

# WELCOME!



## The Fifteenth International Semantic Web Conference

Kobe, Hyōgo Prefecture, Japan

# Welcome to ISWC 2016!



**Yolanda Gil**

University of Southern  
California, US

- 30 Organizing Committee members
- 100 event organizers
- 425 reviewers
- 430 participants
- 260 presentations
- 5 days of great fun
- *Townhall meeting:  
Wednesday 5pm-6pm*



# Welcome to Kobe!



**Hideaki Takeda**

National Institute of  
Informatics, Japan

**Yoshinobu Kitamura**,  
Ritsumeikan University

**Ikki Ohmukai**, National Institute  
of Informatics

**Kouji Kozaki**, Osaka University

**Rathachai Chawuthai**,  
National Institute of Informatics

**Yu Asano**, Hitachi

**Naoki Fukuta**, Shizuoka University

**Ryutaro Ichise**, National Institute of Informatics

**Nobuyuki Igata**, Fujitsu Laboratories

**Makoto Iwayama**, Hitachi

**Fumihiro Kato**, National Institute of Informatics

**Takahiro Kawamura**, Japan Science and Technology Agency

**Seiji Koide**, National Institute of Informatics / Ontology

**Yusuke Komiyama**, National Institute of Informatics

**Fuyuko Matsumura**, Aoyama Gakuin University

**Mitsunori Matsushita**, Kansai University

**Riichiro Mizoguchi**, Japan Advanced Institute of Science and  
Technology

**Takeshi Morita**, Keio University

**Shinichi Nagano**, Toshiba

**Masahide Nakamura**, Kobe University

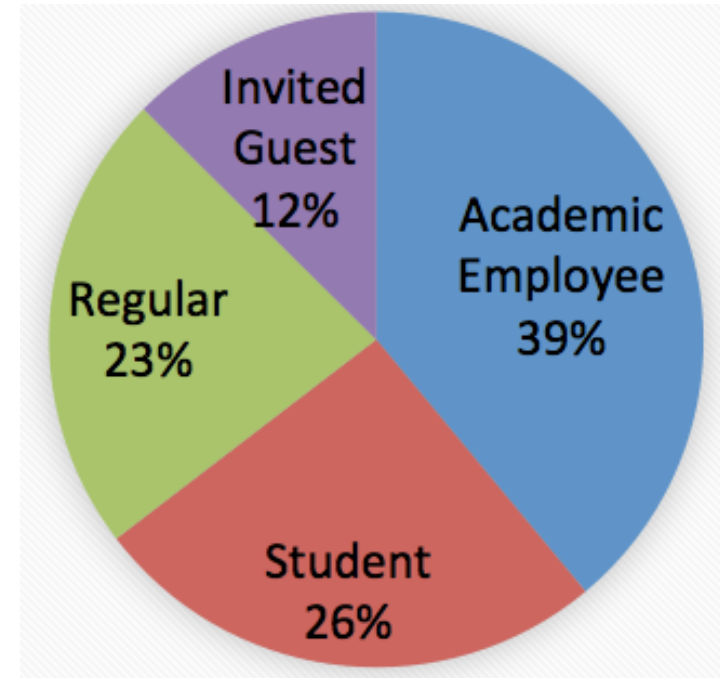
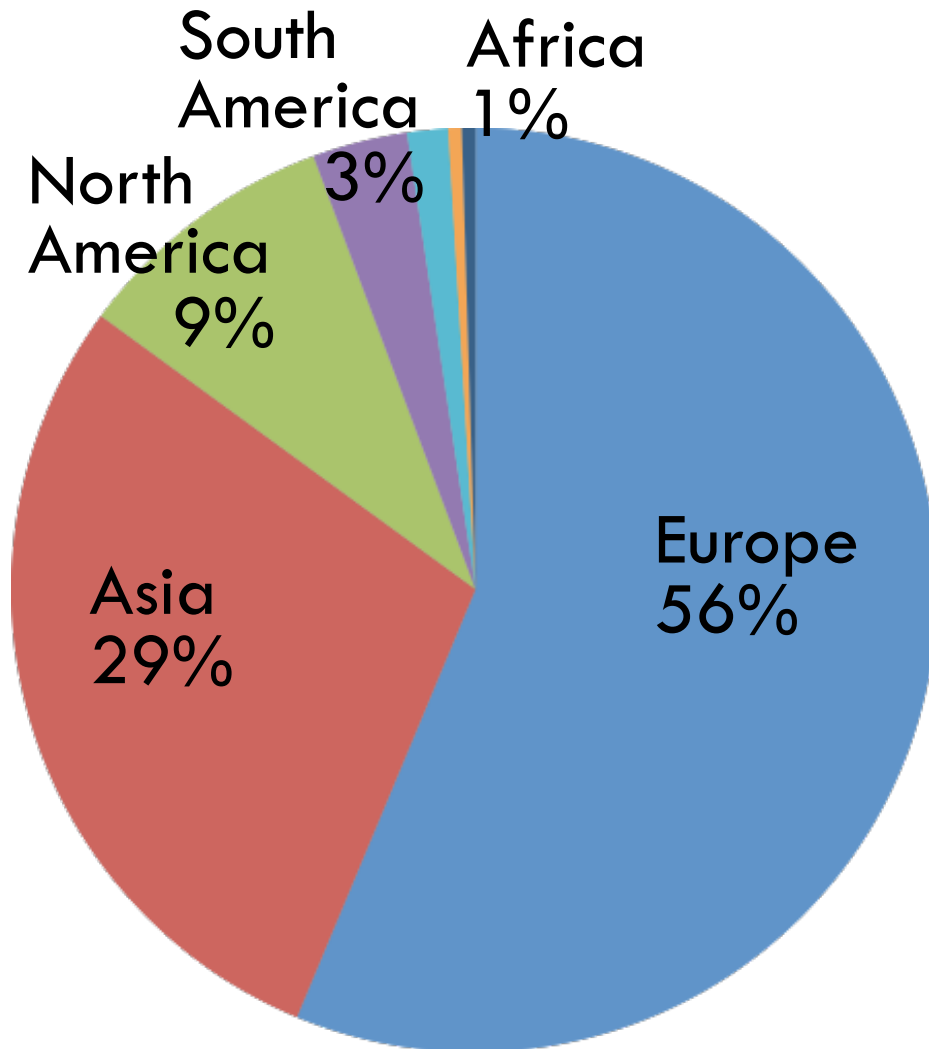
**Sachio Saiki**, Kobe University

**Shun Shiramatsu**, Nagoya Institute of Technology

**Takahira Yamaguchi**, Keio University



# ISWC 2016 Participants



**420 participants from  
42 countries**

# Thank You ISWC 2016 Sponsors!



ORACLE

IOS  
Press



FUJITSU goo



metaphacts

HITACHI  
Inspire the Next

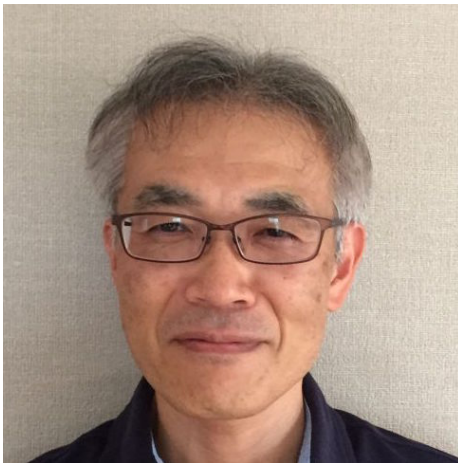
Rakuten  
Institute of Technology

accenture  
High performance. Delivered.



YAHOO!  
JAPAN

Google



**Makoto Iwayama**

Hitachi Ltd, Japan



**Carlos Pedrinaci**

The Open University, UK

# ISWC: From Germinal Ideas to Fruition

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- Germinal ideas: Workshops + Posters + Lightning talks
- Maturing: Workshop presentations + Tutorials + Demos
- Fruition: Paper tracks + Demos + Journal track



# Workshops and Tutorials

- 16 workshops + 5 tutorials
- *Workshop reports Friday at 3:50pm-4:50pm*



**Chiara Ghidini**

Fondazione Bruno Kessler,  
Italy



**Heiner Stuckenschmidt**

University of Mannheim,  
Germany

# Invited Speakers



**Kathleen  
McKeown**

Columbia University,  
US



**Christian Bizer**

University of  
Mannheim, Germany



**Hiroaki Kitano**

Sony Computer Science  
Labs, Okinawa Institute of  
Science and Technology,  
and Systems Biology  
Institute, Japan

# ISWC: From Research to Practice

- Research papers track
- Resource papers track
  - ▣ Ontologies, benchmarking, replication
- Application papers track
  - ▣ Emerging + In-Use + Industrial
- New this year: Journal papers track
- *22 sessions, mixing papers from all tracks*

# Research Papers Track



**Paul Groth**

Elsevier Labs,  
Netherlands



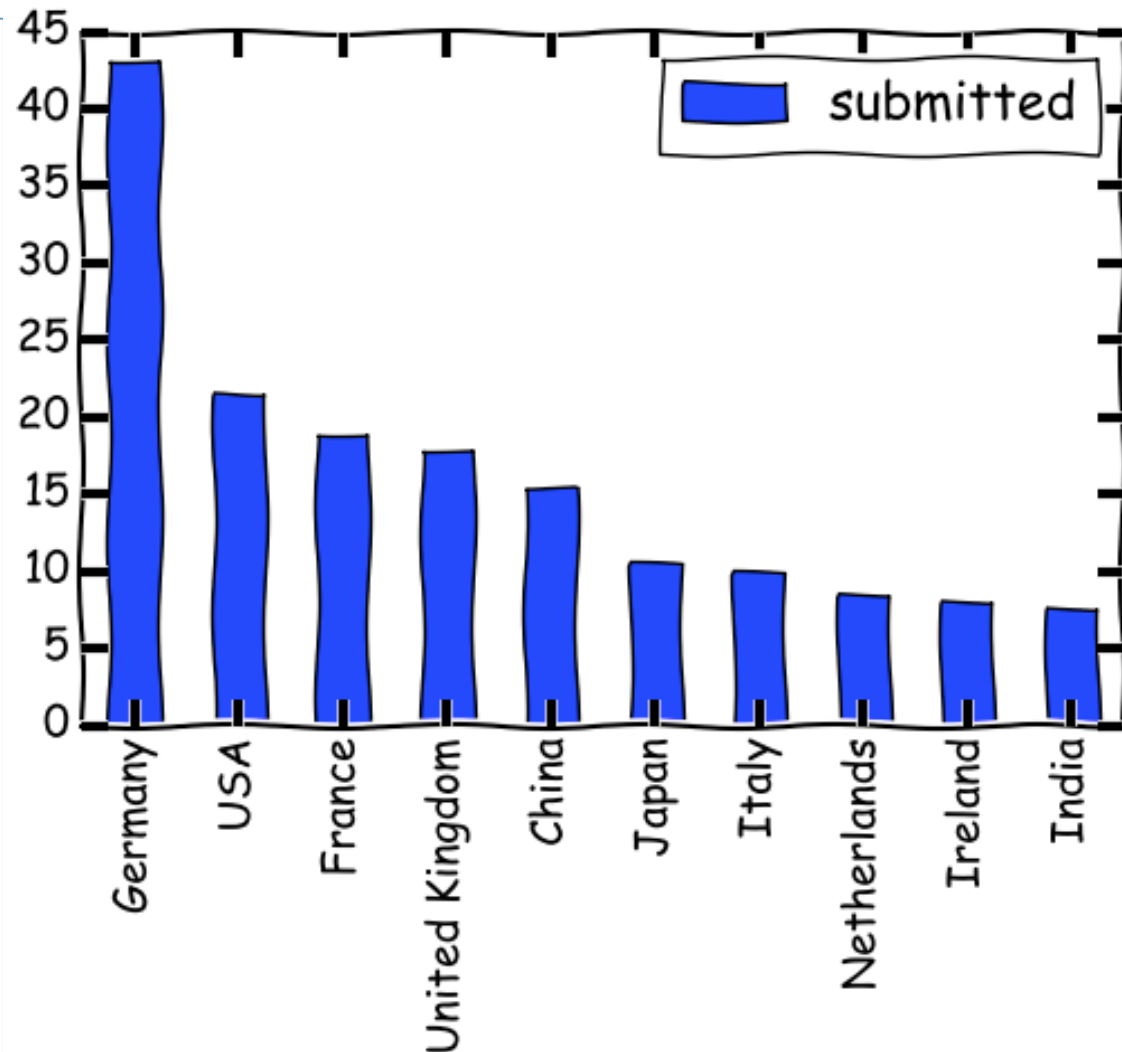
**Elena Simperl**

University of  
Southampton, UK



# Research Papers Track: Statistics

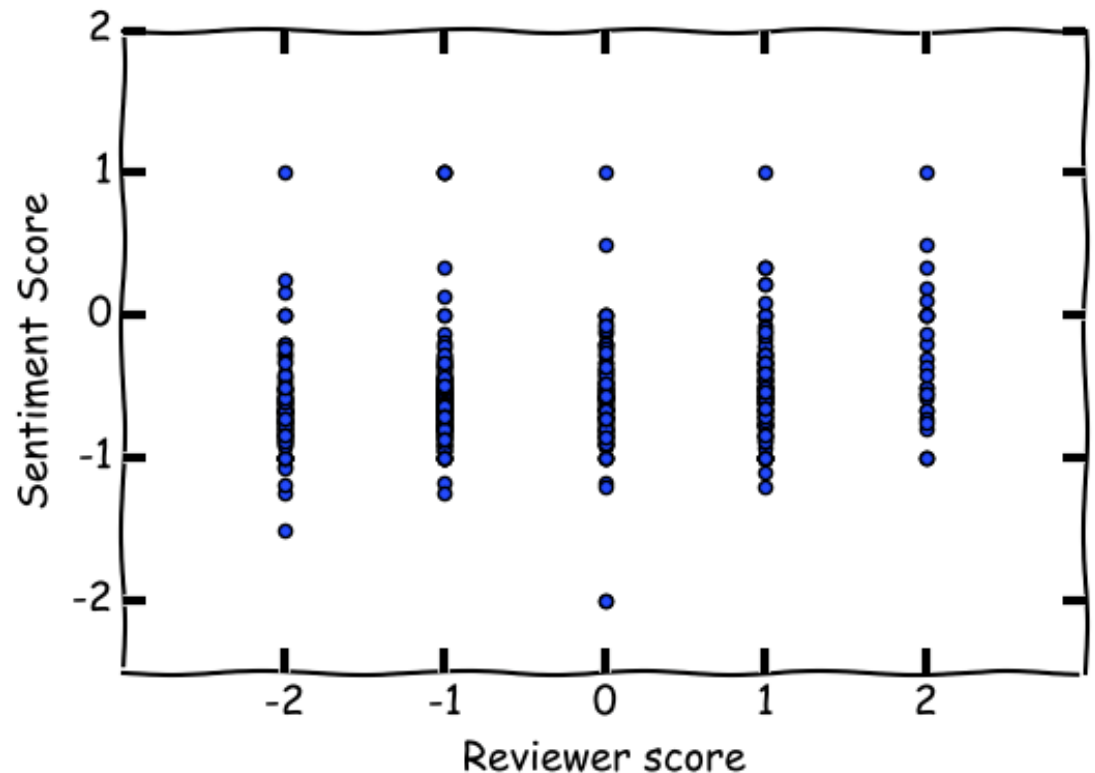
- 212 submissions
  - 40 more submissions than 2015
- 17 senior PC members, 159 PC, 121 reviewers
- Each submission:
  - 3 reviews
  - Author rebuttal
  - 1 metareview
- New this year: additional review structure
  - Yeah for bullets!



# Research Papers Track: Reviews

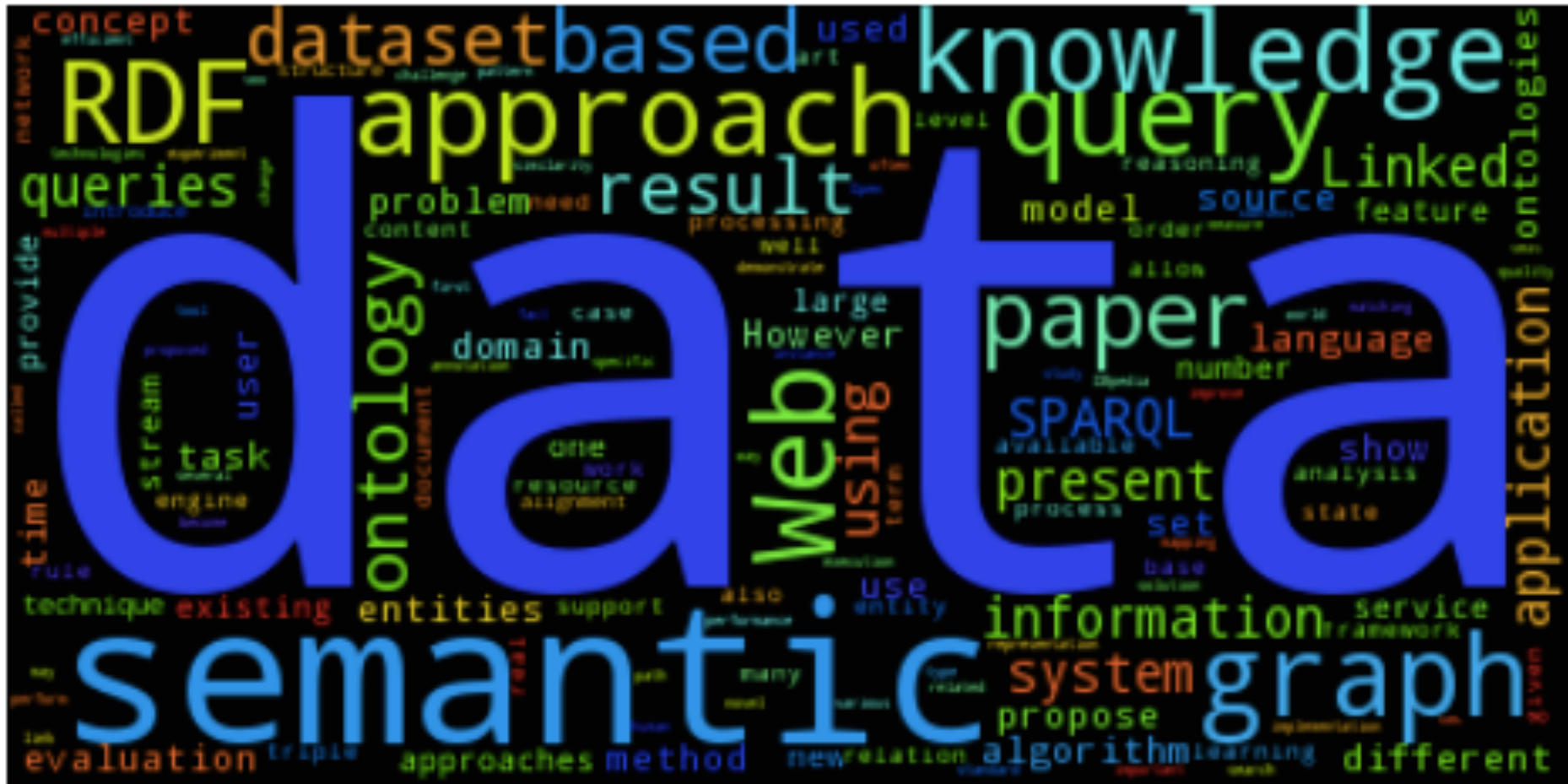
- 664 total reviews
- Review length (in sentences)
  - mean 30
  - std 20
  - min 2
  - 25% 17
  - 50% 25
  - 75% 38
  - max 163
- Review Reading Level: between 9th and 10th grade

- Sentiment analysis (just for fun!)



# Research Papers Track: Papers Presentations

□ 39 papers accepted



# Research Papers Track: Best Reviewer Award

- **Aidan Hogan**, Universidad de Chile, Chile
- **Benedikt Kämpgen**, FZI Forschungszentrum Informatik, Germany



# Research Papers Track:

## Nominees for Best Paper Award

- **Renzo Angles and Claudio Gutierrez**
  - “The multiset semantics of SPARQL patterns”
- **Linhong Zhu, Majid Ghasemi-Gol, Pedro Szekely, Aram Galstyan and Craig Knoblock**
  - “Unsupervised Entity Resolution on Multi-type Graphs”

# Research Papers Track:

## Nominees for Best Student Paper Award

- **Sebastian Neumaier, Jürgen Umbrich, Josiane Xavier Parreira and Axel Polleres**
  - ▣ “Multi-level Semantic Labelling of Numerical Values”
- **Lei Zhang and Achim Rettinger**
  - ▣ “A Probabilistic Model for Time-Aware Entity Recommendation”

# Resources Papers Track



**Alasdair Gray**

Heriot-Watt University,  
UK

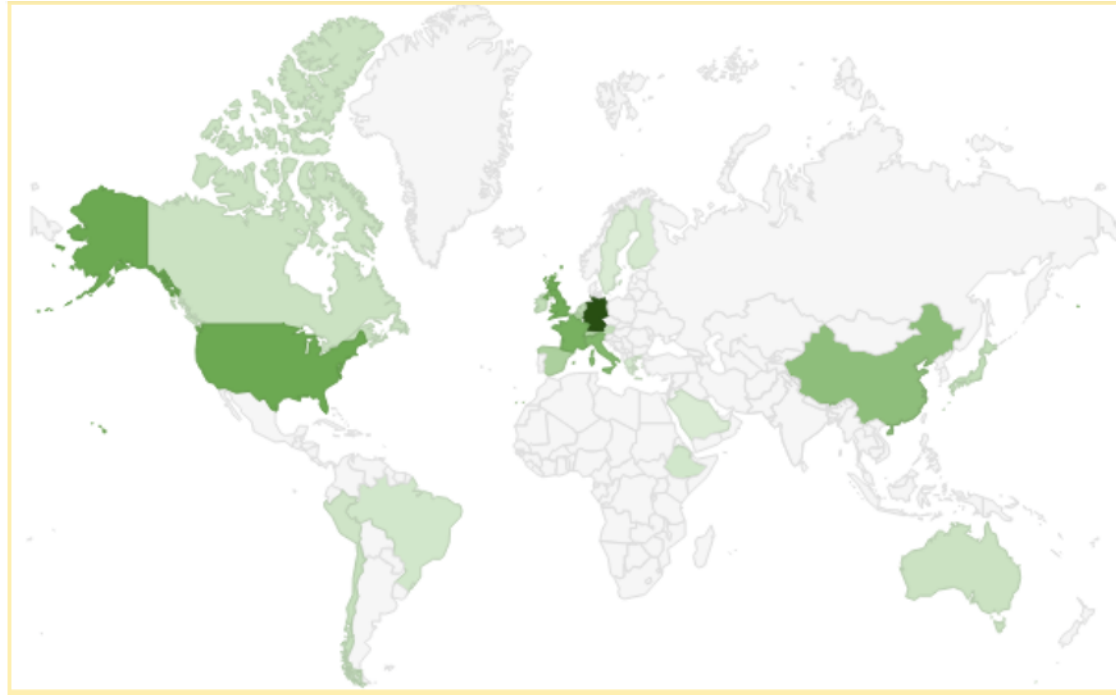


**Marta Sabou**

Vienna Institute of  
Technology, Austria

# Resources Papers Track: Statistics

- 71 submissions
- 57 PC, 24 additional reviewers
- Total: 220 reviews
- New this year:
  - ▣ Resource permanent URI in paper abstract
  - ▣ Review of resource and paper
  - ▣ Structured reviews focusing on resource sharing



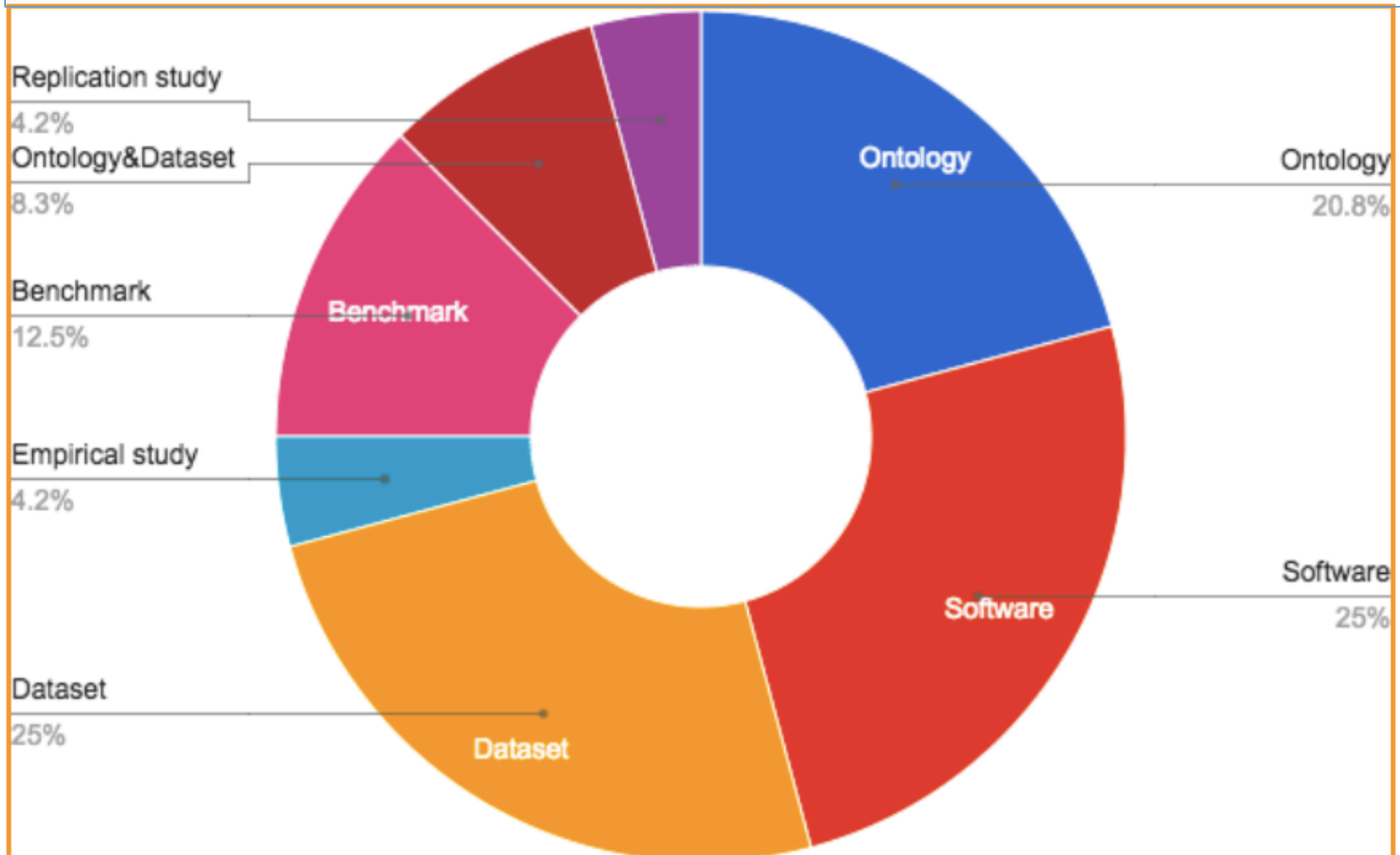
## **Author nationalities:**

Germany 59  
USA 29  
United Kingdom 28  
France 26  
Italy 23  
China 20



# Resource Papers Track: Paper Presentations

□ 24 papers accepted



# Resources Papers Track: Best Reviewer Award

- **Vinh Nguyen**, Kno.e.sis Center, Wright State University, US
- **Peter Wetz**, TU Wien, Austria

# Resources Papers Track:

## Nominees for Best Paper Award

- **Heshan Du, Vania Dimitrova, Derek Magee, Anthony Cohn, Ross Stirling, Giulio Curioni, Barry Clarke and Helen Reeves**
  - ▣ “An Ontology of Soil Properties and Processes”
- **Ivan Ermilov, Jens Lehmann, Michael Martin and Sören Auer**
  - ▣ “LODStats: The Data Web Census Dataset”
- **Bijan Parsia, Nicolas Matentzoglou, Rafael S. Gonçalves, Birte Glimm and Andreas Steigmiller**
  - ▣ “The OWL Reasoner Evaluation (ORE) 2015 Resources”

# Resources Papers Track:

## Nominees for Best Student Paper Award

- **Ivan Ermilov, Jens Lehmann, Michael Martin and Sören Auer**
  - “LODStats: The Data Web Census Dataset”
  - (Also up for the best paper award)
  
- **Monika Solanki, Bojan Božić, Markus Freudenberg, Dimitris Kontokostas, Christian Dirschl and Rob Brennan**
  - “Enabling combined software and data engineering at Web-scale: The ALIGNED suite of ontologies”

# Applications Papers Track



**Freddy Lecue**

Accenture Labs, Ireland

INRIA, France

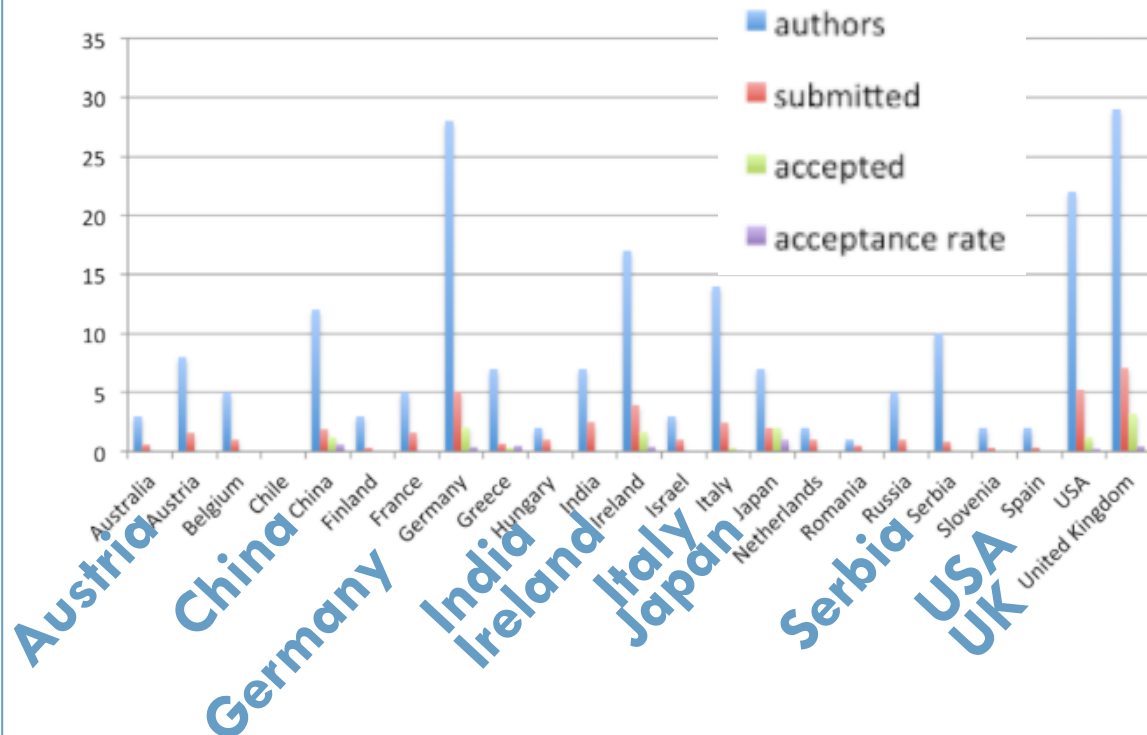


**Markus Krötzsch**

TU Dresden, Germany

# Applications Papers Track: Statistics

- 43 submissions
  - ▣ 23 Emerging Applications
  - ▣ 15 In-Use Applications
  - ▣ 5 Industry Applications
- 31 PC, 15 additional reviewers
- Total: 132 reviews
- New this year:
  - ▣ 3 categories indicating degree of use/utility







# Applications Papers Track: Best Reviewer Award

- **Mauro Dragoni**, Fondazione Bruno Kessler, Italy
- **Aidan Hogan**, Universidad de Chile, Chile

# Applications Papers Track:

## Nominees for Best Paper Award

- **Mihael Arcan, Mauro Dragoni and Paul Buitelaar**
  - “Translating Ontologies in a Real-World Setting with ESSOT”
- **Robert Piro, Ian Horrocks, Peter Hendler, Yavor Nenov, Boris Motik, Michael Rossman and Scott Kimberly**
  - “Semantic Technologies for Data Analysis in Health Care”
- **Vanessa Lopez, Pierpaolo Tommasi, Spyros Kotoulas and Jiewen Wu**
  - “QuerioDALL: Question Answering over Dynamic and Linked Knowledge Graphs”
- **Kavitha Srinivas, Julian Dolby, Achille Fokoue, Mariano Rodríguez Muro and Wen Sun**
  - “Extending SPARQL for Data Analytic Tasks”

# Journal Track



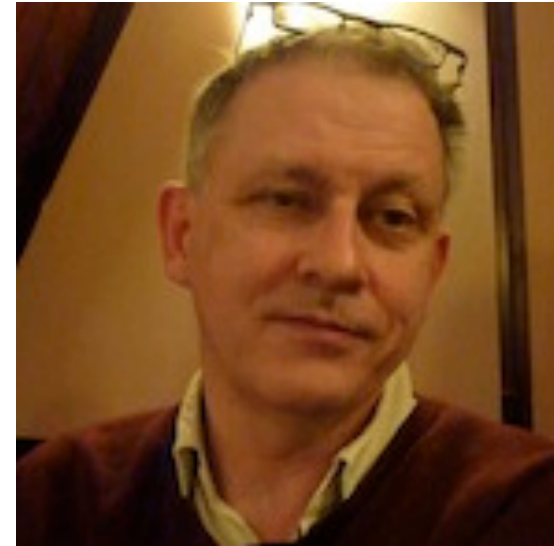
**Abraham  
Bernstein**

University of Zurich,  
Switzerland



**Pascal Hitzler**

Wright State  
University, US



**Guus Schreiber**

VU University  
Amsterdam,  
Netherlands

# Journal Track

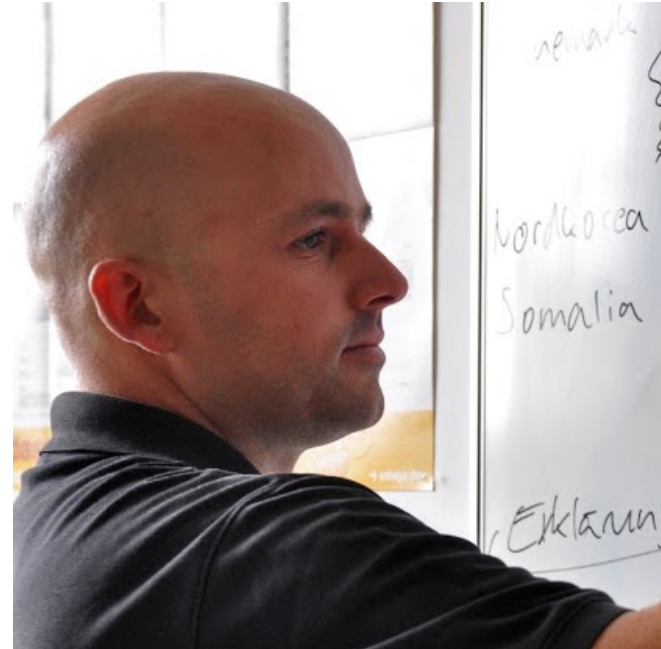
- New this year!
  - ▣ An opportunity for authors to present to the community
- Procedure
  - ▣ Authors self-nominate
  - ▣ Eligibility
    - In print in 2015/2016 (by April) or pre-press website
    - Not previously presented at ISWC or ESWC
  - ▣ Vote by the editorial board / area editors
- 6 selected papers from *Journal of Web Semantics*
- 6 selected papers from *Semantic Web Journal*

# Posters and Demos Track



**Takahiro Kawamura**

Japan Science and  
Technology Agency, Japan



**Heiko Paulheim**

University of Mannheim,  
Germany

# Posters and Demos Track

- Posters: 66 submissions
  - ▣ 55 accepted

- Demos: 49 submissions
  - ▣ 47 accepted

- **Minute madness: 45 secs**
  - ▣ **Wednesday**  
**3:50pm-5:10pm**

- **Poster and demos session:**
  - ▣ **Wednesday 6pm-9pm**

- **Best poster and best demo award selected by PC and **YOU****

- ▣ **Voting code in your conference bag!**
- ▣ **One vote for Best Poster**
- ▣ **One vote for Best Demo**

- **Proceedings on-line**
  - ▣ **<http://ceur-ws.org/>**  
**Vol-1690**



# Lightning Talks



**Miriam Fernandez**

The Open University,  
UK

- Late breaking research or position statements
- Send 1 slide PDF to [iswc2016lightningtalks@gmail.com](mailto:iswc2016lightningtalks@gmail.com)
  - ▣ BEFORE Thursday midnight
  - ▣ Maximum 30 talks 2min each, selected and first come first served
- Friday 10:30am-11:50am

# Proceedings



**Fabian Flöck**

GESIS - Leibniz  
Institute for the Social  
Sciences, Germany

- ☐ On web site
- ☐ SpringerLink
- ☐ USB thumbdrive

# Publicity



**Miel Vander Sande**

Ghent University - imec,  
Belgium



@ISWC2016

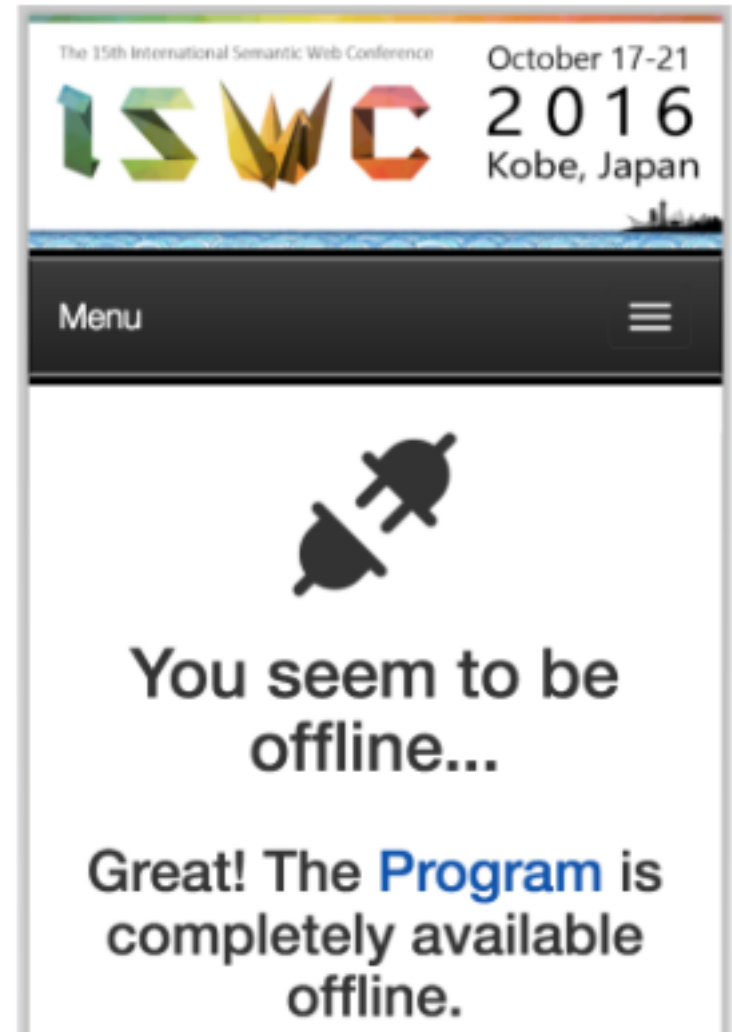
facebook

□ Questions?

▣ [iswc2016.questions@gmail.com](mailto:iswc2016.questions@gmail.com)

# Program Accessibility

- Program section of the website entirely available offline
  - ▣ No install, updates or platforms, just the Web
  - ▣ Easily browse schedule on any device
  - ▣ Bookmark presentations or papers
  - ▣ Consult floorplan or paper abstracts
- Videolectures recordings for plenaries and selected sessions



# Metadata

- Available from <http://www.scholarlydata.org>
- Visualizations: <http://scientometrics.geog.ucsb.edu/iswc/>



**Christoph Lange**  
University of Bonn  
/ Fraunhofer IAIS,  
Germany



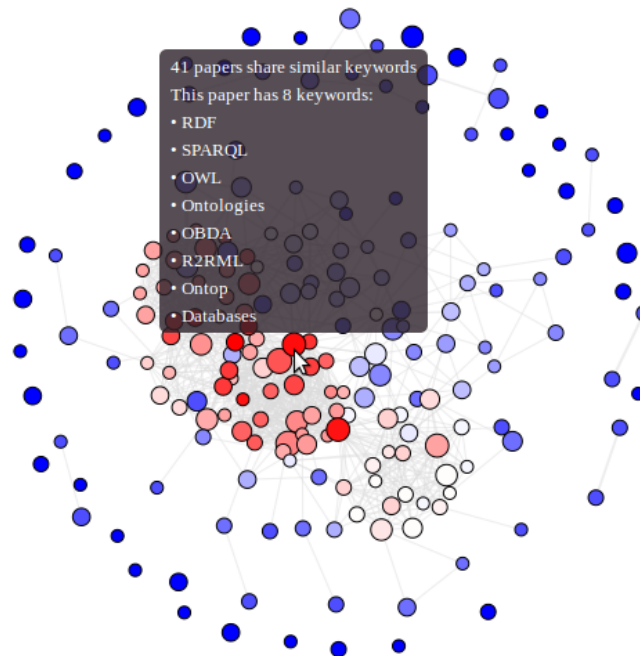
**Silvio Peroni**  
University of  
Bologna, Italy



**Krzysztof  
Janowicz**  
University of California  
Santa Barbara, US

# A Paper at the Keyword Epicenter of ISWC 2016

2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
2012	2013	2014	2015	2016					



## Ontop: Answering SPARQL queries over relational databases (2016)

*Diego Calvanese, Benjamin Cogrel, Sarah Komla-Ebri, Roman Kontchakov, Davide Lanti, Martin Rezk, Mariano Rodriguez-Muro and Guohui Xiao*

\* Unfortunately, many of us did not follow the Springer template this year and did not include any keywords.

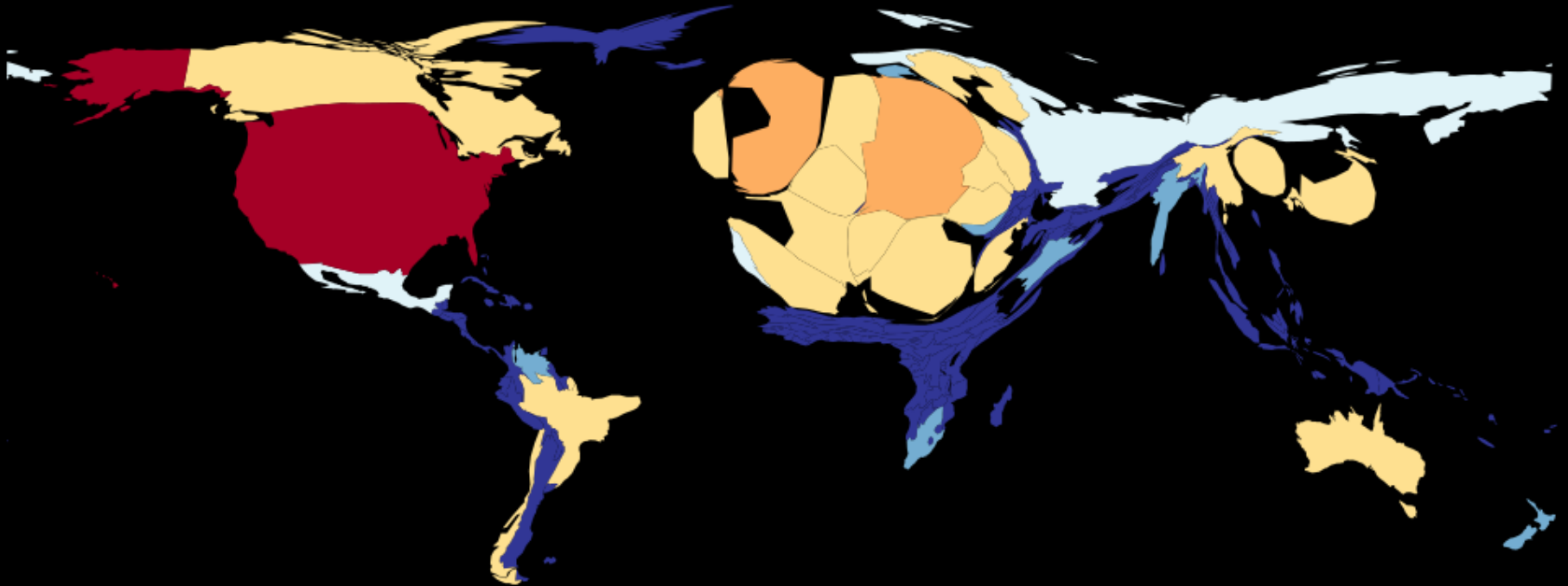
# Does Conference Location Matter?

## 2015 Data

ISWC 2015 in Pennsylvania, USA. There are disproportionately many attendees/authors from the US. Leaving Japan aside, Asia and Oceania are under-represented.

The map below is a *Cartogram* visualization showing the home countries of ISWC 2015 participants. The size of each country is distorted and colored based on the number of participants attending. Countries with higher than average participants are shaded in hotter colors while those with fewer than average are shown in cooler shades.

2015



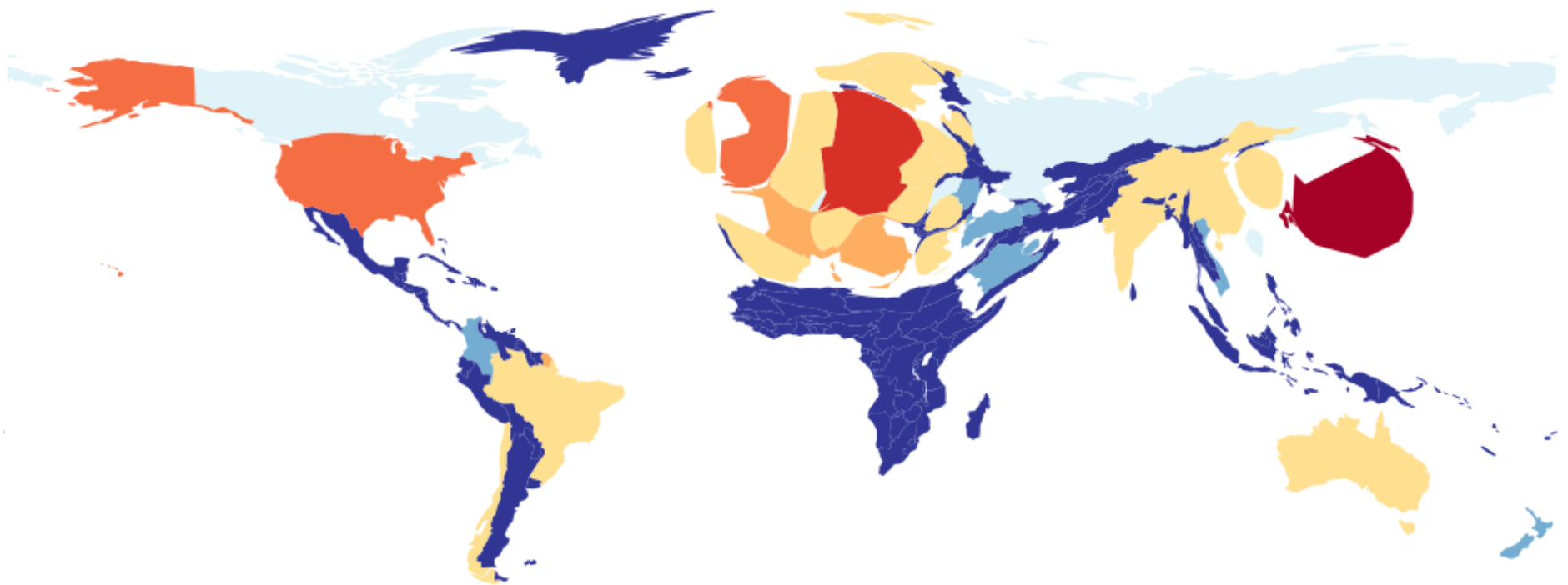


# Does Conference Location Matter?

## 2016 Data

- There are disproportionately many attendees/authors from Japan
- US is slightly under-represented
- More (*authors and*) visitors from Asia and Oceania

2016



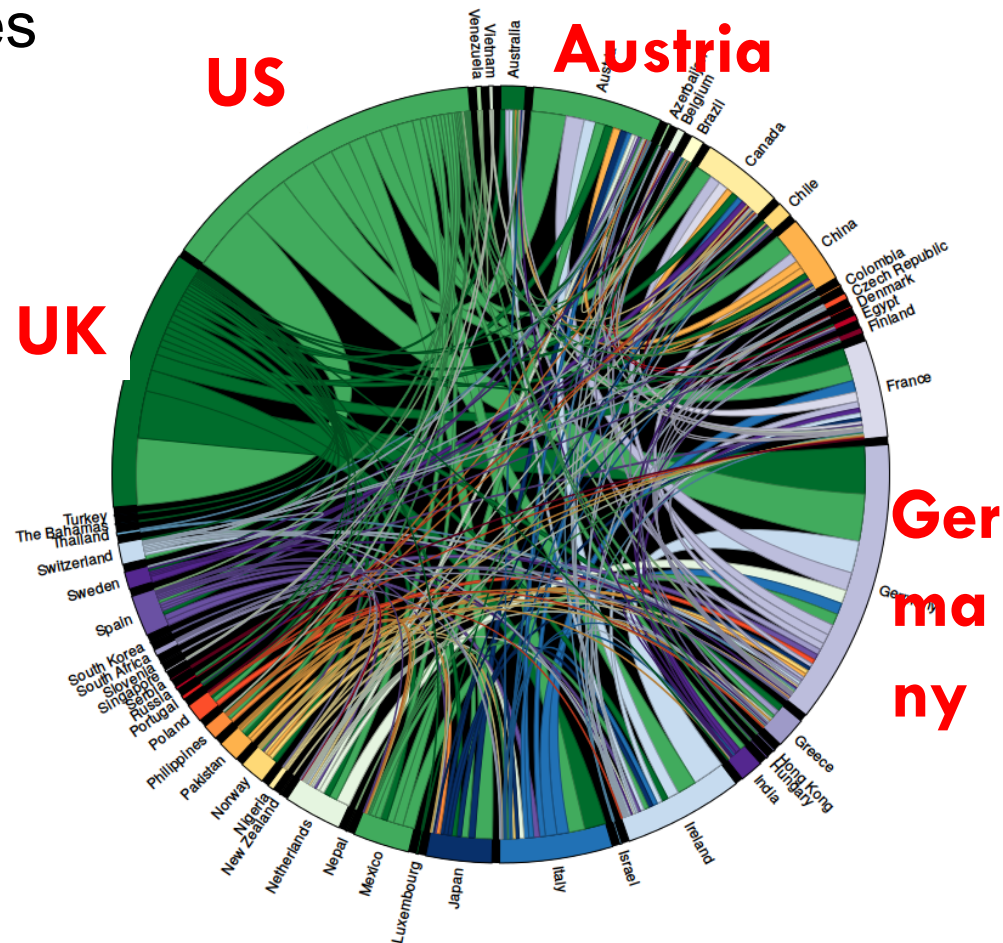
Will we see more participants from Asia/Japan in 2017 and 2018?  
Should ISWC consider new regions?

# Country Collaborations 2002-2016

The degree **and** diversity of collaborations across countries is impressive.

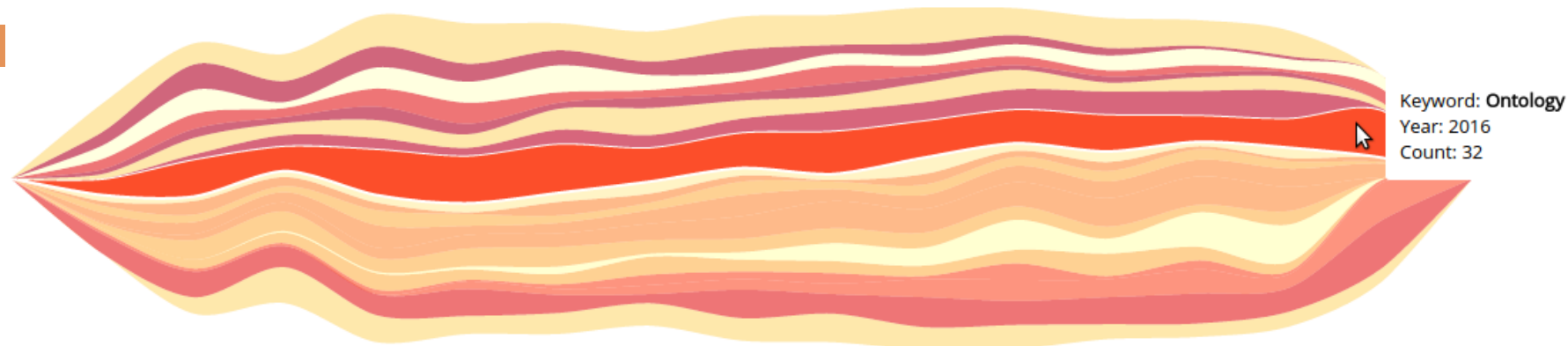
There are very strong ties between the US, UK, and Germany, e.g., 27.2% of all UK papers include US authors.

Interestingly, collaboration between the neighboring Austria and Germany is under-developed.



This *Stream Graph* shows the top 20 keywords from the current and previous conferences. Hover over the *Stream Graph* to view the Keyword along with the Authors and Papers that include the keyword as well as the count of that keyword per year and the country of the author(s) that used the selected keyword. Click on a stream to *lock it* and scroll through the information boxes below.

2001   2002   2003   2004   2005   2006   2007   2008   2009   2010   2011   2012   2013   2014   2015   2016   2017



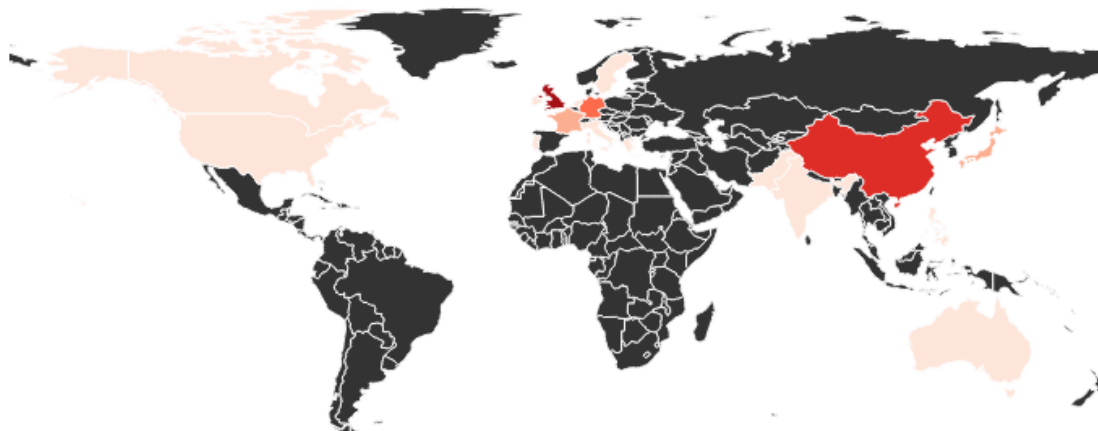
#### Authors (2016)

Mark Sandler: 3  
Craig Knoblock: 2  
György Fazekas: 2  
José Luis Ambite: 2  
Pedro Szekely: 2  
Thomas Wilmering: 2  
Xiaowang Zhang: 2

#### Papers (2016)

A Reuse-based Annotation Approach for Medical Documents  
AUFEX-O: Novel Methods for the Representation of Audio Processing Workflows  
Abstract Meaning Representations as Linked Data  
Agriculture Activity Ontology : An ontology for core vocabulary of agriculture activity  
Algebraic calculi for weighted ontology alignments  
An Extensible Linear Approach For Holistic Ontology Matching  
An Ontology of Soil Properties and Processes

2005: 31  
2006: 32  
2007: 33  
2008: 23  
2009: 24  
2010: 29  
2011: 25  
2012: 23



# Student Coordination

- 27 (SWSA) + 8 (NSF) student travel awards
- **Mentoring lunch Thursday: [iswc.mentoring.lunch@gmail.com](mailto:iswc.mentoring.lunch@gmail.com)**

**Abraham  
Bernstein**

University of  
Zurich,  
Switzerland



**Daniel Garijo**

University of  
Southern California,  
US



**Matthew  
Horridge**

Stanford  
University, US



**Amit P.  
Sheth**

Wright State  
University, US





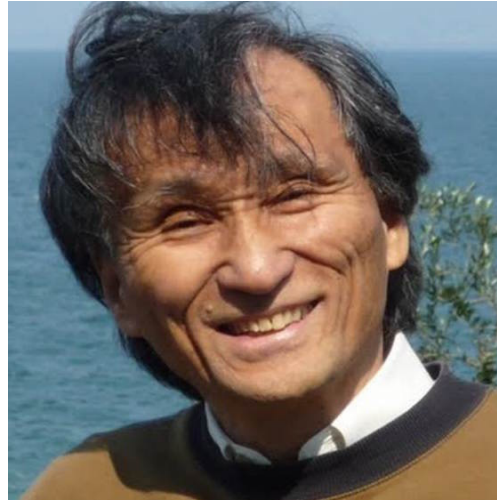
# Doctoral Consortium

- 24 submissions from 14 countries
- 13 presented



**Philippe Cudre-  
Maroux**

University of Fribourg,  
Switzerland



**Riichiro Mizoguchi**

Japan Advanced Institute  
of Science and  
Technology, Japan



**Natasha Noy**

Google Inc, US

# A Word from SWSA



**SWSA**  
SEMANTIC WEB SCIENCE ASSOCIATION

- Promote and exchange scholarly work in Semantic Web and related fields

- ISWC, summer schools, journals, and awards

- President:

- Natasha Noy, US

- Vice-Presidents:

- Abraham Bernstein, Switzerland

- Ian Horrocks, UK

- Secretary:

- Carole Goble, UK

- Treasurer:

- Guus Schreiber, Netherlands

- Immediate Past President:

- Jim Hendler, US

- Members:

- Abraham Bernstein, Switzerland

- Yolanda Gil, US

- Carole Goble, UK

- Jim Hendler, USA

- Ian Horrocks, UK

- Enrico Motta, UK

- Natasha Noy, US

- Guus Schreiber, Netherlands

- Steffen Staab, Germany

- Rudi Studer, Germany

- York Sure-Vetter, Germany

# SWSA Distinguished Dissertation Award

**Hassan Saif, The Open University, UK**

**“Semantic Sentiment Analysis of Microblogs”**

*Brief presentation Friday at 3:30pm-3:50pm*

**Next year's deadline:**

**June 30, 2017**



**SWSA**  
SEMANTIC WEB SCIENCE ASSOCIATION



# SWSA 10-Year Award

**Jorge A. Perez<sup>1</sup>, Marcelo Arenas<sup>2</sup>,  
Claudio Gutierrez<sup>1</sup>**

**“Semantics and Complexity of SPARQL”**

<sup>1</sup>Universidad de Chile, Chile

<sup>2</sup>Pontificia Universidad Catolica de Chile

Chilean Center for  
Semantic Web  
Research



**SWSA**  
SEMANTIC WEB SCIENCE ASSOCIATION