# European Policy for Intellectual Property 10th Annual Conference



# Welcome

to the 2015 European Policy for Intellectual Property Conference



# Welcome to EPIP 2015

The European Policy for Intellectual Property (EPIP) Association was founded in 2005 with the aim "to promote research regarding economic, legal, social, political and historical aspects of intellectual property rights at national, European and international levels". This interdisciplinary approach was visionary. It is not an overstatement to say that EPIP's annual conferences opened a new field of enquiry. Intellectual Property Law left the back office. The difficult questions how to promote innovation, creativity, productivity were now exposed to empirical research.

From the beginning, the EPIP Association intended to make a difference beyond academe, by contributing "ideas, concepts and discussions that will promote innovation" and "inform and encourage policy-oriented discussion". As the 10th Annual Conference arrives in Glasgow (and for the first time in the UK), EPIP is well established as a forum where the best new research meets a wide range of policy makers, from international organisations and governments, to industry and trade bodies.

We are very pleased that our now regular collaboration with the European Commission is continuing, involving pre-discussion of topical issues that feed into our call for papers and panels. If you look through the list of delegates and speakers, you will also notice an extraordinarily diverse range of representation, from the World Intellectual Property Organization (WIPO), OECD, the European Trade Marks and Designs Office (OHIM), to think tanks, law firms, and stakeholders such as the British Film Institute, Society of Authors, UK Music and Fundación Autor SGAE. The UK IP Office contributed as conference sponsor, as did Microsoft and NESTA for specific panels. There are not many conferences where academics mix that easily with Members of Parliament, government officials and firms.

Will we make a difference? This year, we are focussing on the Creative Economy and copyright law. Here, evidence based policy continues to be a particular struggle. We have facilitated a cross-pollination with the SERCI Congress, the annual event of the Society for Economic Research on Copyright Issues, including joint keynotes, panels and mutually free attendance. We are also pursuing our traditional topics, with some excellent plenaries and sessions, ranging from the role of disclosure in patent systems, to 3D printing, big data, and a panel on trade dress (the visual characteristics of a product that signal its origin – which will take a more central role at the conference in Oxford next year).

We had to turn down many paper submissions, and are reaching the limits of what can be accommodated in a two-day conference. I believe it is important that, as an Association, we take our responsibility seriously for the next generation of researchers. If we want interdisciplinary academics who can shape policy in this important field (and we need them), we must offer development opportunities, even a job market for economists, social scientists and lawyers with a focus on innovation. During my tenure as president of EPIP, creating such opportunities through links between innovation centres will be a particular priority, building on our successful pre-conference PhD workshops.

I wish you a fruitful conference.

Martin Kretschmer

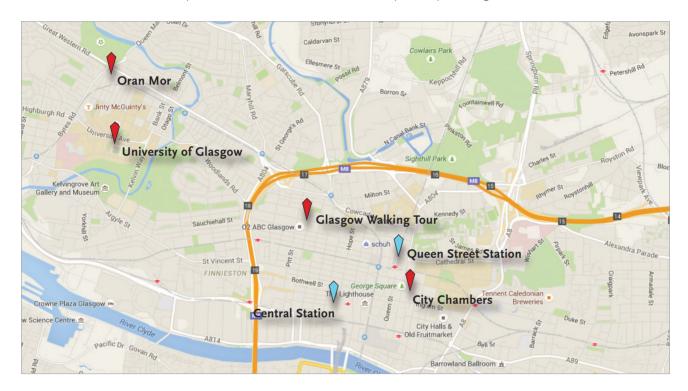
*Director CREATe* (Research Councils UK Centre for Copyright and New Business Models in the Creative Economy) School of Law/College of Social Sciences University of Glasgow



Introductory Information EPIP 2015

# Dear EPIP Delegate,

We welcome you to the 2015 EPIP Intellectual Property in the Creative Economy Conference. We hope you have had a chance to look at the conference website at <a href="http://www.epip2015.org">http://www.epip2015.org</a> where we have included lots of information to facilitate your attendance at the conference and your stay in Glasgow.



# Tuesday

#### MAPS

A map including all the conference venues and locations for social activities is included in this programme. A larger overview from Google is available at <u>http://bit.</u> ly/1NGfnHr (also pictured above).

#### PHD WORKSHOP

The first activity of the conference is a PhD workshop on Tuesday 1st September. Registration has closed, but registered participants will meet from 9.30 in the CREATe hub offices at 10 The Square, University Avenue (Glasgow, G12 8QQ) from 0930 hrs.

#### GLASGOW WALKING TOUR

If you have registered for this activity, you should make your way to Glasgow School of Art Main Reception (164 Renfrew St, Glasgow, G<sub>3</sub> 6RQ) in time for the 1630 hrs departure. The walk will go ahead rain or shine so please dress appropriately including comfortable walking shoes. The tour will end at or very close to Glasgow City Chambers in time for the Civic Reception (see below).

#### CIVIC RECEPTION

The reception will begin promptly at 1900 on the evening of Tuesday 1st September. The event takes place at Glasgow City Chambers (George Square, Glasgow City G2 1DU). Wine will be served but there will be no meal. There are a large number of restaurants in the area and we will be happy to advise some options based on your preferences.

# Wednesday – Thursday

#### CONFERENCE REGISTRATION

A registration and information desk will be available throughout the conference in the University of Glasgow's Forehall. This can be found in the Main Building next to the Chapel and will be prominently signposted. We advise delegates to enter the main building from the entrance on The Square (see map). Day 1 registration will open from o800 hrs. Please note that the venue for much of the programme on the 2nd of September will be a short walk from the Forehall and therefore registration prior to the conference welcome and opening keynote (which starts sharp at o845 hrs) is strongly advised.

#### CONFERENCE PROGRAMME

The full programme is on <u>http://www.epip2015.org/pro-gramme/</u>. At registration delegates will receive a conference bag containing some items such as this conference companion book with information such as the paper abstracts and synopsis of panels, a pen, and a CREATe branded umbrella.

EPIP 2015 is reasonably distributed across the University of Glasgow's campus. Prominent signposting will be available throughout and PGR Ambassadors with CREATe branded T-shirts will be on hand to assist with enquiries. University of Glasgow staff and students attending EPIP will wear distinctive coloured badges so if you have any questions about local issues they will be well placed to answer. We advise delegates to make their way promptly to subsequent sessions as they may be a short walk away.

#### WIRELESS INTERNET

Wireless Internet coverage across most of the University is very good. You should have received details via email of a guest user account that will enable you to access the GU Visitor WiFi network across most of the campus. If you already have Eduroam on your devices, this should work automatically. The Wellington Church (one of the conference venues) has its own open WiFi network.

#### CONFERENCE DINNER AND CÈILIDH

The EPIP Conference Dinner takes place at Òran Mór (Byres Road, Glasgow G12 8QX, United Kingdom), with a drinks reception commencing from 1930 hrs. The evening programme will include a few very short addresses and a Cèilidh. Full instructions for the dances will be issued to guests and we hope you'll enjoy this very Scottish form of entertainment.

If you are unsure whether you have reserved a place at the Conference Dinner and wish to attend please email contact@create.ac.uk for further information.

#### SOCIAL MEDIA

Please use the hashtag **#epip2015** in your social media posts, updates and tweets.

#### TRAVELLING AROUND GLASGOW

The conference is largely situated in the City's West End, with the Walking Tour and Civic Reception, as well as two of the conference hotels (Grand Central and Radisson Blu) located in the city centre (the Hilton is in the West End). Although quite feasible to walk between the West End and City Centre we recommend the use of Glasgow's very simple subway system for travelling between the two. Details of the subway and other public transport options are available from the conference website, at <u>http://www.</u> epip2015.org/visiting-glasgow/.

#### QUESTIONS

Any other questions about practical aspects of EPIP should be emailed to <u>contact@create.ac.uk</u>. This email address will be checked frequently before and during the EPIP conference and is the best way to get in touch with the local organisers.

#### Best wishes,

Sukhpreet Singh, Andrew McHugh, Diane McGrattan *Local Organizers* 

Kenny Barr, Megan Rae Blakely, Sheona Burrow, Christian Geib, Meryem Horasan, Kirsty Mcdougall, Jaakko Miettinen, Kerry Patterson, Jesus Rodriguez Perez, Victoria Stobo, Andrea Wallace *PGR Ambassadors* 





@copyrightcentre

The CREATe local organizers and PGR Ambassadors will be wearing distinctive coloured badges throughout the Conference. Please do not hesitate to ask for assistance from any of the following. To assist you with identifying them, their photos and contact information is included below.



Kenny Barr k.barr.1@research.gla.ac.uk



Megan Rae Blakely <u>m.blakely.1@research.gla.ac.uk</u> @MeganRaeBlakely



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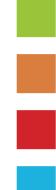
Sukhpreet Singh Sukhpreet.Singh@glasgow.ac.uk +44 (0) 788 871 6466



Victoria Stobo victoria.stobo@glasgow.ac.uk @vstobo



Andrea Wallace Graphic design of EPIP 2015 programme a.wallace.1@research.gla.ac.uk @AndeeWallace



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A detailed map and full schedule for the three days of the conference

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# **Sessions Guides**

Guides that briefly detail the sessions to assist you in planning your days

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# Abstract Index

A collection of submitted abstracts, organized by session

Keynote Sessions	14
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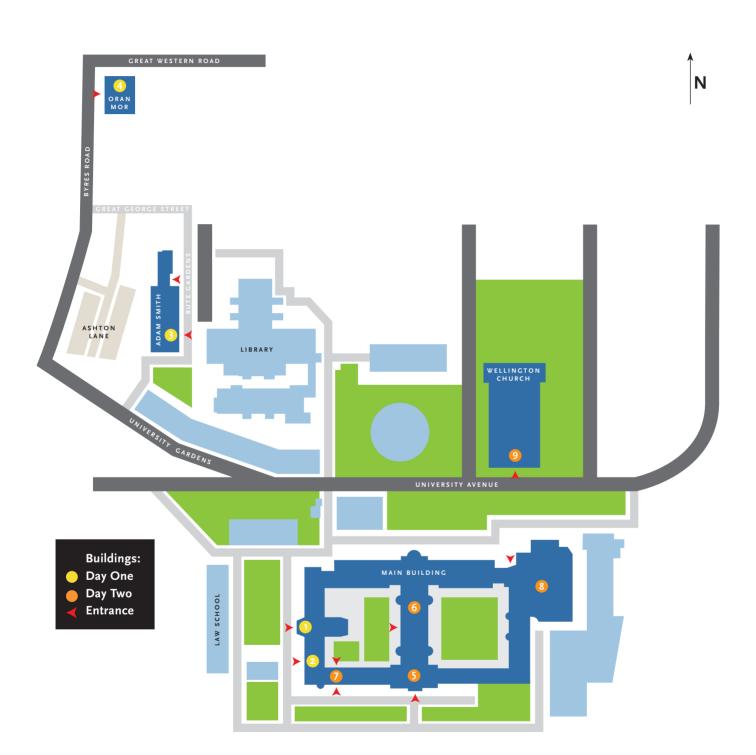
# **Additional Information**

Our latest CREATe projects and more information on getting around Glasgow

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1
2



**Main Building Forehall and Chapel** Chapel Corridor (South) West Quadrangle, G12 8QQ



Main Building Bute Hall Main Entrance, G12 8QQ





Adam Smith Building 40 Bute Gardens, G12 8RS



**Oran Mor** Corner of Byres and Great Western Roads, G12 8QX



Main Building Randolph Hall, Senate Room and Melville Room Main Entrance, G12 8QQ



**Main Building 253 and 250** Main Entrance, G12 8QQ



**Thomson Building Anatomy Large Lecture Theatre (236)** East Side Entrance, G12 8QQ



Wellington Church 77 Southpark Ave, G12 8LE





# **Full Conference Schedule**

# & Conference Key

Please be advised that video and still camerapersons will be present throughout the conference and all Keynote and Panel Sessions will be recorded.

For your convenience, the conference has been organized according the following colour key:

**Keynotes** Opening and closing keynotes on each day

**General Sessions** General sessions and parallel sessions 1-4

**Panel Sessions** Plenary and invited panels

Public Launch Copyrightevidence.org

Preconference Activities

# Tuesday | September 1

# **EPIP Social Activities and Board Meeting**

09:30 – 18:00	Pre-conference PhD Workshop, see page 55
16:30 – 19:00	Glasgow Miracle City Walking Tour
19:00 – 20:00	Civic Reception at the Invitation of the Lord Provost of Glasgow in the Historic City Chambers
	Welcome to Glasgow by Professor Anne H Anderson OBE, FRSE, Vice-Principal & Head of College of Social Sciences, University of Glasgow

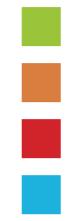
20:30 - 22:00 EPIP Board Meeting (Venue to be Confirmed)

08:00 – 08:30	Registration and Coffee, Main Building Forehall
08:30 – 08:45	Welcome, Main Building Chapel
	Anton Muscatelli, Principal and Vice-Chancellor of the University of Glasgow
	Kamil Kiljanski, Chief Economist, Directorate-General Internal Market and Industry (DG GROW), European Commission
08:45 – 09:30	Opening Keynote, Main Building Chapel
	Ian Hargreaves (Cardiff University, author of Digital Opportunity: A Review of IP and Growth), <i>"Copyright Wars: Frozen Conflict?"</i>
	Responding: MEP Julia Reda (Greens/EFA, Pirate Party)
09:30 – 09:45	Proceed to Adam Smith Building
09:45 – 11:15	Parallel Sessions 1, see page 7
11:15 – 11:30	Coffee Break, Room 915
11:30 – 12:30	Plenary Panel 1: The Role of Disclosure in Patent Systems, Room 1115, see page 11 & 44 Yoshimi Okada (Hitotsubashi University) Sadao Nagaoka (Tokyo Keizai University) Stuart Graham (Georgia Tech) Dietmar Harhoff (Max-Planck-Institute)
12:30 – 14:00	Lunch Break, Room 915
14:00 – 15:00	Plenary Panel 2: Measuring the Creative Economy, Room 1115, see page 11 & 45 sponsored by NESTA
	Jonathan Haskel (Imperial College London) Hasan Bakhshi (NESTA) Dimiter Gantchev (WIPO)
	Chair: Philip Schlesinger (University of Glasgow)
15:00 – 15:15	Coffee Break, Room 915
15:15 – 16:45	Parallel Sessions 2, see page 8
16:45 – 17:00	Coffee Break, Room 915
17:00 – 17:50	Day One Closing Keynote, Room 1115
	Petra Moser (New York University), "Copyright and Science: Evidence from the World War II Book Republication Program"
	Responding: Lionel Bently (Cambridge University)
17:50 – 18:00	Public Launch of the CREATe Copyright Evidence Wiki, Room 1115, see page 52
	Martin Kretschmer, Theo Koutmeridis, Kris Erickson
19:30 – 23:30	Conference Dinner and Cèilidh at Òran Mór



# EPIP Day Two Thursday | September 3

08:00 – 08:45	Tea and Coffee, Main Building Randolph Hall
08:45 – 09:45	Invited Panels 1, see page 12 & 48
09:45 – 10:00	Coffee Break
10:00 – 11:00	Invited Panels 2, see page 12 & 49-51
11:00 – 12:30	Parallel Sessions 3, see page 9
12:30 – 13:30	Joint Lunch with SERCI Delegates served at Wellington Church, venue for SERCI Congress
13:30 – 14:15	SERCI/EPIP Joint Keynote, Wellington Church
	Richard Watt (SERCI and University of Canterbury) "Copyright Collectives and Contracts: An Economic Theory Perspective"
	Chair: Ruth Towse (CREATe and Bournemouth University)
	<i>Responding:</i> Sylvie Nérisson (Max-Planck-Institute), Morten Hviid (University of East Anglia), and Scott Walker (Performing Rights Society/ UK Music)
	delegates for Trade Dress Panel return to Main Building SERCI and other EPIP delegates remain in Wellington Church.
14:15 - 15:15	Plenary Panels 2, see page 11 & 46
15:15 – 15:30	<b>Coffee Break</b> served at the Wellington Church and the University Main Building
15:30 – 16:30	Parallel Sessions 4, see page 10
16:30 – 16:45	<b>Coffee Break</b> served at the University Main Building
16:45 – 17:30	Plenary Panel 3: Access to Data (with chief economists), Main Building Bute Hall
	Joel Waldfogel (University of Minnesota) "Data Needs for Assessing the Function of Copyright"
	Chair: Tony Clayton (Imperial College London)
	<i>Responding</i> : Nathan Wajsman (OHIM), Kamil Kiljanski (European Commission DG Internal Market & Industry), Pippa Hall (UK Intellectual Property Office), and Mosahid Khan (WIPO)
17:30 – 18:00	Closing Keynote, Main Building Bute Hall
	Pamela Samuelson (University of California, Berkeley) "Evidence-based IP Policy-making: What's that?"
18:00	Conference closure, Main Building Bute Hall
	Beth Webster (Swinburne University of Technology) A Preview of EPIP 2016 (Oxford, 3-5 September 2016)
	Rick Rylance, CEO Arts & Humanities Research Council, and chair Research Councils UK



# **Sessions Guides**

The following pages detail the conference events

#### Keynotes

Opening and closing Keynotes for both days

**General Sessions** Parallel Sessions 1-4

**Panel Sessions** Plenary Panel Sessions and Invited Panel Sessions



# Keynotes Wednesday – Thursday

# Wednesday

#### 08:45 – 09:30

**Opening Keynote** Main Building, Chapel



<u>Ian Hargreaves</u> (Cardiff University, author of Digital Opportunity: A Review of IP and Growth), *"Copyright Wars: Frozen Conflict?"* 

# Thursday

13:30 - 14:15



#### SERCI/EPIP Joint Keynote Wellington Church

*Chair:* Ruth Towse (CREATe and Bournemouth University)

Richard Watt (SERCI and University of Canterbury), "Copyright Collectives and Contracts: An Economic Theory Perspective"

Responding: MEP Julia Reda (Greens/EFA, Pirate Party, rapporteur of the European Parliament's review of the 2001 Copyright Directive)

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Responding: Sylvie Nérisson (Max-Planck Institute), Morten Hviid (University of East Anglia), Scott Walker (Performing Rights Society/UK Music)



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17:00 – 17:45

Day One Closing Keynote



Adam Smith 1115 <u>Petra Moser</u> (New York University), "Copyright and

Science: Evidence from the World War II Book Republication Program"

Responding: Lionel Bently (Cambridge University)





17:30 – 18:00

**Closing Keynote** Bute Hall

Pamela Samuelson (University of California, Berkeley), *"Evidence-based IP Policy-making: What's that?"*  Wednesday 9:45 - 11:15

Parallel Sessions 1

Abstracts on pages 16-23; underlined text signifies the presenter

#### **Patents, Science and Innovation** Adam Smith 718

*Chair:* Bruno van Pottelsberghe (ULB - Solvay Brussels School of Economics and Management)

Ashish Arora, <u>Manuel Gigena</u>, Dennis Verhoeven and Reinhilde Veugelers, "*The Role of Small Firms, Large Firms and Universities in the Creation, Development and Commercialization of Radical Innovation in Biotechnology*"

<u>Francesco Lissoni</u>, "Double Disclosures and the Negotiation of Scientific Credit in Research Teams"

Dan Burk, "Patents as Data Aggregators in Personalized Medicine"

Jane Nielsen, Dianne Nicol, Tess Whitton and John Liddicoat, "Material Imperative: Protecting the Intellectual Outcomes of Research Through Formal Transfer Agreements"



Chair: John Enser (Olswang)

<u>Giuseppe Mazziotti</u>, "Is geo-blocking a real cause for concern in Europe?"

<u>Tore Slaatta</u>, "Differences in copyright institutions and practices in the field of literature in Norway and the Nordicregion"

Bertin Martens and <u>Estrella Gomez-Herrera</u>, "Language, Copyright and Geographic Segmentation in the EU Digital Single Market for Music and Film"

Raymond Boyle, "Copyright, Football and European Media Rights"

1 C

**Governance in Europe** Adam Smith 1115

*Chair:* Alison Brimelow (former Chief Executive and Comptroller General of the UK Patent Office and fifth President of the European Patent Office (2007 to 2010))

Benjamin Farrand, "European Governance and Intellectual Property Lawmaking in the European Union"

<u>Yole Tanghe</u>, "The intersection of Intellectual Property Law and EU External Relations Law in the post-Lisbon era"

Marcella Favale, Martin Kretschmer and Paul Torremans, "Is There a EU Copyright Jurisprudence? An empirical analysis of the workings of the European Court of Justice"

<u>Sheona Burrow</u>, "The IPEC Small Claims Track in England and Wales"



#### **Data Mining, Automation and Copyright** Adam Smith 916

*Chair:* Tanya Aplin (King's College London)

Burkhard Schafer, David Komuves, Jesus Niebla and Laurence Diver, "A Fourth Law of Robotics? Enforcing Ethical Copyright Compliance in a World Shared with Automata"

Christian Handke, Lucie Guibault and Joan-Josep Vallbé, "Is Europe Falling Behind in Data Mining? Copyright's Impact on Data Mining in Academic Research"

<u>Christian Geib</u>, "Is Licensing the Answer to Existing Copyright Impediments to Data Mining? Different Licensing Models and their Feasibility"

Frank Müller-Langer and Richard Watt, "How Many More Cites is a \$3,000 Open Access Fee Buying You? Empirical Evidence from a Natural Experiment"

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# Copyright and Consumers Adam Smith 717

Adam Smith 717 Chair: Matthias Schmid (Head of Copyright Division, Ger-

man Federal Ministry of Justice and Consumer Protection)

Luis Aguiar and Joel Waldfogel, "Digitization, Copyright, and the Welfare Effects of Music Trade"

<u>Mikko Antikainen</u>, "Boundaries of private copying in 3D printing"

Joan-Josep Vallbe, <u>Balazs Bodo</u>, Joao Quintais and Christian Handke, "*Knocking on Heaven's Door – User preferences on digital cultural distribution*"

Piers Fleming, Melanie Parravano and <u>Daniel John Zizzo</u>, "Understanding the Determinants of Unlawful File Sharing Behavior: An Experiment"

1 F

#### **International Coordination and Protection** Adam Smith 706

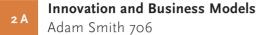
*Chair:* Xavier Seuba (CEIPI/BETA – Université de Strasbourg)

Federica Baldan and Esther van Zimmeren, "The Future Role of the Unified Patent Court in Safeguarding Judicial Coherence in the European Patent System"

<u>Ana Alba Betancourt</u>, "Cross-border Patent Disputes: Unified Patent Court or Commercial Arbitration?"

Liguo Zhang and Niklas Bruun, "Legal Transplant of Intellectual Property Rights in China"

#### Parallel Sessions 2 Wednesday 15:15 - 16:45



Chair: Paul Hofheinz (The Lisbon Council)

Stefan Bechtold, Christopher Buccafusco and Christopher Sprigman, "On the Shoulders of Giants or the Road Less Traveled?: An Experimental Approach to Sequential Innovation in Intellectual Property"

Kris Erickson, "Make, Buy or Borrow? Creative industry business models from public domain inputs"

Ruth Towse, "Copyright and business models in music publishing: the law and the market"

Gillian Doyle, "Digitisation and changes in Windowing strategies in the Television Industry"

2 B

#### Patents Pre-grant (Examination) Adam Smith 1115

Chair: Georg von Graevenitz (Queen Mary University of London | CREATe Fellow)

Gaetan de Rassenfosse, Paul Jensen, Beth Webster and Alfons Palangkaraya, "Do the Major International Patent Offices Enforce the National Treatment Principle?"

Dietmar Harhoff, Ilja Rudyk and Sebastian Stoll, "Deferred Patent Examination"

Junbyoung Oh and Yee Kyoung Kim, "Quality of Invention or Type II error? Accelerated Examination and Grant Decision of Patent Office"

**Copyright Law** 2 C

Adam Smith 718

Chair: Jonathan Griffiths (Queen Mary, University of London)

Mira T Sundara Rajan, "Authorship and Professionalism in the Digital Age: The Economics of Reputation"

Antoni Rubi-Puig, "Copyright and Commercial Speech: An Uncharted Relationship"

Tito Rendas, "Destereotyping the Copyright Wars: The 'fair use vs. closed list' debate in the EU"



International IP and Trade Adam Smith 711

Chair: Irene Calboli, Professor (Singapore Management University/Texas A&M University School of Law)

Chenguo Coco Zhang, "How efficient is the Judicial Enforcement of Patent Law in People's Republic of China (PRC) to deter Patent Infringement? Insight and Empirical Research based on Data Sets on 648 Patent Infringement Cases before the Beijing Courts 2006 - 2014"

Paul Jensen, Alfons Palangkaraya and Beth Webster, "The effect of patents on trade"

Edgar Acatitla and Alenka Guzmán, "Factors affecting the diffusion of nanotechnologies as a new technological paradigm across countries. A patent analysis, 1990-2013"

Sunil Kanwar and Bronwyn Hall, "The Market Value of Innovation: The Case of Indian Manufacturing"



Cultural Goods, Copyright and Digitisation Adam Smith 717

Chair: Richard Paterson (British Film Institute)

Oleksandr Bulayenko, "Mass digitization and making available online of copyrighted works in Europe: Comparison of French and Norwegian approaches"

Maurizio Borghi and Marcella Favale, "Crowdsourcing the orphan works problem"

Thomas Margoni, "The digitisation of cultural heritage: originality, derivative works and (non) original photographs"

Andrea Wallace, "Claiming Surrogate IP Rights: When Cultural Institutions Repossess the Public Domain"

### Thursday 11:00 – 12:30

# **Parallel Sessions 3**



*Chair:* Stefan Bechtold (Eidgenössische Technische Hochschule (ETH) Zurich)

<u>Paul Torremans</u>, "The Unitary Patent and the Unified Patent Court: A View from Private International Law"

<u>Caroline Paunov</u>, "Corruption's Asymmetric Impacts on Firm Innovation"

Stefan Bechtold and Jens Frankenreiter, "Forum Selling in Germany: Supply-Side Effects in Patent Forum Shopping"

<u>Fabian Gaessler</u>, "What to Buy when Forum Shopping – Determinants of Court Selection in Patent Litigation"

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3 B

**Economics of Copyright** Main Building 250

Chair: Séverine Dusollier (Sciences Po Paris)

<u>Steven Watson</u>, Piers Fleming and Daniel Zizzo, "*Perceptions of legal risk do not predict behaviour in unlawful file sharing: An empirical analysis*"

<u>Joost Poort</u> and Nico van Eijk, "Digital Fixation: The Law and Economics of a Fixed e-Book Price"

<u>Hyojung Sun</u>, "Beyond Copyright and the Evolution of Digital Music Services"

Paul Heald, Martin Kretschmer and Kris Erickson, "The Valuation of Unprotected Works: A Case Study of Public Domain Photographs on Wikipedia"



**Creativity, Re-Use and Copyright** Main Building, Senate Room

*Chair:* Jeremy Silver (MusicGlue Ltd, Bridgeman Art Library and InnovateUK)

Patrick Waelbroeck and <u>Martin Quinn</u>, *"Competing UGCs"* 

Jessica Silbey, "Distribution's Diversity and Fairer Uses: A Qualitative Analysis of Borrowing Practices in Creative and Innovative Industries"

<u>Christian Katzenbach</u> and <u>Lies van Roessel</u>, "Playing without Rules? Regulating Imitation and Innovation in the Games Industry"

<u>Joe Karaganis</u>, "Notice and Takedown in the Age of the Robo Notice"

Market Structure and IP

Thomson Building, Anatomy Theatre

Chair: Patrick Waelbroeck (Telecom Paristech)

Robert Ashcroft and George Barker, "Is copyright law fit for purpose in the Internet era?"

<u>Thibault Schrepel</u>, "Friedrich Hayek's Contribution to Antitrust Law and Its Modern Application"

Nizan Packin and Yafit Lev Aretz, "Big Data and Social Netbanks: Are You Ready to Replace Your Bank?"

3 E

Intangibles, Tacit Knowledge and Know-How Main Building, Melville Room

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Chair: Salvatore Torrisi (University of Bologna)

Per Botolf Maurseth and Roger Svensson, "Tacit Knowledge and the Dynamics of Inventor Activity"

Russell Thomson and Gaetan de Rassenfosse, "R&D offshoring and home industry productivity"

<u>Chris Dent</u>, "Patents, Trade Marks and Know-How: Regulated by Different Contracts and Motivators"

<u>Margo Bagley</u>, "Towering Wave or Tempest in a Teapot? Synthetic Biology, IP and Economic Development"

#### Parallel Sessions 4 Thursday 15:30 - 16:30



SERCI/EPIP Joint Session Wellington Church

Chair: Ariel Katz (University of Toronto)

Stan Liebowitz, "Paradise lost: Copyright for British authors in 19th C. America"

Christopher Buccafusco and Paul Heald. "Two Views for the Steeple: Testing Porn Exceptionalism in Trademark and Copyright Tarnishment Claims"

#### **Geographical Indications and Regions** 4 B Main Building 250

Chair: Maurizio Borghi (CIPPM, Bournemouth University)

Peter Drahos, "Australia's Regions and Agriculture: Can Geographical Indications Help?"

Nicola Searle, "The Economics of Geographical Indications: Making Culture Tangible"

Hazel Moir, "Geographic Indications: heritage or terroir?" \_\_\_\_\_

#### Patent Value and Costs 4 C

Main Building, Melville Room

Chair: Roger Burt (Chartered Institute of Patent Attorneys CIPA)

Federico Munari and Azzurra Meoli, "The Patent Paradox in Crowdfunding. An empirical analysis based on Kickstarter data"

Jussi Heikkilä, "The relationship between first and second tier patent protection: The case of the Dutch short-term patent system abolition"

Mark James Thompson, "The Cost of Patent Protection: Renewal Propensity"



Technology, R&D and Patents Main Building, Senate Hall

*Chair*: Bronwyn Hall (University of California, Berkeley)

Georg von Graevenitz, Bronwyn Hall and Christian Helmers, "Technology Entry in the Presence of Patent Thickets"

Emilio Raiteri, "More of the same or something different? Technological originality and novelty in public procurement-related patents"

Riccardo Cappelli, Marco Corsino and Salvatore Torrisi, "Patent strategies: protecting innovation, preempting competition and defending the freedom to operate"

4 E

Innovation Behaviour of Firms Main Building 253

Chair: Gillian Doyle (University of Glasgow)

Irene Calboli and Dan Hunter, "Trademark Proliferation"

Henning Berthold and Barbara Townley, "Innovation and IP: A Dialectical View"

Cecilie Bryld Fjællegaard, Karin Beukel and Lars Alkaersig, "Designers as Determinant for Aesthetic Innovations"



Standards, Interoperability and IP Thomson Building, Anatomy Theatre

Chair: Francesco Lissoni (GREThA – Université de Bordeaux)

Florian Ramel and Knut Blind, "The Influence of Standard Essential Patents on Trade"

Rudi Bekkers and Arianna Martinelli, "The effects of the recent EPO policy change to consider standards-related documentation as prior art"

Sally Weston, "Encouraging interoperability by the sharing of interface information obtained by reverse engineering"

# Wednesday

#### 11:30 - 12:30



The Role of Disclosure in **Patent Systems** Adam Smith 1115

Chair: Stuart Graham (Georgia Tech)

Yoshimi Okada, "Effects of early patent disclosure on knowledge dissemination: Evidence from the impacts of introducing Pre-Grant Publication System in the United States"

Sadao Nagaoka, "Effects of stronger disclosure rule on applicants' behavior and on examination efficiency: Evidence from Japan"

Stuart Graham, "The Disclosure Function of Patents"

Dietmar Harhoff, "Patent Disclosure: Evidence from the PatVal Surveys"

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Measuring the Creative Economy (sponsored by Nesta) Adam Smith 1115

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Chair: Philip Schlesinger (University of Glasgow)

Jonathan Haskel Hasan Bakhshi Dimiter Gantchev

Nesta.

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# Thursday

# 14:15 - 15:15



**SERCI/EPIP** Joint Plenary Panel: **Compensating creators** Wellington Church

Chair: Marcel Boyer (Université de Montréal and CI-RANO)

Christian Handke Ruben Gutierrez Del Castillo Peter Jenner Nicola Solomon John Street Eva Van Passel

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1 B

EPIP Special invited panel: The use of trade dress provisions under trade mark law and its implications for design, creation and competition in design-

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# intensive industries

Main Building, Senate Room

*Chair:* Beth Webster (Swinburne University of Technology)

Alan Marco

#### Dan Hunter

Estelle Derclaye, "Shape(shame)less? Using trademark law to protect trade dress in the EU"

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# 16:45 - 17:30



Access to Data (with chief economists) Main Building, Bute Hall

Chair: Tony Clayton (Imperial College London)

Joel Waldfogel, "Data Needs for Assessing the Function of Copyright"

Responding: Nathan Wajsman (OHIM), Kamil Kiljanski (European Commission DG Internal Market and Industry), Pippa Hall (UK Intellectual Property Office), Mosahid Khan (WIPO)

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## Parallel Invited Panels

Thursday

#### 08:45 - 09:45

 A Legal and Empirical Study into the Intellectual Property Implications of 3D Printing and Policy Considerations Main Building, Senate Room

Chair: Lilian Edwards (University of Strathclyde)

<u>Dinusha Mendis</u>, "A Legal and Empirical Study into the Intellectual Property Implications of 3D Printing – Conclusions and Recommendations"

<u>Sophie Jones</u>, "The Current Status and Impact of 3D Printing Within the Industrial Sector: An Analysis of Six Case Studies"

<u>Davide Secchi</u>, "A Legal and Empirical Study of 3D Printing Online Platforms and an Analysis of User Behaviour

<u>Pippa Hall</u>, "A Legal and Empirical Study into the Intellectual Property Implications of 3D Printing – Policy Considerations"

# 1 B

**The Unitary Patent and Unified Patent Court** Main Building, Bute Hall

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*Chair and Introduction:* Geertrui Van Overwalle (KU Leuven/Louvain)

<u>Bronwyn Hall</u>, "The impact of international patent systems: Evidence from accession to the European Patent Convention"

Bruno Van Pottelsberghe

Esther van Zimmeren

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#### 10:00 - 11:00



IP Governance, Big Data, Data Ownership and Privacy Main Building, Bute Hall

*Introduction and Chair:* Ingrid Schneider (University of Hamburg)

Ingrid Schneider, "Big Data, IP, Data Ownership and Privacy: Conceptualising a conundrum"

<u>Andrew Prescott</u>, "Big Data and Privacy: Some Historical Perspectives"

<u>Walter Peissl</u>, "Big Data and privacy in a networked world: the perspective from technology assessment (TA)?"

Fabio Domanico (European Commission)

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2 B

#### **Reconstructing Copyright's Economic Rights (sponsored by Microsoft)** Main Building, Senate Room

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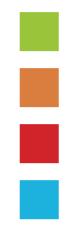
*Chair*: Bernt Hugenholtz (IViR, University of Amsterdam)

<u>Alain Strowel</u> <u>Stefan Bechtold</u> <u>Séverine Dusollier</u> <u>Ansgar Ohly</u> <u>Ole-Andreas Rognstad</u>

Responding: Joost Poort (IViR, University of Amsterdam)



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**Keynote Presentations** 

# Abstracts

### Wednesday

#### **Opening Keynote**

<u>Ian Hargreaves</u> (Cardiff University, author of Digital Opportunity: A Review of IP and Growth), "*Copyright Wars: Frozen Conflict*?"

A reflection upon the review of the IP framework which took place in 2010/11 and resulted in a range of reforms to UK copyright law and practice in the subsequent four years; along with an assessment of the prospects for copyright reform in the European Union in the coming years. Does the evidence suggest diplomatic progress accompanied by stakeholder adjustment, or diplomatic deep-freeze in the face of implacable stakeholder resistance to change?

# **Closing Keynote**

<u>Petra Moser</u> (New York University), "Copyright and Science: Evidence from the World War II Book Republication Program"

Copyrights are intended to encourage the creation of new books, music, and art. But they do so by restricting the use of existing works, which may impose substantial costs on follow-on innovation. This paper exploits a relaxation of copyrights under the 1942 Book Republication Program (BRP) to examine the effects of copyrights on follow-on science. Justified by an Act of Congress, the BRP issued temporary copyright licenses for German science books to US publishers. Using citations as a measure for the use of copyrighted knowledge in followon research, we find that copyright protection impose high costs on follow-on research. With the relaxation of copyrights, citations to German-owned books increased by a factor of five while citations to Swiss books in the same fields - which could not be licensed - remain low. Notably, a 10-percent reduction in price is associated with a 142 percent increase in citations across all BRP books and 445 percent in mathematics. We also find that the effects of copyrights on follow-on science are larger for fields that are more dependent on human than physical capital.

# Thursday

### **SERCI/EPIP** Joint Keynote

<u>Richard Watt</u> (SERCI and University of Canterbury), "Contracts and Collecting Societies"

The existing economic theory of copyright collectives, or copyright management organizations (CMOs) is strongly focused on the benefits of sharing of transaction costs. Here, we appeal to the contractual environment of CMOs to offer a different perspective. Copyright collectives form contracts at two principle points along the supply chain. First, there are the contracts between the collective's members themselves (the copyright holders), for distribution of the collective's income. And second there are the licensing contracts that the collective signs with users of the repertory. Using standard economic theory, the paper argues that there are significant efficiency benefits from having copyrights managed as an aggregate repertory, rather than individually, based on risk-pooling and risk-sharing through the contracts between the members themselves. Similarly, there are also aggregation benefits (at least in terms of the profit of the CMO) of licensing only the entire repertory, rather than smaller sub-sets. Interestingly, there is a link between these two theories of the efficiency of collective, rather than individual, management, and it lies at the heart of the theory of syndicates, and the characteristics that imply that the group (or syndicate as a whole) can be considered as a valid "representative", sharing the same preferences as each individual syndicate member.

# **Closing Keynote**

Pamela Samuelson (University of California, Berkeley), "Evidence-based IP Policy-making: What's that?"

EPIP 2015 has invited Professor Samuelson to take the risk of an unscripted closing keynote, reflecting on key issues and themes emerging during the conference.

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Parallel Sessions Abstracts

# Patents, Science and Innovation

1A. 1 .....

Ashish Arora (Duke University), <u>Manuel Gigena</u> (KU Leuven/Louvain), Dennis Verhoeven (KU Leuven/Louvain) and Reinhilde Veugelers (KU Leuven/Louvain), "The Role of Small Firms, Large Firms and Universities in the Creation, Development and Commercialization of Radical Innovation in Biotechnology"

Despite anecdotal evidence, literature does not provide a clear understanding of how the process of radical innovation unfolds. A capabilities-based view leads to a division of labor wherein large firms are more efficient at commercializing novelty, whereas small firms may either be creators of novelty or intermediaries between universities and large firms. Using novel patent-based indicators, we sketch a framework to study the role of different actor types in the generation of technological novelty, its development, and approach its commercial application.

The first results convey a nuanced view on the role of different actor types in the radical innovation process, wherein all types are present in the stages of novelty generation and reuse, but to different extents. Small firms are principally responsible for experimentation, with a disadvantage on commercialization. They are over-represented on the generation of novelty while, consistent with the experimentation idea, the average usefulness of their innovation output (either in technical or commercial sense) is lower. Novelty introduced by universities is more likely to be of high technical usefulness. Large firms are more likely to develop commercially relevant patents. Conditional upon novelty this holds as well, although the advantage of large firms is smaller.

1A. 2

Francesco Lissoni (GREThA – Université de Bordeaux), "Double Disclosures and the Negotiation of Scientific Credit in Research Teams"

We jointly examine the issues of research team formation and of the allocation of scientific credit to individual team members in a dynamic setting, with reference to "double disclosure" instances (the same research result is both published and patented). Senior (mostly male) and junior (including female) scientists decide whether to collaborate over an extended time horizon and bargain over the allocation of attribution rights (authorship and inventorship). Seniors make take-it-or-leave-offers, which juniors can either accept or sanction by exiting the team. Sustainable equilibria are found in which juniors trade inventorship for authorship, and opt to stay in the team. We test our theoretical predictions against an original dataset of "patent-publication pairs" produced by academics in seven European countries from 1997 to 2007. Younger and female authors are found to be more likely than older and male ones not to appear on patents, irrespective of the country and the technological field. First authors are more likely than middle authors to appear on patents, but when excluded they are less likely to quit the team, which we interpret as a sign of compliance with a successful negotiation outcome over attribution rights.

1A. 3

Dan Burk (University of California, Irvine), "Patents as Data Aggregators in Personalized Medicine"

The role of patents in the emerging practice personalized medicine is problematic, as the potential market for tailored treatments may be too small for the patent incentive to be effective. However, in certain instances patent exclusivity may serve less as an incentive to invest in new inventions than it might to serve as an aggregator for certain types of ancillary information that will be critical to personalized diagnosis and treatments. In this essay I look at the effect of patents on the collection and application of such non-patentable data related to genetic variation. My vehicle for examining such effects is the testing service for genetic predisposition to cancer which was the subject of the recent Supreme Court decision in Association for Molecular Pathology v. Myriad. The Myriad patents appear to have given rise to detailed databases of genetic variations that are now held as trade secrets. This shift toward trade secrecy suggests that patents may play a role in personalized medicine, and perhaps more generally, as aggregators of widely dispersed but valuable information. The welfare effects from such data aggregation, both positive and negative, have gone largely unexplored, and suggest a previously unappreciated justification for patenting in some instances.

1A. 4 .....

Jane Nielsen (University of Tasmania), Dianne Nicol (University of Tasmania), Tess Whitton (University of Tasmania) and John Liddicoat (University of Tasmania), "A Material Imperative: Protecting the Intellectual Outcomes of Research Through Formal Transfer Agreements" Patents over research materials in biotechnology research have long been posited as being responsible for research hold-ups. And yet more recently, contractual agreements over tangible materials (material transfer agreements or MTAs) have been identified as perhaps a greater problem. This paper reports some preliminary results from a study that aims to comprehensively map the MTA environment in Australia. Both materials and data are often transferred without a fee. MTAs are more common than data transfer agreements, and are becoming increasingly ubiquitous. Yet to our knowledge, an MTA has never been enforced in Australia.

This leads to the question as to why they are considered to be important. A key component of the project is the role that intellectual property (IP) plays in their use. We consider whether a perception that a commercial outcome is likely, is driving the increasing use of MTAs. If a commercial result appears unlikely, why is it that terms claiming rights to IP are commonly sought in MTAs? This paper examines these questions against the backdrop of evidence obtained from interviews with personnel from technology transfer officers, and from the first in a series of interviews to be conducted with biological research scientists.

## **Geography and Copyright** in Europe

#### 1**B.** 1

<u>Giuseppe Mazziotti</u> (Trinity College Dublin), "Is geoblocking a real cause for concern in Europe?"

Geo-blocking is a still widely pre-dominant business practice in Europe not only in traditional broadcasting markets, and in the context of the on-demand online services that traditional broadcasters have progressively developed, but also in the context of purely web-based content services giving access to music, sport events and other types of protected works. The clearance of rights for the legitimate offering of these services still occurs on a country-by-country basis, in a way that geo-blocking can be viewed also as a set of technical measures aiming to avoid copyright infringement. This paper draws on recent judgments of the CJEU that raised doubts about the legitimacy of licensing practices aimed at partitioning markets along national borders (Premier League) and analyzed the enforceability of the exhaustion principle in the digital environment, with specific regard to computer programs (Usedsoft v Oracle). As regards exhaustion, the paper finds that this principle, because of its applicability just to sales of goods, would not be a realistic and desirable solution to foster the development of pan-European online content deliveries, which should be regarded as services. When it comes to absolute territorial exclusivity, the paper concludes that, to ensure and strengthen

## Abstracts

legal certainty and to allow a plurality of business models, with a different geographical scope, EU lawmakers could clarify the conditions under which certain licensing agreements and geo-blocking measures may be regarded as suitable and legitimate, also for the purpose to protect cultural diversity and support the creation of works having no or little international appeal.

1**B.** 2

<u>Tore Slaatta</u> (University of Oslo), "Differences in copyright institutions and practices in the field of literature in Norway and the Nordicregion"

Although the Nordic countries have similar legislative frameworks for managing copyright and parallell cultural policy institutions and traditions, the practices and institutional frameworks for extended licencing and collecting societies differ. This article lays out the foundation of the Norwegian system within literature and book publishing, particularly within non-fiction literature, and propose a research project that compares and contrasts it to the other Nordic systems. Questions will be raised both concerning the history of these systems, and their present states, considering the challenges from digitalization and the increasing impact of global industrial competition in the domestic cultural sectors. Questions that will be asked are: What are the historical determinants behind the formation of collecting societies and the practices related to extended licensing. How does historical differences in the Nordic countries translate into the nuts and bolts of the present systems? How can variations among the Nordic systems be explained, and does these variations matter, when it comes to tackling the challenges of digitalization and increasing globalisation. In other words, how do these systems presently work? The presentation will focus on the history and functioning of Norwegian system, as a point of departure.

#### **1B.** 3 .....

Bertin Martens (European Commission – Joint Research Centre) and <u>Estrella Gomez Herrera</u> (European Commission – Joint Research Centre), "Language, Copyright and Geographic Segmentation in the EU Digital Single Market for Music and Film"

The EU seeks to create a seamless online Digital Single Market for media products such as digital music and film. The territoriality of the copyright regime is often perceived as an obstacle that induces geographical segmentation. This paper provides empirical evidence on the extent of market segmentation in the EU on the supply and demand side and measures the contribution of several drivers of this market segmentation. We use data from the Apple iTunes country stores in 27 EU Member States to measure geographical market segmentation in supply (availability), demand (sales) and prices across the EU for downloadable digital music and film. We find that availability of EU media products across country stores in the EU is hovering around 80% for music and 40% for films. Recent industry initiatives to reduce the transaction costs of making digital music available across borders have resulted in a reasonably wide availability though still short of the 100% mark. Consumer preference variables such as cultural proximity, a shared language or border and inherent preferences for home market products are the main drivers for the observed geographical market segmentation in demand patterns, both for music and film. Supply side factors including copyright-related trade costs probably still play a role in music though we can only infer this indirectly in the absence of data on copyright licensing arrangements at product level. Commercial strategies and territorial restrictions in distribution agreements reduce film availability, more so than copyright issues. We also find evidence of price differentiation across iTunes EU country stores.

### 1**B. 4** .....

#### <u>Raymond Boyle</u> (University of Glasgow), "Copyright, Football and European Media Rights"

The position of copyright in the arena of sports content rights and property rights of sporting organizations is a highly contested area of legal and commercial interest in the digital age. At its core is the issue of whether copyright can be incorporated into sports rights contracts as it has been for many years. This paper identifies the ramifications of this debate for the existing business models for both rights holders (Football Association (FA) Premier League, Union of European Football Associations (UEFA)) and broadcasters. Drawing on interviews with key stakeholders, this research analyses the strategic responses of pan-European broadcasters in the field, and key football content rights holders at both the national and European level. How will these developments affect both the pan-European and national markets for football rights? How does copyright law affect live and recorded games and what are the implications for the wider European audio-visual sector of changes in the rights regime for European cultural content?

# **IP Governance** in Europe

1**C.** 1

Benjamin Farrand (University of Strathclyde/University of Warwick), "European Governance and Intellectual Property Lawmaking in the European Union"

The European Union has been the forum for a number of ostensibly surprising developments in the field of intellectual property protection; the rejection of the ACTA

by the European Parliament and subsequent Commission negotiations with the US for a Transatlantic Trade and Investment Partnership, and the use of the enhanced cooperation procedure to establish an EU 'unitary patent' being two prominent examples.

Working within the theoretical frame of European governance, we can better understand the processes by which these legislative initiatives are formed, negotiated and concluded. In particular it is useful to analyse the role of ideas in promoting certain path dependencies and institutional discourses and how they work to influence the way in which the European institutions understand, frame and communicate policies.

In particular, through evaluation of 'frame' and 'narrative', this presentation will demonstrate how the ideational frame of the 'economic crisis in the European Union' has resulted in the construction of a narrative in which the creative and industrial sectors are perceived as being one of the key ways to facilitate the 'growth and jobs' agenda – with this strategy forming both the desired outcome of legislative development, as well as the discursive frame for evidence and information gathering.

1**C.** 2

<u>Yole Tanghe</u> (KU Leuven/Louvain), "The intersection of Intellectual Property Law and EU External Relations Law in the post-Lisbon era"

The scope of the EU's external competence to act in the field of IP has repeatedly been the subject of controversy. Two recent cases of the Court of Justice of the EU (CJEU) have reversed the CJEU's landmark decision in Opinion 1/94. In the Daiichi Sankyo case, the CJEU elaborated on the EU's explicit external competence in the field of IP. This explicit competence is provided for by Article 207 TFEU on the common commercial policy (CCP), which allows the EU to conclude agreements concerning the 'commercial aspects of IP'. In the Broadcasting Rights case, the Court founded its decision on the EU's implied competence to conclude international agreements, as provided for by Article 3(2) TFEU. Considering the outcome of these two judgments, the Court seems to grant the EU a wide scope of action with regard to IPRs. Bearing in mind the internal shared competence in the field of IP, questions arise with regard to the role that is left for the Member States in the post-Lisbon era. Therefore, the aim of the paper is to outline the scope of the EU's external competence in IP matters and to highlight the borders.

### Abstracts

# 1C. 3 .....

<u>Marcella Favale</u> (Bournemouth University), Martin Kretschmer (University of Glasgow) and Paul Torremans (University of Nottingham), "Is There a EU Copyright Jurisprudence? An empirical analysis of the workings of the European Court of Justice"

The Court of Justice of the European Union (ECJ) has been suspected of carrying out a harmonising agenda over and beyond the conventional law-interpreting function of the judiciary. This study aims to investigate empirically two theories in relation to the development of EU copyright law: (i) that the Court has failed to develop a coherent copyright jurisprudence (lacking domain expertise, copyright specific reasoning, and predictability); (ii) that the Court has pursued an activist, harmonising agenda (resorting to teleological interpretation of European law rather than – less discretionary – semantic and systematic legal approaches).

We have collected two data sets relating to all ECJ copyright and database cases up to Svensson (February 2014): (1) Statistics about the allocation of cases to chambers, the composition of chambers, the Judge Rapporteur, and Advocate General (including coding of the professional background of the personnel); (2) Content analysis of argumentative patterns in the decisions themselves, using a qualitative coding technique. Studying the relationship between (1) and (2) allows us to identify links between certain Chambers/ Court members and legal approaches, over time, and by subject. These shed light on the internal workings of the court, and also enable us to explore theories about the nature of ECJ jurisprudence.

1C. 4

#### <u>Sheona Burrow</u> (University of Glasgow), "The IPEC Small Claims Track in England and Wales"

This paper, by closely examining empirical data from the IPEC Small Claims Track, sheds light on the workings of one of the newest courts in England and Wales, which has opened up a unique opportunity for sole traders and SMEs to litigate copyright claims. Following from the Jackson Review in 2009, which found that there was an unmet need for justice for creative SMEs, the Intellectual Property Enterprise Court Small Claims Track was established in 2012. This created a forum for copyright, trade mark, passing off and unregistered design claims valued at less than  $f_{10,000}$  in England and Wales. Building on litigation studies from the UK and beyond, the author has gained access to court files from the IPEC Small Claims Track. This paper will examine empirical data sourced from case files from the first two years of cases and paint a picture of the type of claims brought, the type of litigants using the court, and the outcomes for these types of cases. This paper will then go on to consider whether

the IPEC Small Claims Track has attracted the types of claimants considered in the policy literature and consider whether there was an unmet need for justice. In particular, this paper will consider the potential implications for the creative industries of providing a forum for freelance photographers to litigate their copyright infringement claims.

# Data Mining, Automation and Copyright

1D. 1

Burkhard Schafer (University of Edinburgh), David Komuves (University of Edinburgh), Jesus Niebla (University of Edinburgh) and Laurence Diver (University of Edinburgh), "A Fourth Law of Robotics? Enforcing Ethical Copyright Compliance in a World Shared with Automata"

The paper discusses the regulatory problems for copyright law that we are likely to face in a world that we increasingly share with autonomous devices. It analyses robots both as consumers and (co)creators of art, discusses some of the challenges that such computer creativity creates for the law, and analyses if "enforcement by code" can address some of the legal issues that are likely to emerge. We discuss the possibility of a "fourth law of robotics" looking in particular at the way in which care robots will be interacting with art on behalf of their charges and in the process also become creators of derivative works. Key concepts of traditional copyright law - the idea vs expression dichotomy, the notion of derivativeness, the concept of novelty and with that ultimately the very idea of the author become problematic in such an environment, opening up the discussion if anthropocentric conceptions of copyright are still fit for purpose in the 21th century.

#### 1D. 2 .....

Christian Handke (Erasmus University), Lucie Guibault (IViR, University of Amsterdam) and Joan-Josep Vallbé (University of Barcelona), "Is Europe Falling Behind in Data Mining? Copyright's Impact on Data Mining in Academic Research"

This empirical paper discusses how copyright affects data mining (DM) byacademic researchers. With the diffusion of digital information technology, DM is widely expected to increase the productivity of all kinds of research activities. Based on bibliometric data, we demonstrate that the share of DM-related research articles in all published academic papers has increased substantially over the last two decades. We develop an ordinal categorization of countries according to essential aspects of the copyright system that affect the costs and benefits of DM research. We show that countries in which data mining for academic research requires the express consent of rights holders, data mining makes up a significantly lower share of total research output. To our knowledge, this is the first time that an empirical study bears out a significant negative association between copyright protection and innovation. We also show that in countries where DM requires express consent by rights holders, there is an inverse association between rule-of-law indicators and DM research.

## 1D. 3 .....

<u>Christian Geib</u> (University of Strathclyde), "Is Licensing the Answer to Existing Copyright Impediments to Data Mining? Different Licensing Models and their Feasibility"

Data Mining denotes an automatic or semi-automatic process of exploration and analysis of large quantities of structured data in order to discover pattern and rules. The process of data mining allows researchers to extract explicit and implicit information from data. Data mining involves scanning data, often in the form of expressive content such as scientific journal articles, and placing it into repositories. During this process at least one copy is made. This, if not permitted by author or publisher, is prima facie infringing copyright. The threat of infringement could impede the adaption of this beneficial technology. This paper/session briefly describes how present copyright/sui generis database exceptions are either not applicable or do not provide sufficient defences. The paper/session the introduces various types of licenses such as individually negotiated B2B and B2C licenses, compulsory licences, open licenses such as Creative Commons licenses or new standard licensing scheme. The paper/session considers the role and types of licenses discussed in the context of the European Commission's Horizon 2020 program, the debate about the Digital Single Market and the 'Licensing in Europe Stakeholder Dialogue'. The paper/session finally will review the feasibility of various license solutions for different industries.

#### 1D. 4

Frank Müller-Langer (MPI for Innovation and Competition) and Richard Watt (University of Canterbury), "How Many More Cites is a \$3,000 Open Access Fee Buying You? Empirical Evidence from a Natural Experiment"

The paper analyzes the effect of open access (OA) on a published article's recognition, as measured by the number of citations. We provide evidence from a natural experiment that OA status increases citations by 56% as compared to equivalent articles published in the same issues under a closed access status. Using cross-sectional data on interdisciplinary mathematics and economics journals, we find that this positive journal OA citation

effect decreases in citations to OA pre-prints. We benefit from a natural experiment via hybrid OA pilot agreements. Under these agreements, journal OA status is exogenously assigned to all articles of authors affiliated with hybrid OA pilot institutions. Our analysis provides evidence that OA pre-prints are an imperfect substitute for journal OA. It suggests that OA pre-prints may help authors to increase peer recognition and journal editors to maximize journal impact factors. We also study discipline-specific citation effects.

# **Copyright and** Consumers

1E. 1 .....

Luis Aguiar (Institute for Prospective Technological Studies) and Joel Waldfogel (University of Minnesota), "Digitization, Copyright, and the Welfare Effects of Music Trade"

Music trade has shifted rapidly from physical to digital products, raising the availability of products in different countries. Choice sets have nevertheless not converged across countries, and observers point to copyright-related transaction costs as an obstacle to greater availability. Policy makers are now contemplating various copyright reforms that could reduce these trade costs, raising the question of how much benefit they would create for consumers and producers around the world. We address these questions with a structural model of supply and demand for music in 17 countries, which we employ to counterfactually simulate the effect of a European digital single market on the welfare of consumers and producers. We also simulate autarky and worldwide frictionless trade - in which all products are available in all countries - allowing us to quantify both the conventional gains from status quo trade as well as the maximum possible gains available to free trade. Greater availability of products resulting from easing of copyright restrictions would raise per capita gains to producers in Europe more than in North America. Finally, we find that a European single market would bring most of the benefits of worldwide frictionless trade to both consumers and producers alike.

1E. 2

Mikko Antikainen (Hanken School of Economics), "Boundaries of private copying in 3D printing"

Development of 3D printing technology is creating tension within contemporary intellectual property law by changing the technological and economic landscape and consumer behavior like the digital revolution did before. However, its effects on markets, intellectual property law and innovation are still poorly understood. This paper examines the effects of technological change on law, in particular on copyright law, using Lessig's four point modality framework theory and applying it to 3D printing technology. The paper analyses whether the three modalities - norm, market and architecture - are in contradiction with the current contemporary copyright law and whether their roles as regulators are reduced or reconfigured. Additionally, the study examines whether our contemporary copyright law can adapt to this technological change by a flexible interpretation of copyright exception in Europe and explores if the imbalance of right and exception is so great that legal change is necessary. The paper argues that the development of 3D printing technology has indeed downplayed the role of the law by affecting other modalities. However, even though legal change might be necessary there is a possibility for copyright to adapt to this technological change through legal interpretation and flexibility created by private copying exception.

1E. 3 .....

Joan-Josep Vallbe (University of Barcelona), <u>Balazs Bodo</u> (University of Amsterdam), Joao Quintais (University of Amsterdam) and Christian Handke (Erasmus University), *"Knocking on Heaven's Door – User preferences on digital cultural distribution"* 

This paper explores the social, demographic and attitudinal basis of consumer support to a change from the status quo in digital cultural distribution. First we identify how different online and offline, legal and illegal, free and paying content acquisition channels are used in the Dutch media market using a cluster-based classification of respondents according to their cultural consumption. Second, we assess the effect of cultural consumption on the support to the introduction of a Copyright Compensation System (CCS), which, for a small monthly fee would legalize currently infringing online social practices such as private copying from illegal sources and online sharing of copyrighted works. Finally, we link these two analyses to identify the factors that drive the dynamics of change in digital cultural consumption habits.

1E. 4 .....

Piers Fleming (University of East Anglia), Melanie Parravano (University of East Anglia) and <u>Daniel John Zizzo</u> (Newcastle University}, "Understanding the Determinants of Unlawful File Sharing Behavior: An Experiment"

We present a laboratory experiment motivated by the need to get better causal understanding of unlawful file sharing in order to acquire a better understanding of the effect (or lack of effect) of policy interventions to reduce such behavior.

We find that traditional Beckerian trade-offs in terms of penalty and risks of getting caught do act as deter-

rents; this supports the view that the mixed evidence of the effectiveness of such policy interventions in the context of unlawful file sharing is due to successful avoidance behavior rather than simply ignoring the penalties and risks. Making salient the role of copyright holders/ vendors may, however, be useful; in our experiment, if the copyright holders/vendors have made an effort, less unlawful product acquisition takes place (by around 5%).

The largest behavioral effect comes from social norms. In separate sessions, different participants use a four-points scale to make evaluations on the social appropriateness of unlawful file sharing choices in the different scenarios faced by consumers. We estimate that one point more of social appropriateness increase unlawful product acquisition in our experiment by around 30-40%. This suggests the potential usefulness of policy measures that try to shift the perceptions of such social norms.

# 1E Copyright and Consumers

#### 1F. 1

Federica Baldan (University of Antwerp) and Esther van Zimmeren (University of Antwerp), "The Future Role of the Unified Patent Court in Safeguarding Judicial Coherence in the European Patent System"

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After several decades of negotiations, European Member States finally agreed on the establishment of the Unified Patent Court (UPC), a centralized and highly specialized court, as part of the Unitary Patent Package. The European patent system is an intricate, multilevel governance system. Safeguarding judicial coherence within such a system requires a continuous "dialogue" not only between different courts in a single country, but also between national courts of different countries, between the European Patent Office (EPO) and national courts, between the EPO and the UPC, between national courts and the Court of Justice of the EU (CJEU) and between the UPC and the CJEU. The research question of this paper is whether and how the establishment of the UPC may contribute to a dialogue between patent courts, the EPO and the CJEU and ultimately to judicial coherence.

## 1F. 2 .....

Ana Alba Betancourt (Queen Mary University of London), "Cross-border Patent Disputes: Unified Patent Court or Commercial Arbitration?"

Currently, the enforcement of a patent that is registered in several countries involves the risk of getting different and conflicting decisions from the national Courts. In February 2013, 25 European countries entered in an agreement that aims to homogenize the Patent system by creating the European Patent with Unitary effect and a Unified Patent Court (UPC). Having a patent enforceable in all of the jurisdictions of the signatory parties, through a single court proceeding, may represent an advantage to have legal certainty and lower down the risks of crossborder litigation. But, how is the UPC system going to work? How long will it take to achieve real legal certainty? This paper analyzes key issues of the UPC system and compares them with Arbitration, in order to find the advantages of one and other in cross-border conflicts of patents.

1F. 3 .....

Liguo Zhang (University of Helsinki) and Niklas Bruun (Hanken School of Economics), "Legal Transplant of Intellectual Property Rights in China"

Modern IPR regime originated from Europe. China's current IPR system has been transplanted from the Western. Nonetheless, some scholars believe that legal transplant is impossible and legal rules cannot be divorced from their culture or political context. This study examines how the legal transplant of IP laws has been interacting with the norm building in Chinese society. Our study finds that IP legal transplant and IP norm building in China is not a passive process of accepting western rules; rather it is a dynamic process. In this process, the law makers had to combat with the resistance from traditional ideology and dominant social cultures. The interaction between legislative bodies, judicial institutions, administrative authorities, political and academic elites, state own companies and private companies, foreign government and international organizations and consumers shaped the actual evolution of Chinese IP norms. Therefore China is not only a norm taker, but also a norm maker. Potentially the IP practice in China may create a new variety of IP regime due to its unique political, economic and cultural environments. Moreover, the legal transplant has led to the divergence between the formal IP rules and the actual IP norms as they are followed in practice. Our study attributes this divergence to the actual difficulty in enforcing IPRs in China.

# <sup>2A</sup> Innovation and Business Models

2A. 1

<u>Stefan Bechtold</u> (ETH Zurich), <u>Christopher Buccafusco</u> (Chicago-Kent College of Law) and Christopher Sprigman (NYU School of Law), "On the Shoulders of Giants or the Road Less Traveled?: An Experimental Approach to Sequential Innovation in Intellectual Property"

All creativity and innovation build on existing ideas. Authors and inventors adapt, improve, interpret, and refine the ideas that have come before them. The central task of intellectual property (IP) law is regulating this sequential innovation to ensure that initial creators and subsequent creators receive the appropriate sets of incentives. Somewhat surprisingly, patent and copyright law provide different solutions to this task: While copyright law assigns property rights over original and subsequent creativity to the original author, patent law splits property rights over inventions and their improvement between the original and subsequent inventors. Although many scholars have applied the tools of economic analysis to consider whether IP law is successful in encouraging cumulative innovation, that work has rested on a set of untested assumptions about creators' behavior. This Article reports three novel creativity experiments that begin to test those assumptions. In particular, we study how creators decide whether to borrow from existing ideas or to innovate around them.

Our data suggest that creators do not consistently behave the way that economic analysis assumes. Instead of rationally weighing the objective costs and benefits of different courses of action, creators instead were influenced by decision-making biases and individual preferences that often led to suboptimal and inefficient creative behavior. Many of our subjects chose to borrow when innovating was the optimal strategy, and even more chose to innovate when borrowing was the optimal strategy. We propose that these results may arise from strong personality differences that lead some people towards pioneering innovation and others towards tweaking innovation. Ultimately, we explain the implications of our data for innovation markets, IP doctrine, and the theory of the firm.

#### 2A. 2

Kris Erickson (University of Glasgow), "Make, Buy or Borrow? Creative industry business models from public domain inputs"

This paper explores the mechanisms by which creative firms generate and capture value from the public domain. Given the non-excludable qualities of public domain materials, motivations for firms to appropriate and develop them remains under-explored, as do the strategic options available to firms seeking to generate and capture value from open public domain inputs. Management research has explored the 'make or buy' decision in the context of creative businesses. Among creative SMEs, employee motivations and creative orientation are primary concerns for managers. Original projects are preferred, compared with work-for-hire contracts which offer few opportunities for creative freedom. This paper explores a third option in the make or buy decision, which is to 'borrow' from the public domain. Findings from 23 firms involved in this study suggest 4 distinct business models with different approaches to value creation and capture, and with emphasis at different stages in the value chain. Overall, non-excludability of inputs was not a limiting factor in uptake by any of the firm types. Firms relied on creative core capabilities, speed to market, and audience co-production enabled by non-exclusivity to sustain competitive advantage. Creative managers reported use of both licensed and public domain IP across the board. I propose that a 'private-collective' model of innovation describes these creative firms' strategic decisions concerning IP protection.

# **2A. 3** ..... <u>Ruth Towse</u> (CREATe and Bournemouth University),

"Copyright and business models in music publishing: the law and the market"

The paper argues that the paradigmatic shift from the sale of printed music to exploiting and managing musical rights that took place in music publishing during the early years of the 20th century was due to the changing market rather than to changes in copyright law. On the one hand, copyright law was ineffectual in controlling piracy throughout the 19th century and on the other hand, performing rights were ignored by music publishers for over 70 years; these points suggest that copyright was not the main reason behind the success of the industry. Rather than leading entrepreneurially (the current view of dynamism in the creative industries), publishers 'followed the money' and adapted their business models only when new streams of income from new forms of exploitation through sound recording, broadcasting and film became available as a result of exogenous technical progress. Publishers were locked-in to sales revenue as their business model, though when switching to the new business model of rights management took place, the costs seem not to have been greatly significant.

The paper takes an historical approach to the development of music publishing viewed through the lens of present day issues. The research has resonance for the transition from sales to licensing digital works that is taking place in the creative industries today and puts into perspective the relative significance of market forces and copyright law in the process.

#### 2A. 4

<u>Gillian Doyle</u> (University of Glasgow), "Digitisation and changes in Windowing strategies in the Television Industry"

The business of managing and maximizing the returns from rights in television content is changing because of transformations in the way that television is distributed and in how audiences access, pay for and consume content. The fundamental catalyst has been growth of the internet and, alongside this, the recent rapid development of on-demand television. This paper, drawing on findings from an ongoing project on 'Converging' Technologies and Business Models' which forms part of the CREATe programme of research, examines how UK and international television companies are adjusting their strategies for exploitation of the economic value in IPRs in television content. It assesses how digitization and growth of the internet are affecting the ability of rights owners to segment audiences and deploy the strategies that traditionally have allowed revenues to be maximized. Findings presented, which are based on an empirical investigation of the experience of leading UK and international television producers and rights owners, highlight how television companies at all stages in the supply chain are attempting to future-proof their businesses by adopting a multi-platform approach, straddling both linear and OTT distribution.

# <sup>2 B</sup> Patents Pre-grant Examination

2**B.** 1

Gaetan de Rassenfosse (EPFL), <u>Paul Jensen</u> (University of Melbourne), Beth Webster (Swinburne University of Technology) and Alfons Palangkaraya (Swinburne University of Technology), "Do the Major International Patent Offices Enforce the National Treatment Principle?"

Ongoing interest in harmonizing the international patent system should be seen as an attempt to extract gains from international trade for firms involved in the production of intermediate innovation outputs. Although there is no unified patent examination or a single world patent court, there are other mechanisms which aim to facilitate free trade in innovation. The most important is the national treatment principle: the notion enshrined in international treaties that states that foreigners should be treated the same manner as locals (i.e. 'non-discrimination').

One interesting application of the national treatment principle relates to the issuance of patents – whether discrimination against foreigners in the patent examination process could act as 'behind-the-border' trade barriers which might impinge the free flow of goods and services. The primary focus of this paper is "How would one establish that such an anti-foreign bias exists?", which we answer using data from the largest five patent offices. Wealso consider some of the underlying factors which might explain any observed discriminatory outcomes. Our results confirm the presence of a domestic inventor bias, in all five offices. However, the bias is reduced with the use of the PCT route.

#### 2**B.** 2 .....

Dietmar Harhoff (Max-Planck Institute Munich), Ilja Rudyk (European Patent Office) and <u>Sebastian Stoll</u> (Max-Planck Institute Munich), "*Deferred Patent Examination*"

Most patent systems allow applicants to defer patent examination by some time. Deferred examination was introduced as a response to mounting backlogs of unexamined patent applications. Examination loads are reduced substantially in these systems, albeit at the cost of having a large number of pending patent applications. Economic models of patent examination and renewal have largely ignored this important feature to date. We construct a model of patent application, examination and renewal in which applicants have control over the timing of examination and study the tradeoffs that applicants face. Using data from the Canadian and the German patent o ce, we obtain estimates for parameter values of the value distributions and of the learning process. We use our estimates to assess the value of Canadian and German patents as well as applications. We find that a considerable part of the value is realized before a patent is even granted. In addition, we simulate the counterfactual impact of changes in the deferment period. The estimates we obtain for the value of one additional year of deferment are relatively high and may explain why some applicants embark on delay tactics (such as continuations or divisionals) in patent systems without a statutory deferment option.

#### 2B.3 .....

Junbyoung Oh (Inha University) and Yee Kyoung Kim (Korea Institute of S&T Evaluation and Planning), "Quality of Invention or Type II error? Accelerated Examination and Grant Decision of Patent Office"

This paper investigates the observed high grant ratio of accelerated examinations in Korea and explore whether it comes from high quality of invention or systematic bias of examiners, so called 'type II error.' Using unique micro-level data set directly controlling for the workloads and heterogeneity of examiners, we find that accelerated examination significantly increases not only an examiner's propensity to grant a patent but also the acceptance rate of invalidation appeals in the patent dispute. This implies that the accelerated examination has a negative external effect on the examiner's examination quality and the observed high grant ratio may reflect the 'type II error' of examination by producing unqualified patents.



## 2**C**. 1

<u>Mira T Sundara Rajan</u> (University of Glasgow), "Authorship and Professionalism in the Digital Age: The Economics of Reputation"

This paper examines the concept of reputation within copyright law. It argues that reputation is the key to value in the creative industries, and that technology greatly emphasizes the function of reputation as the foundation of all economic, as well as personal, benefit to creators. In particular, the paper will explore the role of reputation in new business models in the copyright industries, particularly in the areas of music and social media. At a conceptual level, the paper will show that there are key economic and "moral" dimensions to both authorship and ownership of copyright law, and that reputation represents the nexus between the two. Accordingly the marginalization of reputational interests as the exclusive prerogative of authors' "moral rights" should be rejected in favor of a 2

more holistic integration of reputation into the broader framework of rights protected by copyright law.

2**C.** 2

Antoni Rubi-Puig (Universitat Pompeu Fabra), "Copyright and Commercial Speech: An Uncharted Relationship"

Whereas the relationship between copyright law and freedom of speech has been thoroughly discussed both by courts and legal scholars, the relationship between copyright law and commercial speech has not received the same attention. This article aims at filling this gap by providing a detailed discussion of the relations between copyright and commercial speech and their analytical implications, as well as their impact on policy considerations. After providing a comprehensive account of the European Court of Justice and the European Court of Human Rights' case law on commercial speech, three dimensions of its relationship with copyright law and policy are unveiled: i) commercial speech can be copyrightable; ii) the expressive content of commercial speech may be infringing copyright; and iii) the products and services that are promoted in the commercial speech may infringe copyright. Each of these dimensions involves distinctive analytical and policy implications that are discussed separately. Understanding these implications and the links between copyright and marketing of goods would result in a more nuanced approach to the regulation of the digital single market.

2**C**. 3

<u>Tito Rendas</u> (Católica Global School of Law), "Destereotyping the Copyright Wars: The 'fair use vs. closed list' debate in the EU"

The paper critically addresses the alleged lack of flexibility of the closed list of limitations to copyright. It calls into question the established idea that the closed catalogue of article 5 of the Information Society Directive has been preventing European courts from accommodating new technology-enabled uses of copyrighted works. Particularly, it analyses the judicial approach on both sides of the Atlantic to three of these uses: thumbnails, caching and downloading. The conclusion reached in this Part is twofold: (i) European courts frequently interpret limitations in an ample fashion, rendering emerging unauthorized uses non-infringing, despite the absence of a limitation whose letter expressly harbors them; (ii) the outcomes courts reach in Europe and in the U.S. are largely convergent, in spite of the doctrinal differences. The analysis suggests that the main problem with closed lists of limitations is the legal uncertainty they generate the opposite of what is commonly touted as being their main advantage.

# <sup>2 D</sup> International IP and Trade

#### 2**D.** 1

<u>Chenguo Coco Zhang</u> (University of Bremen), "How efficient is the Judicial Enforcement of Patent Law in People's Republic of China (PRC) to deter Patent Infringement? Insight and Empirical Research based on Data Sets on 648 Patent Infringement Cases before the Beijing Courts 2006 – 2014"

This study takes a first step toward providing am empirical basis for assessing how efficient or deficient the judicial enforcement of patent law in PRC de facto is - as generally perceived and debated in numerous international fora - to fulfil its intended purposes, compared to its administrative and criminal enforcement. It does this by assembling, aggregating and analysing information about 648 patent infringement cases trialled before the First, Second and Third Beijing Intermediate People's Courts as well as the Beijing Higher People's Court from 2006 to 2014 . To our knowledge no similar study has ever been undertaken.

#### 2D. 2

Paul Jensen (University of Melbourne), Alfons Palangkaraya (Swinburne University of Technology) and <u>Beth</u> <u>Webster</u> (Swinburne University of Technology), *"The effect* of patents on trade"

In contrast with quotas and tariffs, it is hard to deduce whether fewer rules and less gate-keeping over intellectual property rights will increase or decrease trade in goods. The dominant view is that anticipation of imitation reduces exporters' incentive to export goods to jurisdictions with 'weak' patent regimes. This paper uses two new measures of the patent system to estimate its effect on would-be exporters. We find evidence consistent with two effects. The patent system lowers trade in manufacturing goods- in the main by blocking patentee's ability to embody their inventive idea into exports but in a smaller way by permitting other incumbent firms to legitimately imitate the invention.

#### 2D. 3

Edgar Acatitla (Universidad Autónoma Metropolitana Iztapalapa) and <u>Alenka Guzmán</u> (Universidad Autónoma Metropolitana Iztapalapa), "*Factors affecting the diffusion of nanotechnologies as a new technological paradigm across countries. A patent analysis, 1990-2013*"

The aim of this research is to analyze the factors affecting the diffusion of the new technological paradigm of nanotechnologies (NNP) across countries. First, we estimate the probability of diffusion NNP and we propose a binomial model to find out the factors contributing to it, by using the USPTO patents database. Our research hypothesis states that by considering the forward patent citation (FPC) as a NNP diffusion proxy variable we subscribe [1], the highest probability of diffusion of the nanotechnologies in the countries, is positively related with the following variables of the patent cited: claims, stock of previous knowledge, greater extension towards technological fields, technological cooperation, size of inventor teams, mobility of inventors, academic and private sector links, the institutional effort in nanotech innovation, participation of large private firms and the lower FPC lag time. According to our estimations, the claims, the international mobility of researchers and the technological fields scope have a positive effect on the NNP diffusion. The impact of the institutional efforts is not yet significant. The NNP diffusion and specialization differs across countries.

[1] If the patent P2 cite patent P, suggest that there are knowledge flows from patent P1 to patent P2 (Hall, et al.; 2001).

2D. 4

<u>Sunil Kanwar</u> (Delhi School of Economics) and Bronwyn Hall (University of California, Berkeley), "*The Market Value of Innovation: The Case of Indian Manufacturing*"

We revisit the relationship between market value and innovation in the context of manufacturing firms in a developing country, using Indian data from 2001 through 2010. Surprisingly, we find that financial markets value the R&D investment of Indian firms the same or higher than such investment is valued in developed economies like the US. Using a proxy for the option value of R&D, we find that this accounts for a very small part of the R&D valuation (5% at most). We also find that the market value-R&D relationship does not vary significantly across industry groups, although these results are imprecise.

We find the R&D capital coefficient for Indian firms to be 1.75. This may be compared to the estimates of 1.92, o.80, o.41 and o.36 for UK, US, France and Germany, reported in the literature. Our result carries the strong implication of underinvestment in R&D, because increasing R&D would more than pay for itself in market value increases. Further, a one standard deviation increase in market risk (proxied by industry sales variance) is associated with a 5% increase in the market value of firms, indicating that R&D-intensive firms are valued more highly due to the option value of R&D programmes.

## <sup>2E</sup> Cultural Goods, Copyright and Digitisation

2E.1 .....

Oleksandr Bulayenko (CEIPI – Université de Strasbourg), "Mass digitization and making available online of copyrighted works in Europe: Comparison of French and Norwegian approaches"

Digitation of cultural heritage with the aim of preservation and making it available online is one of important public policy objectives in Europe. Legal mechanisms facilitating large-scale digitisation of orphan and out-ofcommerce works reduce costs for public institutions and may pave a way to a second commercial live of copyrighted works supplying e-markets with new offer. This paper analyses and compares French and Norwegian approaches to mass digitisation with a view of assessing their pros and cons.

European legislative framework for facilitation of mass digitisation through dealing with the issue of orphan works is represented by the EU Orphan Works Directive, complemented by a Memorandum of Understanding on the digitisation of out-of-commerce works agreed among some major stakeholders. Recital 4 of the Directive explicitly provides member states with a possibility to introduce national solutions to tackle broader mass digitisation issues other than the use of orphan works and Recital 24 specifically mentions the collective licenses and other collective management-based arrangements for the same purpose. The latter solution is also referred in the Memorandum. France and Norway are the countries that rely on the aforementioned possibilities for introduction (in France) or maintenance (in Norway) of additional national tools for mass digitisation and making available online of copyrighted works, outside the mechanism provided by the Orphan Works Directive.

In March 2012, France adopted its law on the digital use of out-of-commerce books of 20th century, providing for a statutory mechanism for transfer of exercise of the reproduction and communication to the public rights in digital form of certain books. The solution relied on a unique form of collective management of copyright characterized by a grant of exclusive authorisations, uncommon for collective management. The legitimacy of the law has been disputed since its adoption. In February 2014, the French Constitutional Council (Conseil constitutionnel) established that the mechanism complied with the Constitution, as a limitation to the rights of rightholders was not disproportionate to the pursued objectives of general public interest. Following persistent opposition, 6 March 2015 the Council of State (Conseil d'Etat) decided to submit to the Court of Justice of the European

Union (CJEU) the question of whether the mechanism introduced by the law for use of out-of-commerce books implemented though collective management is compatible with the Information Society Directive. While struggling with the legitimacy of the national solution, France passed a law 20 February 2015 transposing the Orphan Works Directive. The paper will describe in detail the unique but contested French mechanism for digitisation of out-of-commerce books as well as the manner in which the Directive is being transposed.

Unlike French law-makers, Norwegian legislators, while still working on the transposition of the Orphan Works Directive, did not need to provide for a special legal instrument for dealing with the issues of orphan and out-of-commerce works on the national scale. The extended collective management of copyright is a known tool for dealing with the issue of outsiders and quite some research has already been done on this approach of the Nordic countries. This paper will go a step further by looking closer at the reliance on the aforementioned legislative mechanism for implementation of the national digitization project, Bookshelf (Bookhylla). The paper will provide analysis of the two contracts regarding digital dissemination of books between the National Library of Norway and Kopinor, the collective management organisation representing rightholders: pilot contract of 23 April 2009 (expired 31 December 2011) and the currently valid contract of 30 September 2012. The analysis will be strengthened by the feedback of the parties to the contracts, collected through meetings with their representatives during a research visit to Norway.

The paper will conclude by some comparative remarks about the two national solutions and about their coexistence.

#### 2E. 2 .....

<u>Maurizio Borghi</u> (Bournemouth University) and Marcella Favale (Bournemouth University), "*Crowdsourcing the orphan works problem*"

Mass digitisation and online publication of archive and library materials, as well as museums artefacts, offers unprecedented dissemination channels for cultural items that otherwise would remain scarcely known and certainly unexploited. At the same time, digitization may be severely restricted due to the real or potential subsistence of copyright and related rights. In fact, a vast amount of recent cultural heritage items are "orphan works", namely material for which the copyright owner is either unknown or cannot be traced. The EU Orphan Works Directive (2012/28/EU), which has been implemented by most Member States by the end of 2014, has introduced an exception for cultural institutions, intended to facilitate digitization and dissemination of material in their possession. However, under the provisions of the Directive, right clearance remains overly expensive, time-consuming and, ultimately, a critical roadblock for cultural institutions. This is because the Directive is based upon the principle that, before a work is declared to be an orphan, the prospective user ought to carry out a "diligent search" of the rightholders. However, compliance with this legal requirement involves extremely high costs, which may not be affordable to cultural institutions, especially in times of sever budget restrictions. The diligent search requirement, upon which the whole European policy on orphan works is premised, represents the bottleneck to the future development of mass digitization in Europe.

The paper presents a possible solution to the "diligent search bottleneck". While the problem of clearing rights has been so far addressed in a "centralized" way, the paper illustrates a de-centralized approach to right clearance, based on public participation and on crowdsourcing certain phases of the diligent search process. The concept of building upon collective intelligence to perform legally binding searches of information has been already successfully applied in patent law. Crowd-sourced systems of prior art searching have been used both by patent offices to save time and improve the quality of the examination and by NGOs that oppose patenting in certain fields, to search prior art capable of destroying the novelty of patent applications. The paper applies a similar concept to diligent searches of copyright holders in the context of mass digitization of cultural heritage. It discusses how a decentralized system of diligent search can be designed in order to transform a diluted and dispersed information into a reliable and legally valid source to determine the copyright status of works. Finally, it makes the point the future of mass digitization in Europe will largely depend on wider public participation and involvement of European citizens.

The paper is the first output of a collaborative project funded under "Heritage Plus", the programme launched by agencies of 15 European countries and the European Commission as part of the Joint Programming Initiative in Cultural Heritage and Global Change.

2E. 3 .....

<u>Thomas Margoni</u> (University of Stirling), "The digitisation of cultural heritage: originality, derivative works and (non) original photographs"

The purpose of this paper is to explore the legal consequences of the digitisation of cultural heritage institutions' archives and in particular to establish whether digitisation processes involve the originality required to trigger new copyright or copyright-related protection.

Frequently, cultural institutions participating in digitisation projects are not fully aware of whether they possess, or could posses, specific rights stemming from the activity of turning their "physical" catalogue into a "digital" one. At the same time, some of these institutions are concerned that allowing an unrestricted reproduction and digitisation of the works in their collections would deprive them of an important source of income. Conversely, in recent EU policy documents it emerged that "obstacles in ensuring that public domain material remains in the public domain after digitisation, mainly in connection with photos and photographers' rights" are cause of legal uncertainty and market inefficiency.

In the light of these and similar concerns, the paper attempts to clarify and formulate recommendations regarding the copyright and related rights status originating from digitisation projects which, as the European Commission, Member States, cultural institutions and copyright literature report, is a cause of legal uncertainty.

2E. 4 .....

<u>Andrea Wallace</u> (University of Glasgow), "Claiming Surrogate IP Rights: When Cultural Institutions Repossess the Public Domain"

With digitization becoming the norm, cultural institutions are faced with increasingly difficult problems, especially when it comes to copyright. In theory, when cultural institutions digitize public domain works, legal issues become more manageable. In reality, gray areas still cloud these works, such as what quality to make the works available and whether the digital reproductions themselves are protected by copyright or fall in the public domain. Even if a work has no legal strings attached, financing digitization becomes problematic.

Through efforts to find sustainable solutions for these issues, the premise that 'an item in the public domain remains in the public domain' is increasingly not the case. To offset costs, many institutions condition permission to use digital reproductions of public domain works through certain restrictions or revenue producing agreements—agreements imposed either through a license or a website's terms as a copyright-by-contract and which function as a contract of adhesion.

Consequently, practices are becoming accepted that reassign certain rights to a work, as well as its digital surrogate, that have long expired—rights that are being claimed by a surrogate party. This paper explores such trends and addresses the relevant implications for the public domain. Parallel Sessions Abstracts

3 A

## Dynamics of International Legal Flora

3A. 1

<u>Paul Torremans</u> (University of Nottingham), "The Unitary Patent and the Unified Patent Court: A View from Private International Law"

The creation of a unified patent court that will not only deal with unitary patents, but also with European patents is the result of a clear policy to create a single unitary patent for the single market and to centralize litigation concerning such a single patent in front of a single court. Such a court is by definition supranational, but it will also not completely replace the national courts of the member states. This gives therefore rise to issues of private international law and in particular the jurisdiction of the unified patent court needs to be determined. A similar need arises in respect of the central unit and the various division of the court. One needs rules to determine which of them will have jurisdiction in each case.

The EU has decided to deal with this issue on the basis of an amended version of the Brussels I Regulation. The paper will therefore address in a first stage these changes to the Brussels I framework. A critical analysis of these will be followed by a second stage where the paper examines whether the system put in place is capable of achieving the policy goals that lead to its creation.

3A. 2 .....

<u>Caroline Paunov</u> (OECD), "Corruption's Asymmetric Impacts on Firm Innovation"

This paper documents the impacts of corruption on smaller- and larger-sized firms' adoption of quality certificates and patents. Using firm-level data for 48 developing and emerging countries, I analyze whether corruption's impacts are stronger on firms operating in industries that use quality certificates and patents more intensively. My results show corruption reduces the likelihood that firms in these industries obtain quality certificates. Corruption affects particularly smaller firms but has no impacts on exporters or foreign- and publicly-owned firms. While corruption does not reduce patenting, it lowers machinery investments for innovation. More reliable business environments foster firms' adoption of quality certificates.

## 3A. 3

Stefan Bechtold (ETH Zurich) and <u>Jens Frankenreiter</u> (ETH Zurich), *"Forum Selling in Germany: Supply-Side Effects in Patent Forum Shopping"* 

The relationship between legal systems and competition is a complex one. Competition among courts can lead to strategic behavior by market participants. Where court venue selection procedures are permissive, litigants often engage in forum shopping by bringing their case before the court thought most likely to provide a favorable judgment. Most of the existing research on forum shopping focuses on the incentives of litigants and the strategies litigants develop to forum-shop successfully. While such research assumes the existence of differences among court venues, the present project analyzes the other side of the forum shopping market: We are investigating to what extent competition among courts is driven by "forum selling" on the part of judges and courts. Our study focuses on patent litigation in Germany, Europe's most important court system for patent litigation. Based on a qualitative empirical study, which is currently in progress, we plan to describe the incentives judges and courts have, and the strategies that are available to them to stimulate forum shopping. We hope our study will make a useful contribution not only to the debate on forum shopping in patent law, but also to the general debate on forum shopping and judicial decision-making.

3A. 4 .....

Fabian Gaessler (Max-Planck-Institut for Innovation and Competition), "What to Buy when Forum Shopping – Determinants of Court Selection in Patent Litigation"

This study examines forum shopping by plaintiffs in patent litigation at German regional courts between 2003 and 2008. We derive predictions on the plaintiffs' court preferences from an expanded asymmetric information model of litigation. We use alternative-specific conditional logit models to estimate the plaintiffs' court selection. Our results show that plaintiffs consider potential opportunity costs due to delayed judgment in their court selection. This is in particular true if plaintiff and defendant are active in the same product market. Further, the spatial distance between plaintiff and court has a negative effect on court selection. In particular small plaintiffs value local access to court. These findings may contribute to the current debate on the design of the Unified Patent Court in Europe.

## 3 B Economics of Copyright

3**B.** 1

<u>Steven Watson</u> (Lancaster University), Piers Fleming (University of East Anglia) and Daniel Zizzo (Newcastle University), "*Perceptions of legal risk do not predict behaviour in unlawful file sharing: An empirical analysis*"

To reduce the widespread unlawful downloading of copyrighted media, industry has responded via litigation against individual file sharers and by lobbying governments to strengthen intellectual property laws. Such approaches have had limited success in reducing unlawful content sharing. We explore how much perceptions of legal risk impact upon stated unlawful behaviour as well as how relevant factors such as the perceived benefits of unlawful file sharing, trust in industry and legal regulators, and perceived anonymity online impact upon this perceived risk. We examine these questions via a large two-part survey of consumers of music (n = 658) and eBooks (n = 737). We find perceptions of legal risk fail to predict stated file sharing behaviour, while the perceived benefit of unlawfully downloaded files does predict behaviour. The relationship between perceived risk and behaviour is partially mitigated by perceived benefits. We also show that trust in industry and regulators enhance perceptions of risk, while perceptions of anonymity lower perceptions of risk. High trust and high anonymity impact on the effect of perceived benefit on risk perception. These findings have practical implications in terms of the likely success of different behavioural interventions and theoretical implications into how perceptions of risk are processed.

#### 3**B.** 2 .....

Joost Poort (Institute for Information Law, University of Amsterdam) and Nico van Eijk (Institute for Information Law, University of Amsterdam), "Digital Fixation: The Law and Economics of a Fixed e-Book Price"

Fifteen countries in the OECD, ten of which EU members, have regulation for fixing the price of printed books. At least eight of these have extended such regulation to ebooks. This article investigates the cultural and economic arguments as well as the legal context concerning a fixed price for e-books and deals with the question of how the arguments for and against RPM for e-books should be weighted in the light of the evidence. It concludes that while the evidence in defence of a fixed price for e-books is weaker still while the legal acceptability within EU law is disputable. Against this background, introducing a fixed price for e-books is ill-advised.

## 3**B.** 3 .....

<u>Hyojung Sun</u> (University of Edinburgh), "Beyond Copyright and the Evolution of Digital Music Services"

This paper aims to provide a new perspective on the relationship between copyright and technological innovation in the music industry. Despite the popularity of the subject, most attention has been drawn to copyright's direct impact on the music business or file-sharing activity. The process of technological innovation, however, is imbued with uncertainty, contingency and complexity, thereby, owes an elaboration on the interplay of the heterogeneous factors who have differing power and interests. Through a qualitative data analysis of interviews with a wide range of the music industry entrepreneurs and an in-depth case study of Spotify, this paper provides three key findings in copyright's role in the evolution of digital music services. First, the sociotechnical factors, as well as the legal allegations, influenced the decline of P2P networks. Second, in the form of negotiation of licensing deals with digital music service providers, copyright contributed to a resurgence of market control. Third, the process of firms' discovering and matching users' demands highlights the crucial role users play in technological innovation of the digital music industry. Moving beyond the linear understanding of copyright's impact on the technological development, this paper provides a much more complex and nuanced process of technological innovation in the music industry.

#### 3**B.** 4 .....

Paul Heald (University of Illinois), Martin Kretschmer (University of Glasgow) and Kris Erickson (University of Glasgow), "The Valuation of Unprotected Works: A Case Study of Public Domain Photographs on Wikipedia"

What is the value of works in the public domain? We study the biographical Wikipedia pages of a large sample of authors, composers, and lyricists to determine whether the public domain status of available images leads to a higher rate of inclusion of illustrated supplementary material and whether such inclusion increases visitorship to individual pages. We attempt to objectively place a value on the body of public domain photographs and illustrations which are used in this global resource. We find that the most historically remote subjects are more likely to have images on their web pages because their biographical life-spans pre-date the existence of in-copyright imagery. We find that the large majority of photos and illustrations used on subject pages were obtained from the public domain, and we estimate their value in terms of costs saved to Wikipedia page builders and in terms of increased traffic corresponding to the inclusion of an image. Then, extrapolating from the characteristics of a random sample of a further 300 Wikipedia pages, we

estimate a total value of public domain photographs on Wikipedia of between \$246 to \$270 million dollars per year.

## 3C Creativity, Re-Use and Copyright

3**C.** 1

Patrick Waelbroeck (Telecom Paristech) and <u>Martin Quinn</u> (Telecom Paristech), "*Competing UGCs*"

In this article, we analyze a model with strategic interactions between a right owner who can license parts of its intellectual property to an innovative user who chooses the differentiation degree between his derivative work and the original good, by including more or less of his own ideas. In the last stage of the game, both right owner and innovative user compete in the market place. The rightowner may or not benefit from the existence of the derivative work.

We provide a taxonomy of UGC strategies that can be used by the right owner to set the optimal copyright enforcement level. Our taxonomy is composed from two dimensions. The first is the reputation of the innovative user (famous or unknown). The second is the capacity to create and differentiate his content from the original product (copier or talented artist).

An unknown artist needs the demand generated by the original product to sell, whereas a famous artist has already an established audience.

Moreover, copiers have a larger cost to differentiate their work from the original good than the talented artists.

We show that, regardless of his type, the innovative user can have strategic incentives to differentiate his work from the original product, and therefore reducing product market competition.

We also demonstrate that, even when the innovative user is unknown and need the demand of the original product to sell his work, he can find a profitable strategy to enter the market without canibalizing sales from the original product.

#### 3**C.** 2

Jessica Silbey (Northeastern University School of Law), "Distribution's Diversity and Fairer Uses: A Qualitative Analysis of Borrowing Practices in Creative and Innovative Industries"

Based on a qualitative interview study with a range of copyright professionals (both creators and intermediar-

ies), I report on the variety of ways they describe disseminating their work and the reasons for doing so. I will catalogue the five primary ways of disseminating work - some which align with copyright protection and many that do not – and then I suggest some repercussions from the significant misalignment between copyright tools and creative practices for law enforcement and law reform. Because the diversity of ways and reasons for dissemination suggest an ill-fitting IP regime, there is concern that current copyright enforcement mechanisms may overprotect creative and innovative work to the detriment of access that builds businesses and professional reputation, second-generation creators and innovators, and a robust public domain. Studying in more granular ways the forms distribution takes, its reasons, and the particular industries and actors that engage in the varied distributional mechanisms also has implications for fair use determinations (ex-ante and ex-post); exception and limitation law reform (where more accurate bright line rules could be drawn); the scope of the derivative work right in copyright law; and compulsory licensing practices.

## 3**C.** 3

<u>Christian Katzenbach</u> (Humboldt Institute for Internet and Society) and <u>Lies van Roessel</u> (Humboldt Institute for Internet and Society), *"Playing without Rules? Regulating Imitation and Innovation in the Games Industry"* 

Copyright and other IP measures are routinely assumed to be key factors in the creative economies. Yet, empirical evidence for their specific effects on creativity and innovation is still scarce - and methodologically not easy to obtain. While there is abundant data on the creative outputs and the economic cycles of different media sectors, we still know little about the impact of copyright and other IP measures on actual creative practices. In this paper, we contribute to the growing body of empirical copyright research by investigating the tension between innovation and imitation in the digital games sector. In this field, copyright and other IP measures fail to draw a clear-cut line between legitimate inspiration on the one hand and illegitimate plagiarism on the other in this context. In a multi-method, qualitative study (discourse analysis, industry handbook analysis, semi-structured interviews) we investigate how different actors in the industry handle this tension in their daily practice. Findings indicate consensus across the industry that copyright plays a marginal role in regulating innovation and cloning. Whereas independent developers compensate this through strong informal norms and public claims of authorships, big studios base their development process on secrecy and market research.

3**C.** 4

Joe Karaganis (The American Assembly, Columbia University), "Notice and Takedown in the Age of the Robo Notice"

The practice of notice and takedown under the DMCA has changed dramatically in the last five or six years, driven by the adoption of automated notice-sending systems. As these systems became common, the number of takedown requests to many services skyrocketed, quickly overwhelming human vetting at the targeted services. Because of the liability risk associated with ignoring a DMCA request, most targeted services responded with "DMCA+" measures for managing the takedown process on the new, much larger scale, ranging from blanket takedown, to algorithmic triage, to content filtering.

Increasingly, the online regulation of speech passes through such systems, subject to little human intervention or verification and a relatively poor record of accuracy. Our work traces this history and evaluates the reliability of automated procedures, based on interviews with service providers and coding of Google Search notices.

## 3 D Market Structure and IP

3D. 1

Robert Ashcroft (PRS for Music) and George Barker (Australian National University), "Is copyright law fit for purpose in the Internet era?"

3D. 2 .....

<u>Thibault Schrepel</u> (Mayer Brown), "Friedrich Hayek's Contribution to Antitrust Law and Its Modern Application"

3D. 3

Nizan Packin (Baruch CUNY) and Yafit Lev Aretz (Columbia Law School), "Big Data and Social Netbanks: Are You Ready to Replace Your Bank?" <sup>3 E</sup> Intangibles, Tacit Knowledge and Know-How

#### 3E. 1 .....

Per Botolf Maurseth (BI Norwegian Business School) and Roger Svensson (IFN), *"Tacit Knowledge and the Dynamics of Inventor Activity"* 

The inventor generally knows more about the invention than what is written down in a patent application. Because of such tacit knowledge, it might be necessary that the inventor has an active role when the patent is commercialized. Here, we empirically analyze when inventor activity is important for a successful commercialization of patents by using a detailed patent database. The database has unique information on inventor activity, commercialization mode of the patent and profitability of commercialization. In the empirical estimations, we find that inventor activity is especially important for a successful commercialization when a patent is sold or licensed to another firm. When a patent is sold or licensed in a second phase, it is still inventor activity in the first phase that matters for profitability. Thus, our interpretation is that tacit knowledge and close cooperation between the inventors and the external firm are crucial for a successful commercialization of patents.

#### 3E. 2 .....

<u>Russell Thomson</u> (Swinburne University) and Gaetan de Rassenfosse (EPFL), "*R&D offshoring and home industry productivity*"

We examine the conditions under which offshoring research and development (R&D) activities can benefit home country industry. The analysis uses comprehensive patent based indicator of R&D offshoring and considers industry-level data covering 2-digit manufacturing sectors across 18 OECD countries between 1981 and 2007. We tackle the issue of simultaneity by using R&D tax policy as an instrument for technology stock generated via offshoring. We propose a new approach to investigate the location that patented technology is applied, based on applicant filing behavior. The data suggest that technology seeking R&D offshoring contributes positively to industry productivity in the home country and that this effect is conditioned on whether the technology is applied in production in the firms operations in the home country.

#### 3E. 3 .....

<u>Chris Dent</u> (Murdoch University), "Patents, Trade Marks and Know-How: Regulated by Different Contracts and Motivators"

This paper is based on two assumptions: contracts are central to the control of "creations"; and the actions

Notes

of an individual around creations may be understood in terms of "what motivates" them. Here, creations cover those that are protected by IP statutes and "know-how" covers the forms of knowledge that are, at best, controlled through the use of restrictive clauses in employment contracts. And, by "what motivates" them, I mean that any person, whether a creator or an investor in creations, incorporates (at least subconsciously) a number of motivators in their decisions around creations. There are three categories of motivators that impact on these decisions: internal, external and reputational motivators. This paper applies this "motivators" perspective to a range of creations - patents, trademarks and know-how. This range is important because different contracts are used to regulate the use of the different creations. Bringing these two understandings together enables a perspective that offers a more nuanced understanding of the processes of creation than is evident in much of the IP literature. It suggests that while, for example, trademarks and patents are seen as "proper" IP, there are, in some cases, more similarities in the seeking of patents and know-how than there is between those two and the seeking of trade marks - an acknowledgement of the different decision-making processes of the parties involved in each form of creation.

#### 3E. 4 .....

<u>Margo Bagley</u> (University of Virginia), "Towering Wave or Tempest in a Teapot? Synthetic Biology, IP and Economic Development"

Synthetic biology has the potential to provide cures for numerous diseases, stable supplies of therapeutic compounds, and new organisms and products that are limited only by the human imagination. But synthetic biology also has the potential to cause profound disruptions to the environment, and to the livelihoods of tens of thousands of farmers in the Global South who rely on growing and harvesting natural products. It also has the potential to impact how a recent treaty, the Nagoya Protocol, will be implemented in national laws and even has the potential to impact the scope of a potential new genetic resource agreement being negotiated at the World Intellectual Property Organization.

However, it is also quite possible that neither the grand promises nor dire perils of synthetic biology will ever be realized. This paper will explore some of the emerging issues at the intersection of synthetic biology research, intellectual property and biodiversity protection, and human economic development.

## 4A SERCI/EPIP Joint Session

**4A. 1** <u>Stan Liebowitz</u> (University of Texas at Dallas), "Paradise lost: Copyright for British authors in 19th C. America"

The payment to British authors by American publishers during the mid-19th century, when the works of British authors did not have any American copyright protection, is sometimes presented as evidence that authors are well rewarded without the need of copyright protection. The introduction of this evidence to economists and some legal researchers came largely from Arnold Plant's 1934 critique of copyright. Plant relied on evidence gathered in a UK Royal Commission Report published in 1878. In this paper I examine the evidence put forward in the Royal Commission Report as well as data on payments to British Authors from a leading American book publisher during the mid-1800s. The conclusion I reach is that most British authors were not paid at all by American publishers and the majority who were paid received considerably less than they would have received under copyright. Further, a cartel-like agreement among leading American publishers enhanced the payments to British beyond what they otherwise would have been. This result is in contrast to many readings of Plant found in the literature, although a careful reading reveals that Plant claimed less than he seemed to be claiming.

#### 4A. 2 .....

<u>Christopher Buccafusco</u> (Chicago-Kent College of Law) and Paul Heald (University of Illinois), "Two Views for the Steeple: Testing Porn Exceptionalism in Trademark and Copyright Tarnishment Claims"

Copyright and trademark owners fear that the valuable images and symbols they create will be tarnished by unauthorized uses, so they seek more perfect control to prevent what they perceive to be unwholesome consumer associations. In a nutshell, Disney fears the damage that might be caused by the release of an x-rated film starring Mickey and Minnie Mouse–and possibly Goofy–over the internet. Even copyright skeptics admit that "Rowling, Disney and other creative authors have at least some justification for being outraged when their characters are used in contexts wholly different from the original, such as pornography." Whether the fear of tarnishment is justified or not, claims of damage have had real world effects. In 2006, Congress amended the Lanham Trademark Act to provide a remedy against those who "use of a mark or trade name in commerce that is likely to cause ... dilution by tarnishment of [a] famous mark." In 1998, Congress also retroactively extended the term copyright 20 years, a solution suggested by those who feared works falling into the public domain would be subject to misuse. Overseas, the specter of tarnishment has stunted the full development of a parody defense in EU copyright law and may have resulted in the narrowing of the parody defense in U.S. law.

Despite its surface appeal, the theory underlying the tarnishment hypothesis is surprisingly thin and few attempts have been made to discover whether copyright and trademark owners actually suffer damage when unauthorized and unwholesome uses of their images are made. This article presents three novel experiments designed to test the tarnishment hypothesis. In Part I of this article, we briefly survey how tarnishment doctrines, particularly those condemning sexual associations, operate in law. In Part II, we summarize the theories that explain the danger posed by unwholesome, unauthorized uses of copyrighted and trademark goods. In Part III, we summarize the extant literature on the effect of sex on brand perception and purchasing decisions and propose a test of tarnishment caused by pornographic associations, the most extreme worry asserted by image owners. In Part IV, we describe our methodology and report the results of three experiments. These experiments attempt to induce and measure tarnishment by exposing subjects to movie posters of pornographic versions of existing popular movies. We test whether subjects who have been exposed to these poster attach diminished market value or personal value to the underlying movies compared with subjects who have not seen the tarnishing images. In Part IV, we caution policymakers about blindly accepting the tarnishment hypothesis and make some modest recommendations for reform, including the elimination of the distinction currently made between parody and satire in copyright law and elimination of the presumption of harm currently made in certain types of trademark tarnishment cases.

## 4 B Geographical Indicators and Regions

#### **4B.** 1

<u>Peter Drahos</u> (Australian National University), "Australia's Regions and Agriculture: Can Geographical Indications Help?"

The paper outlines the results of a series of case studies carried out in Australia to assess the potential regional development benefits of geographical indications. The study involved 172 semi-structured interviews across a broad geographic swathe of Australia's agricultural landscape and a diversity of food production value chains. The data suggests that a flexible, low-cost GI registration system could be a useful response to some local issues and conditions in particular regions and relating to particular problems.

4**B**. 2 .....

<u>Nicola Searle</u> (Goldsmiths, University of London), "The Economics of Geographical Indications: Making Culture Tangible"

Governments and producers promote Geographical Indications (GI) as a policy measure to provide protection from imitations and bolster rural development. However, the emotive and anecdotal evidence to support these arguments is poorly evidenced. This paper seeks to rebalance these arguments and explore the negative and positive externalities GIs create. It does so in two parts: a critical examination of the economic arguments and literature, and a case study of the Persian carpet industry. Based on semi-structured interviews conducted in Iran, the case study presents an analysis of the use of intellectual property in a non-agricultural GI (NAGI) setting. In an era where IP is constructed as an incentive to innovate, and when the EU may expand NAGI, this paper questions the fundamental economic proposition of GIs.

### 4**B.** 3 .....

<u>Hazel Moir</u> (Australian National University), "*Geographic Indications: heritage or terroir*?"

This paper considers geographic indications (GIs) from both the European terroir perspective and the New World heritage perspective. Consumer protection rationales are critically assessed. Arguments about privileges for producers, often couched in terms of rural development and sustainability, raise competition concerns. These are drawn out using material from case law and GI registrations for foodstuffs in the European Union. This identifies the concentrated usage of GIs and the principal competition issues: defining boundaries and generic names and the strength of the granted privileges. The key sticking point in global GI negotiations is "strong-form"

## Abstracts

GIs which extend producer privileges substantially beyond those provided by trademarks. Options for tackling this major area of disagreement are identified, drawing on the analysis of competition concerns and alternative approaches used in Australia. This greater clarity might reduce the extent of the conflict between Old and New Worlds over legal privileges for geographical indications.

### <sup>4C</sup> Patent Value and Costs

#### 4C. 1

Federico Munari (University of Bologna) and Azzurra Meoli (University of Bologna), "The Patent Paradox in Crowdfunding. An empirical analysis based on Kickstarter data"

The goal of the paper is to provide theoretical explanations and to present empirical evidence about the role of patents in facilitating access to funding on crowdfunding platforms. The research question we address is the following: do projects based on patented technologies have a higher likelihood to be funded in crowdfunding campaigns, as compared to a control group of similar projects (with no patents)? We use data from Kickstarter and compare a sample of 272 projects based on patented technologies to a matched group of other projects. Our analyses suggest the existence of an apparent paradox. On the one hand, projects that declare the presence of an underlying patent represent a tiny minority of the whole population of crowdfunding projects (also when considering most technology-intensive sectors). On the other hand, the possession of patents does not seem to enhance the likelihood to obtain funding in a crowdfunding campaign. We provide explanations to reconcile such evidence with previous theoretical explanations on the role of patents in accessing external finance.

Jussi Heikkilä (University of Jyvaskyla), "The relationship between first and second tier patent protection: The case of the Dutch short-term patent system abolition"

4**C.** 2

Empirical evidence on the interaction between patent and second tier patent systems in advanced economies is almost non-existent. This paper studies how the abolition of the Dutch short-term patent system in June 2008 affected the patent filing activity at the Dutch patent office. The abolition was motivated by the uncertainty, which unexamined short-term patents were claimed to create. The analysis with synthetic control method indicates that the abolition of the short-term patent institution led only to a temporary decrease in the level of patent applications. This might indicate that potential short-term patent applicants shifted to apply for normal 20 years patents. The result questions justifications of short-term patent systems in advanced economies: a two-tiered system complicates "the rules of the game" but might not provide any additional boost to innovation in comparison to a normal patent system.

#### 4**C.** 3

Mark James Thompson (Swiss Federal Institute of Intellectual Property), "The Cost of Patent Protection: Renewal Propensity"

We analyse the effect of patent thickets on entry into technology areas by firms in the UK. We present a model that describes incentives to enter technology areas characterised by varying technological opportunity, complexity of technology, and the potential for hold-up in patent thickets. This two stage model encompasses entry and firms' subsequent patenting decisions. We derive a number of predictions regarding effects of complexity (positive), opportunity (positive), expected hold-up (negative) on entry from the model. The predictions are tested using data on patenting activity of UK firms. We distinguish empirically between complexity and hold-up potential and control for technological opportunity in several different ways. The measure of hold-up potential is associated with a reduction of first time patenting in a given technology area, controlling for the level of technological complexity and opportunity. Technological areas characterised by more technological complexity and opportunity, in contrast, see more entry. This is in line with the predictions we derive from the theoretical model. Our evidence indicates that patent thickets raise entry costs, which leads to less entry into technologies. This effect is independent of a firm's size in our data.

## <sup>4D</sup> Technology, R&D and Patents

Georg von Graevenitz (Queen Mary University of London), Bronwyn Hall (University of California, Berkeley) and Christian Helmers (Santa Clara University), "Technology Entry in the Presence of Patent Thickets"

4D. 2 .....

4D. 1

Emilio Raiteri (EPFL), "More of the same or something different? Technological originality and novelty in public procurement-related patents"

During the last decade demand-side innovation policies have received renewed interest and innovative public procurement has been increasingly considered as a de facto technology policy. However, recent studies say little about the kind of innovations procurement is able to induce. This gap in the literature is surprising if we relate the current debate with the economic-historical analyses illustrating the contribution of the US government in spurring major technological breakthroughs.

This work hypothesizes that the innovative output induced by procurement contract is more exploratory and novel in nature compared to what would be achieved in the absence of public demand. To test this hypothesis I design a quasi-experiment, in which patents are the units of analysis. Treated patents are the output of a federal procurement contract. The control group is constructed through matching methods based on patent characteristics. Treated and control group are compared to check for differences on two kind of outcome variables: i) the originality index ii) a set of novelty-related measure based on technological classi fications assigned to each patent. Results suggest that public procurement produces innovations that are peculiar objects in the technology space, that embody more novel and wider combination of technological capabilities.

#### 4D. 3 .....

Riccardo Cappelli (University of Bologna), Marco Corsino (University of Bologna) and <u>Salvatore Torrisi</u> (University of Bologna), "Patent strategies: protecting innovation, preempting competition and defending the freedom to operate"

Patents are increasingly important for reasons that go beyond protection of inventions from imitation, which is the traditional patent strategy. Many patents are not used commercially but generate rents by blocking rivals' patents - a proprietary strategy. They can also be used to avoid the risk of being held-up by other patent owners or as a bargaining chip in litigation and cross-licensing - a defensive strategy. This paper empirically investigates how the choice of patent strategy varies with the characteristics of patent owners and the technological environment where patents originate. We exploit data from a large-scale survey of patent applications at the European Patent Office to test our research hypotheses. Multinomial logit estimates yield the following results: (i) a defensive strategy is more likely to be pursued for patents that protect complex technologies and, conditional on complexity, the probability of opting for this strategy increases with the firms' sunk capital investment; (ii) a defensive patenting is also more likely when a firm faces competitors for the patent, but competition in the core technology of the firm makes a proprietary strategy more likely; (iii) a defensive strategy is more likely when the firm has a large patent portfolio.

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## <sup>4 E</sup> Innovation Behaviour of Firms

### 4E. 1 .....

Irene Calboli (Singapore Management University/Texas A&M University School of Law) and Dan Hunter (Swinburne University of Technology Law School), *"Trademark Proliferation"* 

Trademarks have grown like kudzu. There is, however, no comprehensive literature on the worrisome trend of what we call "trademark proliferation." This article seeks to address that gap.

First, this article shows why trademark proliferation is a problem. Proliferation means that there are many marks in the commercial sphere, which are not needed for the purpose of identifying the source of the good and or the service to which these marks attach as these goods or service are already identified by a other marks. At the same time, the strength of the rights granted to these marks has dramatically increased, as a result of the general expansion of trademark rights.

Second, the article examines the important reason why scholars have not taken a strong stand against trademark proliferation. There seems to be an assumption that these marks satisfy the foundational distinctiveness requirement. Yet, the problem is that distinctiveness has come to mean little more than "recognizable" by the human senses. This is not at all what we should mean by "distinctive"—and likely not what was meant by the courts when they interpreted the concept of distinctiveness as one of the pillars of trademark protection.

In the final section of the article we discuss how we can limit this proliferation. First, we rescue distinctiveness from its current formulation, and give it the conceptual teeth it needs to operate as a limit for trademark protection. Then we examine aesthetic functionality and argue for a better theory of aesthetic functionality as a needed limitation against trademark proliferation.

4E. 2 .....

Henning Berthold (University of St Andrews) and Barbara Townley (University of St Andrews), *"Innovation and IP: A Dialectical View"* 

This paper aims to explore the ambiguous space of innovation and intellectual property (IP) by juxtaposing new venturers' conflicting accounts of the significance of IP and critically engaging with established economic arguments that frame the concept as a means of incentivisation for creativity and innovation. Whilst it has gained prominence in the political and public discourse, the state of the economic literature on such effects of IP is inconclusive. In fact, contrary to the orthodox view, the paper finds support for the argument that it is in the absence of intellectual monopolies that competition is fierce and innovation may thrive. This is particularly evident in the case of new entrepreneurial ventures aspiring to the Schumpeterian notion of being first (to market) and being best. It is argued that the ambivalent state of IP is not least to do with an increasingly fragmented understanding of what constitutes (economic) value and how it ought to be created. Using empirical material from a Scottish innovation initiative, the paper illustrates the growing tensions between public and private as manifest in the handling of intellectual goods, and contributes to a more nuanced theory of IP that emphasises its conditional relevance.

## 4E. 3 .....

Cecilie Bryld Fjællegaard (Copenhagen Business School), Karin Beukel (University of Copenhagen) and Lars Alkaersig (Technical University of Denmark), "Designers as Determinant for Aesthetic Innovations"

Aesthetic innovations are increasingly becoming an important appropriation mechanism for firms. During the last ten years the growth of design patent applications (protection covering aesthetic innovations) has tripled, while both patent and trademark applications have "only" doubled. During the same period, design patents have also been main IP at stake in IP litigations, for example in the smart phone industry. However, in contrast to firms growing interest in aesthetic innovations, our current knowledge of the determinants hereto is limited. Labor mobility studies in innovation has mainly focused at explaining how scientists are core ingredients in creating technological innovations. This paper investigates adds to labor mobility and innovation studies by examining whether the same story is true when we consider mobility of designers and aesthetic innovations? We explore a unique dataset containing information on firms, their hiring of designers and aesthetic innovations measured by design applications (design patents). Our findings show that hiring a designer does increase firms' likelihood of producing aesthetic innovations. Hence, designers are determinant for aesthetic innovations. However, the firm needs prior experience in registering design rights in order to fully benefit from the hiring of a designer.

## Standards, Interoperability and IP

4 F

4F.1

Florian Ramel (Technische Universität Berlin) and Knut Blind (Technische Universität Berlin), "The Influence of Standard Essential Patents on Trade"

Standard essential patents (SEPs) are of increasing importance in the ICT sector. For the first time, we examine their effects on trade flows while controlling for stocks of standards and patents using a gravity model and panel data. To be able to assess the actual global production patterns, we use trade in value-added data in contrast to traditional gross trade flows. This allows us to analyze the influence of SEPs in global value chains (GVCs) of the ICT industries.

We find SEPs to be trade enhancing. The interaction between SEPs and national standards, however, hampers trade because these two factors can promote temporary monopolies. Moreover, we find a macroeconomic cross licensing effect. In contrast to other patents, SEPs influence trade flows positively for both exporters and importers. This results from the strong intermingling in the global ICT production. To produce standardized technologies producers license their patents reciprocally and generate gains from trade for all participating economies. Lastly, we show that SEPs are more valuable than patents without references in standards when it comes to the integration of non-ICT products and services into the GVCs of the ICT sector.

#### 4F.2 .....

Rudi Bekkers (Eindhoven University of Technology) and Arianna Martinelli (CNR-IBINET and Scuola superiore Sant'Anna), "The effects of the recent EPO policy change to consider standards-related documentation as prior art"

The aim of this paper is to investigate the causal effect of a recent attempt undertaken by the EPO to improve the quality of the patent granting process. To do so we examine a policy change that aimed at including the information revealed during the standardisationsetting process into the official definition of prior art. All the empirical analysis consistently support that the policy was successful. Indeed, we find a negative and strongly significant reduction in the granting rate, suggesting that the process of patent granting has become more careful and selective after the policy implementation.

## 4F.3 .....

<u>Sally Weston</u> (Bournemouth University), "Encouraging interoperability by the sharing of interface information obtained by reverse engineering"

The reverse engineering provisions of the Software Directive recognise the need to balance control and openness but the criteria for determining the positioning of the 'pivot' is not yet established. Many forms of complex software, such as 3D CAD software, provide a core and critical function for users, and the integrity of the users' proprietary data must be taken into account when adjusting the balance between control and openness. Any change must avoid market destruction. Mandatory disclosure of interface information is considered overlyinterventionist and probably unworkable as interfaces are difficult to categorise. Reverse engineering is a vital tool to gain interoperability and as its purpose is limited there is no reason to protect the first comer. Efficient reverse engineering as permitted by the Software Directive should be encouraged. There are doctrinal and economic rationales for allowing interface specifications obtained by legitimate decompilation to be shared. This recommendation is discussed with mechanisms to implement are outlined, including a register, and the benefits of copyright and patents having similar provisions discussed. Consideration is given as to how these recommendations could work with the recommendations of the 2013 Commission Staff Working Document.

## Abstracts

## The Role of Disclosure in Patent Systems

Chair: Stuart Graham (Georgia Tech)

1.1

<u>Yoshimi Okada</u> (Hitotsubashi University), "Effects of early patent disclosure on knowledge dissemination: Evidence from the impacts of introducing Pre-Grant Publication System in the United States"

In order to assess the disclosure function of the patent system, this study examined the impact of the pregrant publication system introduced in the United States in 2000. Unlike earlier studies, the applicant (inventor) non-self-citations (excluding examiner citations) were used to track knowledge flow. The causal effects of disclosure were identified by examining the changes in behavior before and after this legal change. The introduction of the pre-grant publication system was found to accelerate the initiation of knowledge diffusion significantly across all technology areas, except for Chemical field. The effect was the strongest in the Computers & Communications field, which had the longest publication lag before the reform. In addition, the initial slope of the diffusion curve rose while the long-term level of citation flow declined in the Computers & Communications field. In contrast, both of them rose in the Electrical & Electronic field. These results suggest the possibility that early disclosure not only stimulated complementary inventions but also helped inventors recognize early the duplications and then helped the reductions of duplicative R&D and/or applications, in a field with a long publication lag. In addition, we found that the examiner citation curve begins significantly earlier and more sharply compared to the applicant citation curve, which shows that examiner citation is a wrong measure of knowledge flow.

1.2

<u>Sadao Nagaoka</u> (Tokyo Keizai University), "Effects of stronger disclosure rule on applicants' behavior and on examination efficiency: Evidence from Japan"

This study investigates the impact of stronger prior art disclosure rule introduced in Japan in September 2002 on the disclosure conduct by the applicants and on the examination efficiency. Such rule was introduced to improve the examination efficiency as well as to strengthen the stability of the patent right, although the penalty of not following the rule is minimal. The disclosure of the prior art which is more relevant for examination increased significantly after the legal change. A theory suggests that an inventor with high quality patent is more likely to disclose the prior art since the gain from examination efficiency as well as from the stability of the patent right is larger. We find empirical results supporting these predictions.

**1.3** <u>Stuart Graham</u> (Georgia Tech), "The Disclosure Function of Patents"

Theoretically, the patent system has been justified on several different bases. Primarily, the awarding of patents is supported on the incentive rationale. While the field often speaks of the additional benefits that flow from the disclosure function of patenting, whether from cumulative innovation or a reduction in wasteful duplicative inventive effort, there have been few attempts to empirically validate such benefits. This paper presents preliminary analysis of the extent to which innovators rely on patent disclosures, and the characteristics of such innovators as well as the determinants of employing patent information in the innovating process. This study uses data from the 2008 Berkeley Patent Survey, administered to young US technology firms in the biotech, medical devices, IT hardware and software/Internet sectors. About 1,300 firms responded. Participants were asked whether they checked patent literature when innovating, and if so, at what point. The responses show that patent information is consulted, although the degree differs significantly between groups of respondents. Venturebacked firms consult such information more regularly, and in certain sectors-notably biotechnology and medical devices-show a greater reliance on patent information than others, particularly compared with software and Internet start-ups. Moreover, the results demonstrate that when firms consult patent literature, they tend to do so relatively early in the innovation process. While patent holders are more likely to check the literature, some firms that own no patents also reference patents.

<u>Dietmar Harhoff</u> (Max-Planck Institute), "Patent Disclosure: Evidence from the PatVal Surveys"

This presentation will focus on the relationship among different types of information inputs (including patent documents) in the generation of follow-on patented invention, and information characteristics associated

1.4

with differential impact, in terms of citations and value, of European patents. It will include key figures concerning the research inputs (such as the characteristics of the inventors, the motivations to innovate, the characteristics of the innovation process), and the innovative performance of entities in six different European countries (i.e. the value of the innovations produced by European inventors). The data on which the presentation is based are drawn from a survey of a large sample of inventors of EPO patent applications. The survey was carried out under the PatVal-EU projects I and II sponsored by the European Commission. Findings will be discussed.

## 2 Measuring the Creative Economy (sponsored by NESTA)

Chair: Philip Schlesinger (University of Glasgow)

<u>Jonathan Haskel</u> (Imperial College London) <u>Hasan Bakhshi</u> (NESTA) Dimiter Gantchev (WIPO)

As the creative economy has steadily risen in importance in the estimation of policymakers, the imperative to measure this still relatively new object of policy and its underlying activity has grown. Claims about the creative economy's scale and its relative dynamism abound and governments proclaim its contribution to GDP and GVA in such resoundingly confident terms that they are usually uncritically reproduced by media commentary and believed by those working in the creative sectors. But as this session will show, matters are more complicated and certainty harder to achieve. With a trio of panellists all involved in the world of policy but representing different interests and approaches, this session offers a frank engagement with matters generally taken for granted and still too little discussed.

Hasan Bakhshi of Nesta, will discuss the Dynamic Mapping Approach to defining the creative economy and classifying occupations and industries as creative or not, being developed at the innovation think-tank. He will identify its key features and discuss the ways in which it meets the needs of policymakers and where it does not. As the quest to develop metrics of general applicability continues, he will conclude by exploring some of the issues raised in extending the approach internationally.

Dimiter Gantchev of The World Intellectual Property Organization (WIPO) looks at the issue from the standpoint of an international agency. Measurement has responded to policy demands by the WIPO Member States interested in the overall economic contribution of copyright that might enable governments to compare the performance of the sector domestically with other sectors and internationally with other countries. There are many variations in governments' motivation for undertaking such research. Comparability has remained a key incentive for the use of a harmonized methodology with specific data collection challenges met on the ground. How the results then play out is an unpredictable question and achieving sustained comparability a major challenge.

Jonathan Haskel, an economist and academic at Imperial College, raises, questions about how to approach many measuring the creative economy and the moot question of which industries are and are not creative. What activity should be measured in such cases? And how does such measurement fit with other economic measures? Creative activity results in "intangible" or knowledge assets. But the National Accounts are a welldeveloped system for measuring tangible assets (like machines or buildings): so how does the creative economy fit in? Further, if credible measures can be devised what implications might there be for economic growth and comparative economic performance?

## **1A** SERCI/EPIP Joint Plenary Panel: Compensating Creators

*Chair:* Marcel Boyer (Université de Montréal and CIRANO)

Christian Handke (Erasmus University Rotterdam) Ruben Gutierrez Del Castillo (Fundación Autor) Peter Jenner (Sincere Management) Nicola Solomon (Society of Authors) John Street (University of East Anglia) Eva Van Passel (Vrije Universiteit Brussel)

Copyright law provides the basis for rewarding creators but it neither ensures that they are paid nor that earnings sufficiently compensate them for the investment of their time and human capital in creating protected works. What determines compensation in that sense is the market value of the contractual and institutional arrangements that exist for payment. Another sense of the term compensation is the 'equitable remuneration' for the use of their works in a licensing scheme over which they have no control; in this case, assessing the value of rights is difficult without the guidance of market prices. Social scientists specializing in copyright, including members of this panel, have studied both these aspects, producing data that has implications for policy on copyright and for cultural supply in general; other members of the panel belong to organisations representing creators, whose views are important for further academic research.

## **EPIP Special Invited Panel: The** use of trade dress provisions under trade mark law and its implications for design, creation and competition in design-intensive industries

Chair: Beth Webster (Swinburne University of Technology)

<u>Alan Marco</u> (US Patent and Trademark Office) <u>Dan Hunter</u> (Swinburne University of Technology)

Estelle Derclaye (University of Nottingham), "Shape(shame)less? Using trademark law to protect trade dress in the EU"

According to OHIM and the EPO, IP-intensive industries are those which use a lot of IP-protected material to make their products. How do design-intensive industries cope with using shapes of products and/or their packaging protected by trademark rights belonging to others? Both follow-on innovation and competition can potentially be hampered by such protection as designers cannot reuse those shapes as they are trademark-protected and trademark protection, contrary to other IPR, can last forever.

This paper examines EU trademark statutory and case law in relation to shapes and specifically packaging and its consequences for competition and follow-on design innovation including if, and if so how, trademark law makes design law redundant when undertakings choose to trademark a shape rather than protect it via design law. Owing to time constraints, the paper does not consider colour marks.

## Access to Data (with chief economists)

Chair: Tony Clayton (Imperial College London)

<u>Joel Waldfogel</u> (University of Minnesota), "Data Needs for Assessing the Function of Copyright"

The purpose of copyright is to provide rewards adequate to induce creators to continue creating new works of value to producers and consumers. Recent technological changes have affected both revenue and costs in copyright-protected industries. Hence, while producers' revenue is an important indicator, it is alone inadequate for assessing whether copyright is working. Instead, we need to assess the value of the new products created, a task that one should admit at the outset is difficult. Quantifying the number of new works is an important start, but given the skew in products' appeal, data on the number of works are ideally supplemented with data on the usage of works, both by time and by vintage of creation. In some cases the ideal data exist and are available; in other cases they exist but are expensive. In still other cases the data are proprietary and unavailable to researchers. Hence, researchers must be creative - an open-minded – in data that shed light on the fundamental question of how recent technological changes have affected the operation of the copyright-protected industries. Coordinated efforts to make data available to the research community would be valuable.

*Responding:* Nathan Wajsman (OHIM), Kamil Kiljanski (European Commission DG Internal Market and Industry), Pippa Hall (UK Intellectual Property Office) and Mosahid Khan (WIPO)

## A Legal and Empirical Study into the Intellectual Property Implications of 3D Printing and Policy Considerations

**Invited Panel Sessions Thursday** 

Chair: Lilian Edwards (University of Strathclyde)

1**A.** 1 .....

<u>Dinusha Mendis</u> (Bournemouth University), "A Legal and Empirical Study into the Intellectual Property Implications of 3D Printing – Conclusions and Recommendations"

1A. 2 .....

<u>Phil Reeves</u> (Econolyst), "The Current Status and Impact of 3D Printing Within the Industrial Sector: An Analysis of Six Case Studies"

1A. 3

Davide Secchi (University of Southern Denmark), "A Legal and Empirical Study of 3D Printing Online Platforms and an Analysis of User Behaviour"

**1A. 4** <u>Pippa Hall</u> (UK Intellectual Property Office), "A Legal and Empirical Study into the Intellectual Property Implications of 3D Printing – Policy Considerations"

## **The Unitary Patent and Unified Patent Court**

*Chair and Introduction:* Geertrui Van Overwalle (KU Leuven/Louvain)

**1B.** 1 .....

<u>Bronwyn Hall</u> (University of California, Berkeley), "The impact of international patent systems: Evidence from accession to the European Patent Convention"

The introduction of the European unitary patent presents firms with a new alternative for protecting their intellectual property, one that offers international protection rather than a set of choices for national protection. Although in principle such an option offers a lower cost and simplified system for firms desiring widespread coverage, some have critiqued the introduction as disadvantaging smaller firms in less-developed economies. To shed some light on this subject, we study the accession of 12 transition and emerging market countries to the European Patent Convention (EPC), those who joined between 2000 and 2008. We use firm-level data to explore the impact of the accession on patenting behavior by firms in those countries. The focus is on the differential behavior of foreign and domestic firms faced with a new choice of international versus national-level patenting. We examine the extent to which (a) domestic entities file fewer patent applications with the national office and more with the EPO, (b) more domestic entities obtain patent protection domestically, (c) fewer foreign entities apply for patent protection with the national office and obtain instead an EPO patent, (d) more foreign entities obtain patent protection in the country by validating an EPO patent in the country.

#### 1**B.** 2 .....

Bruno Van Pottelsberghe (Université libre de Bruxelles)

**1B. 3** ..... Esther van Zimmeren (KU Leuven/Louvain)

## <sup>2A</sup> IP Governance, Big Data, Data Ownership and Privacy

*Introduction and Chair:* Ingrid Schneider (University of Hamburg)

2A. 1 .....

<u>Ingrid Schneider</u> (University of Hamburg), "Big Data, IP, Data Ownership and Privacy: Conceptualising a conundrum"

Big Data is a buzzword to indicate the present and future of data aggregation and analysis, from research and data-related business towards the internet of things. However, one central question as yet has remained unresolved: Who owns data? Can data be owned? And if so, who is the owner?

Property in data challenges traditional concepts of civil law which from Roman times have attributed property to tangible goods. Data are intangible goods which in many ways match the public good character of information and knowledge (Arrow 1962; Nelson 1959), at least with respect to non-rivalry in use. Concerning questions of access and exclusion, issues of data ownership need to be addressed in the advent of Big Data, as they are strongly associated with power distribution. Data as such are not regarded as property but can be protected via trade secrets, copyright, and other means. For structured databases, a sui generis database right was created by the EU Database Protection Directive (29/9/EC) which protects the "substantial investment in either the obtaining, verification or presentation of the contents" [Art. 7(1)]. Similarly, arguments for ownership and trade in data often rely on "return on investment" justifications.

This may, however, form a weak rationale for new business models in the internet and social media, in which users get services for free, but "pay" with their personal data, often without their own knowledge ("If you don't pay for the product, you are the product"). Concerns about violation of privacy and clashes with human rights need to be addressed by shaping the legal and political governance of Big Data.

In response to the network effects of the internetbased data economy, the subsequent power inequalities between users, providers, and intermediaries call for legal interventions. Some scholars have proposed individual ownership of data to empower prosumers (Lanier 2013). Others reject the commodification of (personal) data, and strongly call for public ownership, against private appropriation (Morozov 2014).

For conceptualising the conundrum associated with intellectual property in data(bases) and data ownership, several forms of private and collective ownership need to be discerned. For the latter, I will propose to rediscover five categories of Roman Law for nonexclusive property, namely res nullius, res communes, res publicae, res universitatis, and res divini juris (Rose 2003). Such categories could be useful to distinguish the variety of concerns, motives, and norms implicated in data ownership.

Moreover, replies to the question whether privatisation, proprietarisation, and commodification of data enables or restricts invention, innovation and diffusion of information are closely tied to the shaping and reshaping of governance models, both in the EU and on a global scale. Such issues need to be addressed in the EU's Digital Agenda.

2A. 2

<u>Andrew Prescott</u> (University of Glasgow), "Big Data and Privacy: Some Historical Perspectives"

Anxieties about the quantities of information gathered by governments and other organisations go back hundreds of years. Contemporary chronicles expressed shock at the quantity of information gathered in 1086 by commissioners of William the Conqueror which was summarised in Domesday Book. Domesday Book is the oldest English public record and ever since its compilation its data was regarded as one of the most precious possessions of the English state. With industrialisation and the growth of population, governments became increasingly

## Abstracts

interested in collecting information about the rapidly changing state of the nation. The changing format and character of censuses from 1801 onwards reflects many of these anxieties. The ability of nineteenth-century governments to analyse and deploy this data was limited by the need for clerical sorting, but the introduction of punch cards sorted by electro-mechanical machines for the American census in 1890 not only allowed governments to make more effective use of census data but also raised new issues about privacy. As Jon Agar has described, the availability of analogue computing technologies led to arguments in the first half of the twentieth century that the British government should create a vast national index, but these proposals were rejected on grounds of the defence of individual liberty.

In this context, how far are our current concerns about big data justifiable? Is our situation no different than the chroniclers who complained about William the Conqueror? I believe there are some fundamental changes which we need to address. First is the ubiquity of data.

For governments from the eleventh to the twentieth century, data was something gathered with enormous clerical and administrative effort which had to be carefully curated and safeguarded. Only large organisations such as governments or railroad companies had the resources to process this precious data. Privacy was therefore something which could be easily safeguarded by wider constitutional and legislative frameworks. As we have reached the point in the past few years where data is everywhere, this framework of trust no longer potential applies. As a result of this, the types of organisations deploying data have changed. In particular, it is noticeable that the driving forces behind the development of big data methods have frequently been commercial and retail organisations: not only Google and Amazon, but also large insurance, financial and healthcare corporations. This is a contrast to earlier developments, both analogue and digital, where governments have been prominent.

The Oxford English Dictionary draws a distinction between the term big data as applied to the size of datasets and big data referring to particular computational methods, most notably predictive analytics. Predictive analytics poses very powerful social and cultural challenges, especially as more and more personal data such as whole genome sequences becomes cheaper and more widely available. How far can your body be covered by existing concepts of privacy? And is the likely future path of your health, career and life a matter of purely personal concern? While the rise of predictive analytics represents the most powerful intellectual challenge of big data, it is nevertheless worth comparing the potential offered by predictive analytics to discussions in the 1920s and 1930s about the linking of card indexes to create large

national indexes. It appears that political culture at that time was more robustly in favour of defending individual liberty, whereas this is not now so evident. Finally, it is worth noting that generally the most important large data sets (censuses, tax records) have been about people, but increasingly big data will become about things. For example, machine tools frequently have sensors attached to them which enable the state of the tools to be monitored remotely by the manufacturer. This might encourage the manufacturer to monitor use of their products by clients in ways that could have commercial implications. The monitoring of medical implants will raise even more complex issues. This is an area for which there is very little historical precedent, as a notorious case in the US Supreme Court which debated how the US Constitution would view GIS monitoring devices illustrates. Our construct of privacy is one that focuses on the human element, but perhaps we need to bring technical thinking more strongly into the discussion.

<u>Walter Peissl</u> (Austrian Academy of Science), "Big Data and privacy in a networked world: the perspective from technology assessment (TA)?"

2A. 3 .....

Big Data is "the" buzz word nowadays. Big Data is supposed to do everything: organise traffic and prevent accidents, provide early warning for epidemics, and facilitate crime prevention. Prevention and forecast are the main directions of thinking with regard to Big Data. The inherent rationale:\_Take all data available, scan, merge and interpret them, and thus shape the future/ decision making on the basis of existing (past) patterns. What does this imply for privacy and data protection?

This presentation will give an overview on issues arising with new technological developments and will present some insights from the interdisciplinary technology assessment arena. Approaches dealing with the upcoming conflicts between the fundamental right to privacy and new concepts like Big Data will be discussed. Among those, techno-organisational solutions (privacy by design) as well as economic approaches (self-regulation/ privacy seals) will be presented. The presentation is based inter alia on a large scale participatory assessment of criteria and factors determining acceptability and acceptance of security technologies in Europe. Therefore, it also addresses issues of legitimacy of techno-economic models, and democratic participation of the European citizenry.

**2A. 4** <u>Fabio Domanico</u> (European Commission)

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## 2 B Reconstructing Copyright's Economic Rights

(sponsored by Microsoft)

Chair: Bernt Hugenholtz (IViR, University of Amsterdam)

Alain Strowel (KU Leuven/Louvain) <u>Stefan Bechtold</u> (Swiss Federal Institute of Technology Zurich) <u>Séverine Dusollier</u> (Sciences Po Paris) Ole-Andreas Rognstad (University of Oslo)

Recent case law of the European Court of Justice on copyright's three core economic rights – of reproduction, communication to the public and distribution – suggests a growing disconnect between the legal definitions of the economic rights that are historically patterned on 19th and 20th century modes of exploitation of copyright works, and the economic and technological realities of the 21st Century. This disconnect leads to overprotection or underprotection of copyright works, and is therefore likely to act as a disincentive for investment in innovative content and information services.

This panel, which is part of a Microsoft-sponsored collaborative interdisciplinary research project led by IViR and CREATe, seeks to reconstruct the core economic rights protected under EU copyright law, with the aim of bringing these rights better in line with economic and technological realities.

Responding: Joost Poort (IViR, University of Amsterdam)

## **Copyright Evidence Wiki**



The Copyright Evidence Wiki Project will be presented by CREATe's Martin Kretschmer, Theo Koutmeridis and Kris Erickson

## CopyrightEvidence.org

<u>CopyrightEvidence.org</u> intends to establish a body of evidence that allows better navigation in a contested policy field. Competing claims can be assessed and challenged transparently if the underlying data and methods are revealed. Robustness and limitations of findings are meticulously collected and are available here for all to see.

This project is offering a form of a dynamic literature review in a rapidly changing technological, business and socio-legal landscape, as the evidence related to copyright is consistently and transparently updated to account for the most recent findings. Only very recently, new research methods in combination with the development of big data, which are richer both in size and in depth, have allowed researchers to test empirically key theoretical propositions and forced them to build theories which are consistent with observation. This generated the need to evaluate political decisions and design policy interventions based on evidence.

This open online platform builds on an innovative research philosophy and examines copyright from an interdisciplinary perspective, while it also facilitates bringing evidence to the debate from studies in fields that were previously overlooked. Relevant empirical work spreads across conventional methodological and disciplinary boundaries and it does not need to have "copyright" in the title.

A crucial dimension of the existing evidence examines different stages of production (e.g. creation, innovation, diffusion, distribution), in various creative industries (e.g. music, film and motion pictures, TV programmes, computer software, books), and estimates the effects of copyright on diverse agents in each sector, such as creators, investors, distributors, users or society as a whole. Heterogeneity seems to be a key common element across several studies. The fact that the impact of copyright law differs across various agents, industries and different demographic groups, implies the need for more specific policies.

The transition to a global digital economy is associated with new challenges for enforcement authorities, for

copyright law and for new business models. Imaginative use of the increasing volume of data is crucial for the design of more rational policies at the national and international level. Importantly, the effects of copyright protection or infringement on welfare, creativity and innovation demand the theories that developed over the past decades to be consistent with rigorous empirical analysis.

#### CopyrightEvidence.org

To date, **438** studies have been recorded.

#### Structure

Fundamental issues about the copyright incentive:

- Relationship between protection and welfare;
- Effects of protection on industry structure (e.g. oligopolies, competition, superstars).

#### **Evidence-based copyright policy:**

- Nature and Scope of exclusive rights (e.g. hyperlinking);
- Enforcement (e.g. quantifying infringement, criminal sanctions, intermediary liability, graduated response, litigation and court data, education and awareness).

#### Methodology (Collection)

- Quantitative Collection Methods such as survey research (quantitative; e.g. sales/income reporting); experimental (laboratory);
- Qualitative Collection Methods such as survey research (qualitative; e.g. consumer preferences); case studies.

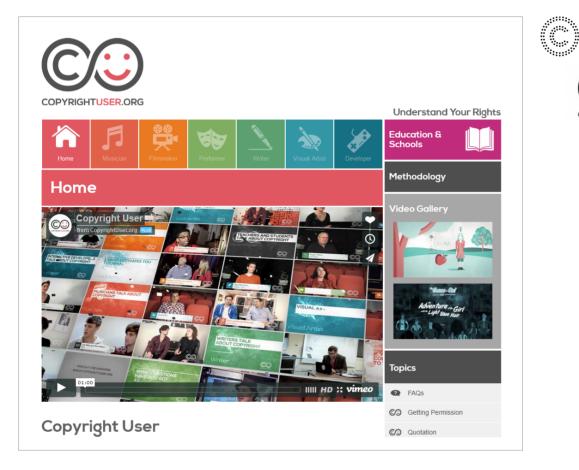
#### Methodology (Analysis)

- Quantitative Analysis Methods such as descriptive statistics (counting, means reporting, crosstabulation); regression analysis;
- Qualitative Analysis Methods such as textual content analysis; legal analysis.

**Industry Sectors** include categories such as advertising; architectural; computer consultancy; computer programming; creative, arts and entertainment; cultural education; film and motion pictures; PR and communication; photographic activities; programming and broadcasting; publishing of books, periodicals and other publishing; software publishing (including video games); sound recording and music publishing; specialised design; television programmes; and translation and interpretation.

## **Copyright User**

CREATe



## CopyrightUser.org

Copyright User is an open access web resource providing copyright guidance to all users of creative materials: artists, producers, consumers and those in between. With emphasis on small business innovators and emerging technology users, the platform is uniquely and authoritatively placed in a sector where there is much uncertainty.

The research team adopted a bottom-up approach and identified more than 24,000 queries about copyright by lay people on the Yahoo! Answers platform. This laid the basis for de-mystifying the most commonly misunderstood aspects of UK copyright law. Guidance is offered in accessible short video formats, to individuals, creators and small firms about how to license and use work as well as how to protect and control their own work.

Expert advice was sought from more than a dozen prominent copyright scholars in the UK and responses were subjected to peer review by academics and industry experts. Uptake of this resource by industry, libraries, educational institutions and creative associations has been overwhelming, with more than 130,000 web visits in the first year of existence, helping to establish Copyright User as a credible and independent resource, in a sector often characterised by misunderstandings and partiality.

Copyright User featured prominently in Mike Weatherley MP's October 2014 report to the UK Prime Minister on copyright education and awareness. Since then, The Copyright User team has been working closely with the Connected Digital Catapult in London, an early-stage technology incubator. Catapult helped to co-produce a new set of resources on the copyright concerns facing SMEs and small businesses. Recently, the Copyright User expertise has been sought by the Education Licensing Working Group as part of a focus on digital and information literacy for those in libraries and higher education. The resource has been approached by various UK media institutions, archives, and creators' groups, to explore new online content and education opportunities.

## **Visiting Glasgow**

## About the University of Glasgow

The University of Glasgow, founded in 1451, is the fourth-oldest university in the English speaking world. The University occupies an architecturally stunning High Victorian campus on Gilmore Hill, within view of the Scottish Highlands. Visit the University's web site for more information.

#### EAT

For fish and chips, head to **Old Salty's**. The fried cod is flaky, fresh and substantial without feeling to heavy; the blood pudding is fragrant with clove and nutmeg. *1126 Argyle St.*; http://oldsaltys.co.uk

A new addition to Glasgow, the **Ox and Finch** in Finnieston serves mouthwatering small dishes such as squid, prawns, chorizo and morcilla with smoked paprika on sourdough, and Earl Grey baked Alaska. *920 Sauchiehall St.;* <u>http://www.oxandfinch.com/</u>

Explore **Ashton Lane**, a tiny back-street behind Byres Road. It's one of Glasgow's best kept secrets and is home to popular pubs like the **Ubiquitous Chip** and **Brel**, as well as a fantastic range of other places to eat. *See the Conference Map for directions*.

**The Fish People Cafe**. This small and personal restaurant at the entrance to Shields Road underground serves ridiculously fresh fish, made possible by the fact it's owned by a fishmonger. Have a platter of oysters followed by the seafood stew, or try the sole in Pernod cream with crayfish. 350 Scotland St.; http://thefishpeoplecafe.co.uk

Ready to try some haggis? Head to **Stravaigin** a local gastro-pub with a menu featuring gourmet concoctions from wild ingredients like grey squirrel, hedgerow herbs and sea urchins–and lots of local beer. *28 Gibson Street;* http://www.stravaigin.co.uk/

#### ΤΕΑ

**The Hidden Lane Tea Room** serves breakfast, lunch and afternoon tea traditional-style on china cups and saucers. All the sandwiches, soups, bread and cakes are home-made and delicious. <u>http://thehiddenlanetearoom.com</u>, *1103 Argyle St*.

Among the treasures designed by Charles Rennie Mackintosh are the **Willow Tea Rooms** and Queen's Cross Church, both built in the early 20th century.

#### SHOP

**Byres Road**, in the heart of the West End, offers a wide range of local shops and boutiques, as well as a number of places to stop and rest for a coffee.

## DRINKS

**The Good Spirits Co**. For a whisky lover, this basement shop is nothing short of heaven. 23 Bath St.; <u>http://the-goodspiritsco.com</u>

The **Ben Nevis Bar** in Finnieston is a longtime local favorite known for its outstanding collection of whiskeys. The pub plays host to traditional music jamming sessions and has a wee fire that puffs away quietly in the corner, adding some warmth until the whisky does the trick. Try a half & half (nip of whisky and a half pint of local beer). *1147 Argyle St.;* http://thebennevis.co.uk

A local favourite, the **Hillhead Book Club** has a breathtaking interior with a full menu and cocktail list that will keep you interested for hours. *17 Vinicombe St.*; <u>http://www.</u> <u>hillheadbookclub.com/</u>

#### SEE

Take a stroll through **Kelvingrove Park** just south of the University campus. Victorian in design, it's right on the banks of the River Kelvin, and is close to the Kelvingrove Museum. Built at the turn of the 20th century in Spanish Baroque style, the **Kelvingrove Art Gallery and Museum** is one of the most spectacular buildings in the world. Glaswegians are particularly proud of this place, which houses historic Glaswegian artists as well as worldfamous pieces like the Dalí masterpiece "Christ of St. John of the Cross." <u>http://glasgowlife.org.uk/museums/</u> kelvingrove, *Argyle Street* 

#### **Glasgow Cathedral and Necropolis**

Built in the 12th Century, the Glasgow Cathedral still holds Church of Scotland services to date. It's surrounded by the Glasgow Necropolis, one of the best views of the city. *Castle St.*; <u>http://www.glasgowcathedral.org.uk/</u>

#### TAXIS

Black taxi cabs can be picked up at most times in the University area and the city centre. You can also phone:

Hampden Cabs: 0141 332 5050 Glasgow Taxis: 0141 429 7070

For more ideas:

#### Glasgow City Website

https://peoplemakeglasgow.com/visiting

The Wall Street Journal's Insiders Guide to Glasgow http://www.wsj.com/articles/an-insiders-guide-toglasgow-scotland-1440097338

## Tuesday | September 1 PhD Preconference Workshop

09:30 – 09:45	Registration and Coffee
09:45 – 10:00	Introduction to the course
10:00 – 10:45	Copyright and the creative economy
	Professor Ruth Towse (CREATe and Bournemouth University)
10:45 – 11:30	Economic theory of copyright
	Professor Richard Watt (SERCI and University of Canterbury)
11:30 – 11:45	Coffee Break
11:45 – 13:00	Empirical studies on economic effects of copyright
	Professor Paul Heald (University of Illinois) Professor Patrick Waelbroeck (Telecom Paristech)
13:00 – 14:00	Lunch Provided
14:00 – 17:00	Student presentations and discussions
	led by Dr Christian Handke (Erasmus University), Dr Kristofer Erickson (University of Glasgow) and Dr Theo Koutmeridis (University of Glasgow)
17:00 – 18:00	Close of Workshop
19:00 – 20:00	Civic Reception at the Invitation of the Lord Provost of Glasgow in the Historic City Chambers

## **EPIP Delegate List**

#### Fiona Hyslop BPA/MSP

Cabinet Secretary for Culture, Europe and External Affairs Scottish Government

"The Scottish Government attaches great importance to the role of the creative industries in Scotland. We very much welcome that this conference will be taking place here and hope that academics and practitioners from across Europe will benefit from the insights that will be shared by the international experts in your programme. We wish you every success."

#### Thank you to our attendees:

Alain Strowel, Université Saint-Louis - Bruxelles Alan Marco, The United States Patent and Trademark Office Alenka Guzman Chavez, Universidad Autonoma Metropolitana Alex Turvey, UK IPO Alison Brimelow, CREATe Andrea Wallace, University of Glasgow Andrew McHugh, University of Glasgow/CREATe Andrew Prescott, University of Glasgow Anne Anderson, University of Glasgow Ansgar Ohly, LMU Munich Antanina Garanasvili, University of Padova Anthony Clayton, Imperial College Anton Muscatelli, University of Glasgow Antoni Rubi Puig, Universitat Pompeu Fabra Ariel Katz, University of Toronto Azzurra Meoli, University of Bologna Balazs Bodo, University of Amsterdam Bartolomeo Meletti, CREATe Benjamin Farrand, University of Strathclyde Bernd Justin Jütte, University of Luxembourg Bernt Hugenholtz, IViR, University of Amsterdam Beth Webster, Swinburne University of Technology, Melbourne Bronwyn Hall, University of California/Berkeley Bruno van Pottelsberghe de la Potterie, ULB - Solvay Brussels School of Economics and Management Burkhard Schafer, University of Edinburgh Caroline Paunov, Organisation for Economic Co-operation and Development (OECD) Charlotte Vandeput, ULB - Solvay Brussels School of Economics and Management Chenguo Coco Zhang, University of Bremen Chris Dent, School of Law, Murdoch University Christian Geib, University of Strathclyde Christian Handke, Erasmus University Rotterdam Christian Katzenbach, Humboldt Institute for Internet and Society Christopher Buccafusco, IIT Chicago-Kent College of Law Dan Burk, University of California, Irvine Dan Hunter, Swinburne Law School Daniel Cahoy, Smeal College of Business, Penn State Daniel Zizzo, Newcastle University David Humphries, UK IPO David Komuves, University of Edinburgh David Strickler, US Copyright Royalty Judge Davide Secchi, University of Southern Denmark

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