

# Yong-Yeol Ahn

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## CONTACT INFORMATION

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## HIGHLIGHTS

### Selected Honors

- Kavli Fellow, 2015.
- LinkedIn Economic Graph Challenge winner, 2015.
- Microsoft Research Faculty Fellowship, 2014: one of the seven fellows across world.
- AKPA Outstanding Young Researcher Award, 2012: one of the two Korean awardees.

### Computational social science and biology

- Community structure: *Nature*, 2010 (1100+ citations); *Science*, 2011 (400+ citations).
- Online social networks: *IMC'07* (1300+ citations); *WWW'07* (900+ citations); *IMC'08* (200+ citations).
- Social media: *Pulse of the Nation* (covered by major TV channels and newspapers); *ICWSM'11* (300+ citations).
- Information diffusion and viral memes: *Sci. Rep.*, 2013 and *ICWSM'14* (covered by *Scientific American* and *IEEE Spectrum*); *PRL*, 2014 (featured in Editors' suggestion).

### Cultural science

- Computational gastronomy: *Sci. Rep.*, 2011 (the most downloaded paper in all *Nature* journals in Dec. 2011—more than 110,000 downloads in two weeks; 100+ citations; covered by *Nature News*, *Scientific American*, etc.); *PLoS ONE*, 2013 (covered by *Wired* and MIT tech review blogs)
- Computational history: *Science*, 2014 (a video produce by *Nature* has attracted about one million views; NSF Vizzies challenge finalist).

## ACADEMIC POSITIONS

### Indiana University, Bloomington, IN, USA

Assistant Professor, School of Informatics and Computing Oct 2011 to present  
Adjunct Professor, Department of Statistics June 2014 to present

### Northeastern University, Boston, MA, USA

Post-doctoral research associate June 2008 to May 2011

### Dana-Farber Cancer Institute, Harvard University, Boston, MA, USA

Visiting Researcher June 2008 to May 2011

### Jacobs University, Bremen, Germany

ICTS fellow March 2007 to April 2007  
Visiting Researcher July 2006 to August 2006

### KAIST, Daejeon, South Korea

Postdoctoral Research Associate February 2008 to May 2008  
Research Assistant March 2003 to January 2008  
Teaching Assistant March 2002 to February 2003

## INDUSTRIAL POSITIONS

### Janys analytics

Co-founder & Data scientist

May 2011 to present

EDUCATION

Ph.D. Physics, KAIST (Daejeon, South Korea), February 2008

- Thesis topic: Organizing Principles and Dynamics of Complex Networks
- Advisor: Professor Hawoong Jeong

M.S. Physics, KAIST (Daejeon, South Korea), February 2003

B.S. Physics, KAIST (Daejeon, South Korea), February 2001

TEACHING

**Instructor, Indiana University Bloomington**

I590 Network Science (Online)	Spring 2017
I422/I590 Data Visualization	Fall 2016
I590 Network Science (Online)	Fall 2016
I422/I590 Data Visualization	Fall 2015
I709 Complex Systems Seminar II	Spring 2015
H400/I400/I590 Data Visualization	Fall 2014
I590 Complex Networks and Their Applications	Spring 2014
H400/I400/I590 Data Visualization	Fall 2013
I709 Complex Systems Seminar II	Spring 2013
I211 Information Infrastructure II	Fall 2012
H400/I400/I590 Visual Analytics	Spring 2012
I590 Complex Networks and Their Applications	Spring 2012

**Teaching Assistant, KAIST**

Computational Physics	Fall 2003
Classical Mechanics	Spring 2003
General Physics II	Fall 2002
General Physics I	Spring 2002

ADVISING

**Post-doctoral Mentor**

Shirin Nilizadeh (co-mentored with Prof. Apu Kapadia)	2014-2015
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**PhD Students**

Yizhi Jing	2015-present
Jaehyuk Park	2015-present
Nathaniel Rodriguez	2013-present
Qing Ke	2012-present

**Ph.D. Thesis Reviewer**

Michele Coscia, Università di Pisa	2012
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**Undergraduate Interns**

Sarah Ewing (IU)	Fall 2016
Anna Branam (IU)	Fall 2016
Luit Saikia (IU)	Fall 2015
Shikun Ding (IU)	Fall 2015
Kehontas Rowe (Mills College, co-mentored)	Summer 2013
Bryce Lewis (Bryn Mawr College, co-mentored)	Summer 2013

**High School Interns**

Chloe Kilman-Silver (Winsor School, co-mentored)	Summer 2011
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SELECTED HONORS

**Conference**

- Best paper award, ACM Internet Measurement Conference (IMC, San Diego, California, USA), 2007
- Best oral presentation award, The 14th Workshop for Statistical Physics (Nami Island, Chuncheon, Korea), 2007

**Scholarship**

- ICTS fellow, Jacobs University 2007
- Scholarship from DAAD (Germany) and KOSEF (Korea), 2006

GRANTS, AWARDS,  
AND FELLOWSHIPS

**List of grants and awards**

- PI, Microsoft, Microsoft Azure Research Award, 2016.
- Co-PI (PI: Cassidy Sugimoto), Indiana University, Faculty Research Support Program, 2016-2017.
- Co-PI (PI: Brea Perry), NIH, R01DA039928: Doctor Shopping for Controlled Substances: Insights from Two-Mode Social Network Analysis, 08/2016–06/2020.
- Kavli Fellow, 2015: [Kavli Frontiers of Science](#)
- LinkedIn Economic Graph Challenge, 2015: one of [the 11 winning teams](#).
- PI, Indiana University, Faculty Research Support Program, 09/2014–03/2015.
- Microsoft Research Faculty Fellowship, 2014: one of [the seven fellows](#).
- Association of Korean Physicists in America, Outstanding Young Researcher Award, 2012: one of the two awardees selected in America.
- The 1st KOBIC Bioinformatics Contents Contest, Grand prize, 2007

PUBLICATIONS

†: equal contribution

- [A48] Alexander J. Gates, Ian B. Wood, and **Yong-Yeol Ahn**. “On comparing clusterings: an element-centric framework unifies overlaps and hierarchy”. In: *Under review* (2017).
- [A47] Alexander J. Gates and **Yong-Yeol Ahn**. *The Impact of Random Models on Clustering Similarity*. 2017. arXiv: 1701.06508 [stat.ML].
- [A46] Qing Ke, **Yong-Yeol Ahn**, and Cassidy R. Sugimoto. “A Systematic Identification and Analysis of Scientists on Twitter”. In: *PLoS One* (in press) (2017). arXiv: 1608.06229 [cs.DL].
- [A45] Huina Mao, **Yong-Yeol Ahn**, Budhendra Bhaduri, and Gautam Thakur. “Improving land use inference by factorizing mobile phone call activity matrix”. In: *Journal of Land Use Science* (in press) (2017).
- [A44] Supun Nakandala, Giovanni Luca Ciampaglia, Norman Makoto Su, and **Yong-Yeol Ahn**. “Gendered Conversation in a Social Game-Streaming Platform”. In: *Proceedings of the 11th International AAAI Conference on Weblogs and Social Media (ICWSM’17)*. Montreal, Canada, 2017. arXiv: 1611.06459 [cs.SI].
- [A43] Arram Bae, Doheum Park, Juyong Park, and **Yong-Yeol Ahn**. “Network Landscape of Western Classical Music”. In: *Leonardo* 49.5 (2016), p. 448.
- [A42] Arram Bae, Doheum Park, **Yong-Yeol Ahn**, and Juyong Park. “The Multi-Scale Network Landscape of Collaboration”. In: *PLoS ONE* 11.3 (2016), e0151784.
- [A41] Juyong Lee, Zhong-Yuan Zhang, Jooyoung Lee, Bernard R. Brooks, and **Yong-Yeol Ahn**. *Link community detection through global optimization and the inverse resolution limit of partition density*. 2016. arXiv: 1601.05100 [physics.soc-ph].

- [A40] Azadeh Nematzadeh, Giovanni Luca Ciampaglia, **Yong-Yeol Ahn**, and Alessandro Flammini. *Information Overload in Group Communication: From Conversation to Cacophony in the Twitch Chat*. 2016. arXiv: 1610.06497 [cs.SI].
- [A39] Shirin Nilizadeh, Anne Groggel, Peter Lista, Srijita Das, **Yong-Yeol Ahn**, Apu Kapadia, and Fabio Rojas. "Twitter's Glass Ceiling: The Effect of Perceived Gender on Online Visibility". In: *Proceedings of the Tenth International AAAI Conference on Weblogs and Social Media (ICWSM'16)*. Cologne, Germany, 2016.
- [A38] Nathaniel Rodriguez, Johan Bollen, and **Yong-Yeol Ahn**. "Collective Dynamics of Belief Evolution under Cognitive Coherence and Social Conformity". In: *PLoS ONE* 11.11 (2016), e0165910. arXiv: 1509.01502 [physics.soc-ph].
- [A37] Yu-Xiao Zhu, Wei Wang, Min Tang, and **Yong-Yeol Ahn**. *Social contagions on weighted networks*. 2016. arXiv: 1604.00467 [physics.soc-ph].
- [A36] James P. Bagrow, Sune Lehmann, and **Yong-Yeol Ahn**. "Robustness and Modular Structure in Networks". In: *Network Science* 3 (2015), pp. 509–525.
- [A35] Daejin Choi, Jinyoung Han, Taejoong Chung, **Yong-Yeol Ahn**, Byung-Gon Chun, and Ted T. Kwon. "Characterizing Conversation Patterns in Reddit: From the Perspectives of Content Properties and User Participation Behaviors". In: *Proceedings of the 2015 ACM on Conference on Online Social Networks*. ACM. 2015, pp. 233–243.
- [A34] Huina Mao, Xin Shuai, **Yong-Yeol Ahn**, and Johan Bollen. "Quantifying socio-economic indicators in developing countries from mobile phone communication data: applications to Côte D'Ivoire". In: *EPJ Data Science* 4.1 (2015), pp. 1–16.
- [A33] Bratislav Mišić, Richard F. Betzel, Azadeh Nematzadeh, Joaquin Goñi, Alessandra Griffa, Patric Hagmann, Alessandro Flammini, **Yong-Yeol Ahn**, and Olaf Sporns. "Cooperative and Competitive Spreading Dynamics on the Human Connectome". In: *Neuron* 86 (2015), p. 1518.
- [A32] Abhik Seal, **Yong-Yeol Ahn**, and David Wild. "Optimizing drug-target interaction prediction based on random walk on heterogeneous networks". In: *Journal of Cheminformatics* 7.1 (2015), p. 40.
- [A31] Zhong-Yuan Zhang and **Yong-Yeol Ahn**. "Community Detection in Bipartite Networks using Symmetric Binary Matrix Factorization". In: *International Journal of Modern Physics C* 0 (2015), p. 1550096.
- [A30] Qing Ke and **Yong-Yeol Ahn**. "Tie Strength Distribution in Scientific Collaboration Networks". In: *Physical Review E* 90 (2014), p. 032804.
- [A29] Azadeh Nematzadeh, Emilio Ferrara, Alessandro Flammini, and **Yong-Yeol Ahn**. "Optimal Network Modularity for Information Diffusion". In: *Physical Review Letters* 113 (2014), p. 088701.
- [A28] Shirin Nilizadeh, Apu Kapadia, and **Yong-Yeol Ahn**. "Community-Enhanced De-anonymization of Online Social Networks". In: *Proceedings of the 2014 ACM SIGSAC Conference on Computer & Communications Security. CCS'14*. Scottsdale, Arizona, USA: ACM, 2014.
- [A27] Maximilian Schich, Chaoming Song, **Yong-Yeol Ahn**, Alexander Mirsky, Mauro Martino, Albert-László. Barabási, and Dirk Helbing. "A Network Framework of Cultural History". In: *Science* 345 (2014), pp. 558–562.

- [A26] Lilian Weng, Filippo Menczer, and **Yong-Yeol Ahn**. “Predicting Successful Memes using Network and Community Structure”. In: *Proceedings of the Eighth International AAAI Conference on Weblogs and Social Media (ICWSM’14)*. Ann Arbor, MI, USA, 2014.
- [A25] **Yong-Yeol Ahn**, Deok-Sun Lee, Henry Burd, William Blank, and Vinayak Kapral. “Metabolic Network Analysis-Based Identification of Antimicrobial Drug Targets in Category A Bioterrorism Agents”. In: *PLOS ONE* 9 (2014), e85195.
- [A24] Huina Mao, Xin Shuai, **Yong-Yeol Ahn**, and Johan Bollen. “Mobile communications reveal the regional economy in Côte D’Ivoire”. In: *NetMob 2013 Special session on the D4D challenge (one of the 19 papers out of 166 submissions)*. Cambridge, MA, USA, 2013.
- [A23] Lilian Weng, Filippo Menczer, and **Yong-Yeol Ahn**. “Virality Prediction and Community Structure in Social Networks”. In: *Scientific Reports* 3 (2013), p. 2522.
- [A22] **Yong-Yeol Ahn** and Sebastian Ahnert. “The Flavor Network”. In: *Leonardo* 46 (2013), pp. 272–273.
- [A21] Zhong-Yuan Zhang, Yong Wang, and **Yong-Yeol Ahn**. “Overlapping Community Detection in Complex Networks using Symmetric Binary Matrix Factorization”. In: *Physical Review E* 87 (2013), p. 062803.
- [A20] Yu-Xiao Zhu, Junming Huang, Zi-Ke Zhang, Qian-Ming Zhang, Tao Zhou, and **Yong-Yeol Ahn**. “Geography and Similarity of Regional Cuisines in China”. In: *PLOS ONE* 8 (2013), e79161.
- [A19] Meeyoung Cha, Fabricio Benevenuto, **Yong-Yeol Ahn**, and Krishna P. Gummadi. “Delayed Information Cascades in Flickr: Measurement, Analysis, and Modeling”. In: *Computer Networks* 56 (2012), pp. 1066–1076.
- [A18] Arabidopsis Interactome Mapping Consortium. “Evidence for Network Evolution in an Arabidopsis Interactome Map”. In: *Science* 333 (2011), pp. 601–607.
- [A17] Alan Mislove, Sune Lehmann, **Yong-Yeol Ahn**, Jukka-Pekka Onnela, and J. Niels Rosenquist. “Understanding The Demographics Of Twitter Users”. In: *Proceedings of the Fifth International AAAI Conference on Weblogs and Social Media (ICWSM’11)*. Barcelona, Spain, 2011.
- [A16] Yunkyoo Sohn, Myung-Kyu Choi, **Yong-Yeol Ahn**, Junho Lee, and Jaeseung Jeong. “Topological Cluster Analysis Reveals the Systemic Organization of the *Caenorhabditis elegans* Connectome”. In: *PLOS Computational Biology* 7 (2011), e1001139.
- [A15] **Yong-Yeol Ahn**<sup>†</sup>, Sebastian Ahnert<sup>†</sup>, James P. Bagrow, and Albert-László Barabási. “Flavor Network and the Principles of Food Pairing”. In: *Scientific Reports* 1 (2011 (the most downloaded paper in all *Nature* journals)), p. 196.
- [A14] Sang Hoon Lee, Pan-Jun Kim, **Yong-Yeol Ahn**, and Hawoong Jeong. “Googling social interactions: web search engine based social network construction”. In: *PLOS ONE* 5 (2010), e11233.
- [A13] Y. Shen, J. Liu, G. Estiu, B. Isin, **Yong-Yeol Ahn**, D.-S. Lee, A.-L. Barabási, V. Kapral, O. Wiest, and Z. N. Oltvai. “A blueprint for antimicrobial hit discovery targeting metabolic networks”. In: *PNAS* 107 (2010), pp. 1082–1087.
- [A12] **Yong-Yeol Ahn**<sup>†</sup>, James P. Bagrow<sup>†</sup>, and Sune Lehmann<sup>†</sup>. “Link Communities Reveal Multi-scale Complexity in Networks”. In: *Nature* 466 (2010), pp. 761–764.

- [A11] Meeyoung Cha, Haewoon Kwak, Pablo Rodriguez, **Yong-Yeol Ahn**, and Sue Moon. "Analyzing the Video Popularity Characteristics of Large-Scale User Generated Content Systems". In: *ACM/IEEE Transactions on Networking* 17 (2009), pp. 1357–1370.
- [A10] Hyunwoo Chun, Haewoon Kwak, Young-Ho Eom, **Yong-Yeol Ahn**, Sue Moon, and Hawoong Jeong. "Comparison of online social relations in terms of volume vs. interaction: a case study of cyworld". In: *Proceedings of ACM Internet Measurement Conference (IMC'08)*. Vouliagmeni, Greece, 2008.
- [A9] Filippo Radicchi, **Yong-Yeol Ahn**, and Hildegard Meyer-Ortmanns. "Impact of the updating scheme on stationary states of networks". In: *J. Phys. A: Math. Theor.* 41 (2008), p. 224010.
- [A8] Meeyoung Cha, Haewoon Kwak, Pablo Rodriguez, **Yong-Yeol Ahn**, and Sue Moon. "I Tube, You Tube, Everybody Tubes: Analyzing the world's largest user generated content video system". In: *Proceedings of ACM Internet Measurement Conference (IMC'07)*. San Diego, CA, USA, 2007.
- [A7] **Yong-Yeol Ahn**, Seungyup Han, Haewoon Kwak, Sue Moon, and Hawoong Jeong. "Analysis of topological characteristics of huge online social networking services". In: *Proceedings of the 16th International World Wide Web Conference (WWW'07)*. Banff, Alberta, Canada, 2007.
- [A6] Seungyup Han, **Yong-Yeol Ahn**, Sue Moon, and Hawoong Jeong. "Collaborative blog spam filtering using adaptive percolation search". In: *Proceedings of the 15th International World Wide Web Conference, workshop on the Weblogging Ecosystem (WWW'06)*. Edinburgh, Scotland, 2006.
- [A5] **Yong-Yeol Ahn**, Beom Jun Kim, and Hawoong Jeong. "Wiring cost in the organization of a biological neuronal network". In: *Physica A* 367 (2006), pp. 531–537.
- [A4] **Yong-Yeol Ahn**, Naoki Masuda, Hawoong Jeong, and Jae Dong Noh. "Epidemic dynamics of two species of interacting particles on scale-free networks". In: *Physical Review E* 74 (2006), p. 066113.
- [A3] Dong-Hee Kim, Seung-Woo Son, **Yong-Yeol Ahn**, Pan-Jun Kim, Young-Ho Eom, and Hawoong Jeong. "Underlying scale-free trees in complex networks". In: *Progress of Theoretical Physics Supplement* 157 (2005), p. 213.
- [A2] Jae Dong Noh, Hyung-Chai Jeong, **Yong-Yeol Ahn**, and Hawoong Jeong. "Growing network model for community with group structure". In: *Physical Review E* 71 (2005), p. 036131.
- [A1] Seung-Woo Son, Dong-Hee Kim, **Yong-Yeol Ahn**, and Hawoong Jeong. "Response Network Emerging from Simple Perturbation". In: *Journal of Korean Physics Society* 44 (2004), p. 628.

#### PATENTS

- [P3] Alan Mislove, **Yong-Yeol Ahn**, Alexander E. Dusenbury, and Sune Lehmann. "Integrated system for sentiment in social data streams". Pat. US 61/798,726 (Pending).
- [P2] **Yong-Yeol Ahn**, Azadeh Nematzadeh, Ian Wood, Jaehyuk Park, Yizhi Jing, and Michael Conover. "Data Flow Based Feature Vector Clustering". Pat. US 15/229,956 (Pending).

[P1] **Yong-Yeol Ahn**, Lilian Weng, and Filippo Menczer. “Systems and methods to predict meme virality using network structure”. Pat. US 61/783,615 (Pending).

#### OTHER WORKS

- [O7] Alan Mislove, Sune Lehmann, **Yong-Yeol Ahn**, Jukka-Pekka Onnela, and J. Niels Rosenquist. *Pulse of the Nation*. 2012 Beijing Design Week. 2012.
- [O6] Alan Mislove, Sune Lehmann, **Yong-Yeol Ahn**, and Chloe Kliman-Silver. *Tweets mentioning “earthquake” immediately following Virginia earthquake on 08/23/2011*. [http://www.youtube.com/watch?v=XJ1EQbmJ\\_LQ](http://www.youtube.com/watch?v=XJ1EQbmJ_LQ). 2011.
- [O5] Alan Mislove, Sune Lehmann, **Yong-Yeol Ahn**, Jukka-Pekka Onnela, and J. Niels Rosenquist. *Mapping the Conversation: Political Topics and Geography on Twitter*. <http://election.ccs.neu.edu>. 2010.
- [O4] Alan Mislove, Sune Lehmann, **Yong-Yeol Ahn**, Jukka-Pekka Onnela, and J. Niels Rosenquist. *Pulse of the Nation*. Foosaner Art Museum, “The Art of Networks”, <http://isabelmeirelles.com/exhibit-the-art-of-networks/>. 2010.
- [O3] Alan Mislove, Sune Lehmann, **Yong-Yeol Ahn**, Jukka-Pekka Onnela, and J. Niels Rosenquist. *Pulse of the Nation: US mood throughout the day inferred from Twitter*. <http://www.ccs.neu.edu/home/amislove/twittermood/>. 2010.
- [O2] **Yong-Yeol Ahn**, Sebastian Ahnert, James P. Bagrow, and Albert-László Barabási. *Flavor Network*. Edge-Serpentine Gallery exhibition, “Maps for the 21st Century”, <http://www.edge.org/documents/Edge-Serpentine-MapsGallery/>. 2010.
- [O1] **Yong-Yeol Ahn**, James P. Bagrow, Sune Lehmann, and Alec Pawling. *Twittermood: United States Map of Mood*. <http://twittermood.net>. 2009.

#### SELECTED TALKS

##### Invited conference talks and lectures

- American Mathematical Society meeting  
Special Session on Network Theory (Bloomington, IN) 04/01/2017
- Data Science meets Social Science, Indiana University  
(Bloomington, IN) 11/03/2016
- ACM 10th Intl. Workshop on Data and Text Mining  
in Biomedical Informatics (DTMBIO) 2016 (Indianapolis, IN) 10/28/2016
- NetSci 2016 (Seoul, South Korea) 06/03/2016
- Network of Networks (NetoNets) Satellite  
at NetSci 2016 (Seoul, South Korea) 05/30/2016
- Social Connectome Satellite at NetSci 2016 (Seoul, South Korea) 05/30/2016
- Higher Order Models in Network Science (HONS) Satellite  
at NetSci 2016 (Seoul, South Korea) 05/30/2016
- Mathematical Analysis of Cultural Expressive Forms: Text Data,  
IPAM Cultural Analytics Long Program 05/23/2016
- Culture Analytics Beyond Text: Image, Music, Video, Interactivity  
and Performance, IPAM Cultural Analytics Long Program 03/23/2016
- Information & Library Science Doctoral Symposium, IU 10/25/2014
- Computational Gastronomy—Food in the Age of Data  
(The Royal Society Workshop, Chicheley, UK; co-organizer) 09/29/2014
- ChASM 2014: Computational Approaches to Social Modeling  
(WebSci 2014 workshop, Bloomington, IN) 06/23/2014

- COVENANT 2013: Collective Behaviors and Networks  
(a satellite event of ECCS, Barcelona, Spain) 09/19/2013
- Quantifying Success (a satellite event of ECCS, Barcelona, Spain) 09/18/2013
- UKC2013 (East Rutherford, NJ) 08/07/2013
- International Workshop on Social Computing 2013 (Seoul, South Korea) 07/27/2013
- Workshop on Time-Dependent and Multiplex Networks  
(University of Oxford, United Kingdom) 07/08/2013
- Wolfram Data Summit 2012 (Washington, DC) 09/07/2012
- Arts, Humanities, and Complex Networks  
(Leonardo satellite symposium at NetSci2012, Evanston, IL) 06/19/2012
- Cambridge Networks Day 2012  
(University of Cambridge, United Kingdom) 05/18/2012
- Gastronomy & Technology Days 2011 (Telefonica, Barcelona, Spain) 10/18/2011
- 2011 Summer School on Social Network Analysis  
(NIMS, Daejeon, South Korea) 08/06/2011
- Using online social networks research to improve health  
(Columbia University, New York, NY) 05/23/2011
- 5th APCTP-KIAS Winter School on Statistical Physics  
(Phoenix park, South Korea) 01/28/2008

#### Invited Colloquia and Seminars

- Bloomington Rotary Club 03/01/2016
- School of Medicine, Indiana University, IN 11/30/2015
- USC Information Sciences Institute, CA 11/04/2015
- Information and Library Science Colloquium, Indiana University, IN 03/06/2015
- Computer Science Colloquium, Indiana University, IN 11/14/2014
- Department of Biology Colloquium, Write State University, OH 10/20/2014
- University of Oxford, UK 10/02/2014
- LinkedIn 08/19/2014
- Facebook 06/06/2014
- Department of Physics, SNU, South Korea 05/19/2014
- Department of Computer Science, KAIST, South Korea 05/16/2014
- POSTECH, South Korea 05/15/2014
- KIAS, South Korea 05/14/2014
- Technology Management, Economics and Policy Program,  
SNU, South Korea 05/13/2014
- Sungkyunkwan University, South Korea 05/13/2014
- School of Culture Technology, KAIST, South Korea 05/12/2014
- Data Science Seminar, University of Washington, WA 03/19/2014
- Network Science Talks series, Indiana University, IN 10/28/2013
- DIMACS, Rutgers University, NJ 03/04/2013
- Department of Computer & Information Science, IUPUI, IN 01/11/2013
- Wolfram Research, IL 10/25/2012
- Department of Statistics Colloquium, IUB, IN 09/24/2012
- Computer Science & Engineering, University of Washington, WA 07/19/2012
- IBM Watson Research Center, NY 06/15/2012
- Center for Social Data, DTU, Denmark 05/24/2012
- School of Informatics Colloquium, IUPUI, IN 03/09/2012
- Department of Physics Colloquium, Ohio State University, OH 01/03/2012
- Dept. of Computer Science, KAIST, South Korea 07/18/2011



- BECS, Aalto University, Finland 05/09/2011
- Dept. of Physics, University of Notre Dame, IN 03/10/2011
- School of Informatics and Computing, IUB, IN 03/03/2011
- Dept. of Brain and Cognitive Science, SNU, South Korea 11/26/2010
- Dept. of Computer Science, UMASS Boston, MA 10/14/2010
- SCANS seminar series, CCIS, Northeastern University, MA 10/05/2010
- APCTP, Pohang, South Korea 07/20/2010
- Dept. of Industrial & Systems Engineering, KAIST, South Korea 07/23/2010
- Dept. of Computer Science, KAIST, South Korea 07/09/2010

## SERVICE

### Editorial services

- Editor (with Sune Lehmann), Spreading Dynamics in Social Systems (To be published by Springer Nature)
- Editor (with Emma Spiro), Proceedings of 8th International Conference on Social Informatics Volume I & II (2016).
- Advisory Board Member, Human Computation (Journal, 2014-present).

### Organization

- Program Co-chair, “NetSci 2017” (International School and Conference on Network Science, Indianapolis, IN). 06/2017
- Program Co-chair, “SocInfo 2016” (8th International Conference on Social Informatics, Bellevue, WA). 11/2016
- Co-organizer, “COOL2014 (Connecting Online & Offline Life)”, a WWW’14 workshop (Seoul, South Korea). 04/2013
- Co-organizer, “Computational Gastronomy: Food in the Age of Data”, a Royal Society International Scientific Seminar (Buckinghamshire, UK). 09/2014

### Reviewer

- Funding: NSF, NIH NCI, Irish Research Council
- General: Science, PNAS, Science Advances, Scientific Reports, PLoS ONE, Network Science
- Mathematics and Physics: Physical Review Letters, Nature Physics, Physical Review X, EPL, Physics Letters A, Physical Review E, Physica A, European Physical Journal B, European Journal of Applied Mathematics
- Biology: PLoS Computational Biology, BMC Systems Biology, IET Systems Biology
- Medicine: Journal of Obesity
- Computer Science: WWW’09, SIGKDD’10, ACM Transactions on Intelligent Systems and Technology, ACM Transactions on Knowledge Discovery from Data
- Other: Journal of Computer-Mediated Communication, Palgrave Communications, Journal of Obesity, Leonardo

### PC member

- ICWSM: 2014–2017 (Senior PC).
- CCS: 2017
- WWW: 2012–2017.
- IC2S2: 2015, 2017.
- CompleNet: 2010, 2012–2016.
- ASONAM: 2015.
- NetSci: 2015.
- GLBIO: 2015.

- SocInfo: 2014 (Best Reviewer Finalist), 2015.
- ECCS Computational Social Science workshop: 2014.
- WebSci: 2014.
- WWW SIMPLEX workshop: 2013.
- ECCS COVENANT workshop: 2013.

## IN THE PRESS

### Selected list of media coverages

- “Gendered Conversation in a Social Game-Streaming Platform” was covered in several news articles and blogs. A more comprehensive list is *here*.
  - *Motherboard* (11/23, 2016).
  - *Kotaku* (11/23, 2016).
- “NIH ‘Doctor shopping’ project”
  - *Fox 59* (10/26, 2016).
  - *IU Bloomington Newsroom* (10/19, 2016).
- “LinkedIn Economic Graph Challenge 2015”
  - *IU Inc.* (May 15th, 2015).
  - *SoIC News* (May 14th, 2015)
- “A Network Framework of Cultural History” (*Science* **345**, 558, 2014).
  - *Nature News* (July 31st, 2014). Among the top 4 most viewed videos from *Nature Video*, with about 900,000 views.
  - *The Economist* (July 31st, 2014).
  - *The Boston Globe* (July 31st, 2014).
  - *National Geographic* (July 31st, 2014).
  - *NPR Goats and Soda* (August 1st, 2014).
  - *Dong-A Science* (July 31st, 2014).
- “Geography and Similarity of Regional Cuisines in China” (*PLoS ONE* **8**, e79161, 2013).
  - *MIT Technology Review* (July 25th, 2013).
  - *Wired Science blog ‘Social Dimension’* (July 24th, 2013).
- “Virality Prediction and Community Structure in Social Networks” (*Scientific Reports* **3**, 2522, 2013).
  - *IEEE Spectrum* (March 27th, 2014).
  - *Scientific American* (December 17th, 2013).
- “Flavor network and the principles of food pairing” (*Scientific Reports* **1**, 196, 2011). More comprehensive list can be found *here*.
  - *Nature News* (December 15th, 2011).
  - *The Huffington Post* (December 15th, 2011).
  - *Mail Online* (December 19th, 2011).
  - *InsideScience.org* (December 23rd, 2011).
  - *Physorg.com* (December 26th, 2011).
  - *Technology Review, The Physics arXiv Blog* (November 29th, 2011).
  - *Gizmodo* (December 18th, 2011).

- *NPR, the salt* (December 21st, 2011).
  - *Flowing Data* (December 27th, 2011).
  - *IU News* (December 15th, 2011).
  - *Northeastern News* (December 16th, 2011).
- “Pulse of the nation: U.S. Mood Throughout the Day inferred from Twitter” was covered in several television programs, newspapers, and blogs. A more comprehensive list can be found *here*. Some highlights are following:
    - *CBS Evening News with Katie Couric* (July 23rd, *video, transcript*).
    - *Fox News* (July 28th, 2010, *video*).
    - *CBS 3* (August 2nd, 2010, *video*).
    - *New York Times* (July 24th, 2010).
    - *New York Times, VentureBeat* (July 23rd, 2010).
    - *New York Times, Bits* (July 22nd, 2010).
    - *BBC* (July 23rd, 2010).
    - *Time Magazine* (July 22nd, 2010).
    - *Vanity Fair* (July 22nd, 2010).
    - *New York Magazine* (July 22nd 2010).
    - *LA Times* (July 23rd, 2010).
    - *Wall Street Journal* (July 24th, 2010).
    - *USA Today* (July 28th, 2010).
    - *SF Gate/San Francisco Chronicle* (July 21st, 2010).
    - *CBS News* (July 22nd, 2010).
    - *National Public Radio* (July 23rd, 2010). *all tech considered*.
    - *National Public Radio* (July 22nd, 2010). [*The Picture Show*]
    - *Mashable* (July 21st, 2010).
    - *Huffington Post* (July 23rd, 2010).
    - *CNET* (July 22nd, 2010).
    - *Gawker* (July 22nd, 2010).
    - *Engadget* (July 27th, 2010).
    - *CNN* (August 6th, 2010).
  - “Link communities reveal multiscale complexity in networks” (*Nature* **466**, 761, 2010) was featured on *Northeastern News* and *Science On (Hankyoreh)*.
  - “Googling social interactions: Web search engine based social network construction” (*PLoS One* **5**, e11233, 2010) was featured on *New Scientist* and *Pocket Science*.