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 Department of Informatics  
 Indiana University Bloomington  
 Bloomington, IN 47408-3912

**RESEARCH INTERESTS**

My research focuses on the study of sociotechnical systems and mechanisms to enhance physical and mental wellbeing and to facilitate civic engagement and environmental stewardship. I utilize mixed methods approaches to tackle research problems in online and geographic communities. Specifically, my current research focuses on leveraging the awareness of individual and community activities embedded in sensor technologies, smart devices, social media, and online forums in the design, prototyping, and deployment of novel personal informatics interfaces and civic engagement platforms.

**EDUCATION**

|   |                                       |             |
|---|---------------------------------------|-------------|
| Ph.D. Information and Computer Science            | University of California, Irvine      | 2006 – 2011 |
| M.S. Information Networking                       | Carnegie Mellon University            | 2003 – 2005 |
| B.S. Computer Science and Engineering (cum laude) | University of California, Los Angeles | 2000 – 2003 |

**EXPERIENCE****Indiana University Bloomington**

|   |             |
|---|-------------|
| Assistant Professor, Department of Informatics  | Since 2016  |
| Part-time Assistant Professor, University Studies, DePauw University                        |             |
| Director, Societal Computing Lab (SOCO)   | Since 2015  |
| Affiliated Faculty, Center for the Integrative Study of Animal Behavior (CISAB)             |             |
| Affiliated Faculty, Indiana University Network Science Institute (IUNI)                     |             |
| Affiliated Faculty, Institute for Software Research (ISR), University of California, Irvine |             |
| Fellow, Center for Computer-Mediated Communication (CCMC)                                   |             |
| Fellow, Minority Serving Institution Faculty Research Development Institute (MSI)           |             |
| Fellow, National Center for Faculty Development & Diversity (NCFDD)                         |             |
| Fellow, Consortium for the Science of Sociotechnical Systems (CSST)                         | Summer 2016 |
| Assistant Professor, Department of Information and Library Science                          | 2015 – 2016 |

**The Pennsylvania State University**

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| Research Associate and Lecturer (Graduate Faculty), College of Information Sciences and Technology | 2012 – 2015 |
| Affiliated Faculty, Center for Human-Computer Interaction  |             |

**Microsoft Research**

|   |             |
|---|-------------|
| Research Intern, Visualization and Interaction for Business and Entertainment (VIBE) Group, Redmond, WA | Summer 2010 |
|---|-------------|

**IBM Research**

|   |                  |
|---|------------------|
| Research Intern, User Systems and Experience Research (USER) Group, San Jose, CA        | Summer-Fall 2008 |
| Extreme Blue Intern, Component Systems Group, San Jose, CA                              | Summer 2007      |
| Research Developer, User Systems and Experience Research (USER) Group, San Jose, CA     | 2006             |
| WBI Tools Developer & Performance Analyst,  | Summer-Fall 2005 |
| WebSphere Business Integration Performance and Development Division, Austin, TX         |                  |
| Extreme Blue Intern, User Systems and Experience Research (USER) Group, San Jose, CA    | Spring 2005      |
| Software Developer Intern—Test Tool Development, Printing Systems Division, Boulder, CO | Summer 2004      |

**MSC.Software**

|  |             |
|--|-------------|
| Mainframe Systems Intern, High Performance Computing Division, Santa Ana, CA | Summer 2002 |
|--|-------------|

## FUNDING

## External Grants

- [EG.5] Andrew W. Mellon Foundation Faculty Fellowship 2016-2017). *Understanding cross-cultural differences of crowd work in U.S., Taiwan, and China*. PI: **Patrick C. Shih**. \$20,000.
- [EG.4] U.S. National Park Service. 2015-2016). *Population monitoring, seasonal activity, and landscape movements of little brown myotis (*Myotis lucifugus*) in Yellowstone National Park*. PI: John Treanor; Co-PIs: Joe Johnson, Jessica Kropczynski, & **Patrick C. Shih**. \$60,000.
- [EG.3] Yellowstone Park Foundation. 2015-2016). *Bat ecology and movements in Yellowstone National Park*. PI: John Treanor; Co-PIs: Joe Johnson, Jessica Kropczynski, & **Patrick C. Shih**. \$50,000.
- [EG.2] Bloomberg Financial Products UX Research Awards. 2015-2016). *End-user configurable tools for integrating discussions of trending financial news*. PI: John M. Carroll; Co-PI: **Patrick C. Shih**. \$135,000.
- [EG.1] Next Century Corporation Technology Innovation Grant. 2014-2015). PI: **Patrick C. Shih**. \$2,000.

## Internal Grants

- [IG.7] IUB Collaborative Research and Creative Activity Funding Award 2017-2018). *Just Like Me”: Stories from All Sides of the Vietnam War*. PI: **Patrick C. Shih**. \$20,000.
- [IG.6] IUB Groups STEM Summer Research Experience Program 2016). *Impact of initial trust on video-mediated social support*. PI: **Patrick C. Shih**. \$2,000.
- [IG.5] Penn State Center for Online Innovation in Learning Research Initiation Grant. 2015-2016). *Occupy MOOCs: Understanding and designing for actual student motivations and activities in MOOCs*. PI: John M. Carroll; Co-PIs: Mary Beth Rosson, & **Patrick C. Shih**. \$49,082.
- [IG.4] Penn State Schreyer Institute for Teaching Excellence Teaching Project Grant. 2014-2015). *Supporting Technology Augmented Rhetoric (STAR)*. PI: **Patrick C. Shih**; Co-PI: Jessica Kropczynski. \$5,000.
- [IG.3] Penn State Summer Undergraduate Research Fellowship. 2014). *Using Smartphones as sensing infrastructure at large festivals*. PI: **Patrick C. Shih**. \$1,000.
- [IG.2] Penn State Center for Online Innovation in Learning Research Initiation Grant. 2013-2014). *Supporting Dialectical Learning with Piazza*. PI: John M. Carroll; Co-PI: **Patrick C. Shih**. \$42,000.
- [IG.1] Penn State Summer Undergraduate Research Fellowship. 2013). *Supporting dialectical learning with Piazza*. PI: **Patrick C. Shih**. \$1,000.

## HONORS AND AWARDS

|   |             |
|---|-------------|
| European Exhibition of Creativity and Innovation Conference (Euroinvent) Silver Medal Award [B.2] | 2017        |
| ACM CHI Special Recognitions for Exceptional Reviews  | 2017        |
| IU Office of Mentoring Services & Leadership Development Award                                    | 2017        |
| ACM CSCW Special Recognitions for Exceptional Reviews   | 2016        |
| Consortium for the Science of Sociotechnical Systems (CSST) Fellowship                            | 2016        |
| ACM CHI Best Paper Honorable Mention Award (top 5%) [C.15]  | 2015        |
| iConference Best Paper Award Nomination (top 3%) [C.14]   | 2015        |
| 1000 Pitches Summit finalist in “Mobile Apps” category (top 9 out of 1083)                        | 2014        |
| ACM CHI Best Paper Honorable Mention Award (top 5%) [C.8]   | 2014        |
| DoED Graduate Assistance in Areas of National Need (GAANN) Fellowship                             | 2008 – 2010 |
| UC Irvine Chancellor’s Fellowship   | 2006 – 2010 |
| IBM Service Science, Management and Engineering (SSME) Certificate                                | 2007        |
| CMU Best Teaching Assistant Award Nomination  | 2004 – 2005 |
| CMU Information Networking Institute Scholarship  | 2003 – 2005 |
| Golden Key International Honour Society   | 2003        |
| UCLA Paul Sandager Alumni Scholarship   | 2002        |
| UCLA University Scholarship   | 2002        |
| Eta Kappa Nu International Electrical and Computer Engineering Honor Society                      | 2001        |
| Tau Beta Pi National Engineering Honor Society  | 2001        |
| UCLA Dean’s Honor List  | 2001        |
| Stanford National Invitational Congress Debate Finalist   | 1999        |
| US FIRST Robotic Team Award   | 1998        |

## PUBLICATIONS

Google Scholar: [https://scholar.google.com/citations?hl=en&user=Lzw8EnkAAAAJ&pagesize=100&view\\_op=list\\_works](https://scholar.google.com/citations?hl=en&user=Lzw8EnkAAAAJ&pagesize=100&view_op=list_works)  
 ResearchGate: [https://www.researchgate.net/profile/Patrick\\_Shih](https://www.researchgate.net/profile/Patrick_Shih)

## Journal Papers

- [J.12] John M. Carroll, **Patrick C. Shih**, Kyungsik Han, and Jessica Kropczynski. 2017. Coordinating community cooperation: Integrating timebanks and nonprofit volunteering by design. *International Journal of Design* 11, 1 (Apr. 2017), 51-63. ISSN: 1991-3761.
- [J.11] Jonathan K. Nelson and **Patrick C. Shih**. 2017. CompanionViz: Mediated platform for gauging canine health and enhancing human-pet interactions. *International Journal of Human-Computer Studies* 98 (Feb. 2017), 169-178. <http://dx.doi.org/10.1016/j.ijhcs.2016.04.002>
- [J.10] Chase McCoy and **Patrick C. Shih**. 2016. Teachers as producers of data analytics: A case study of a teacher-focused educational data science program. *Journal of Learning Analytics* 3, 3 (Dec. 2016), 193-214. <http://dx.doi.org/10.18608/jla.2016.33.10>
- [J.9] Kyungsik Han, **Patrick C. Shih**, Mary Beth Rosson, and John M. Carroll. 2016. Understanding local community attachment, engagement and social supported networks mediated by mobile technology. *Interacting with Computers* 28, 3 (May 2016), 220-237. <http://dx.doi.org/10.1093/iwc/iwu040>
- [J.8] John M. Carroll, Yu Wu, **Patrick C. Shih**, and Saijing Zheng. 2016. Re-appropriating a Question/Answer system to support dialectical constructivist learning activity. *Educational Technology Research and Development* 64, 1 (Feb. 2016), 137-156. <http://dx.doi.org/10.1007/s11423-015-9405-6>
- [J.7] Jing Wang, **Patrick C. Shih**, Yu Wu, and John M. Carroll. 2015. Comparative case studies of open source software peer review processes. *Information and Software Technology* 67 (Nov. 2015), 1-12. <http://dx.doi.org/10.1016/j.infsof.2015.06.002>
- [J.6] **Shih, P. C.**, Kyungsik Han, and John M. Carroll. 2015. Using social multimedia content to inform emergency planning and management of recurring and cyclical events in local communities. *Journal of Homeland Security and Emergency Management* 12, 3 (Sep. 2015), 627-652. <http://dx.doi.org/10.1515/jhsem-2014-0071>
- [J.5] Jing Wang, **Patrick C. Shih**, and John M. Carroll. 2015. Life after weight loss: Design implications for community-based long-term weight management. *Computer Supported Cooperative Work* 24, 4 (Aug. 2015), 353-384. <http://dx.doi.org/10.1007/s10606-015-9226-5>
- [J.4] John M. Carroll, **Patrick C. Shih**, and Jessica Kropczynski. 2015. Community informatics as innovation in sociotechnical infrastructures. *Journal of Community Informatics* 11, 2 (Jun. 2015), 17 pages. ISSN: 1712-4441.
- [J.3] Kyungsik Han, **Patrick C. Shih**, Victoria Bellotti, and John M. Carroll. 2015. It's time there was an app for that too: A usability study of mobile timebanking. *International Journal of Mobile Human-Computer Interaction* 7, 2 (Jun. 2015), 1-22. <http://dx.doi.org/10.4018/ijmhci.2015040101>
- [J.2] Jing Wang, **Patrick C. Shih**, and John M. Carroll. 2015. Revisiting Linus's Law: Benefits and challenges of open source software peer review. *International Journal of Human-Computer Studies* 77 (May 2015), 52-65. <http://dx.doi.org/10.1016/j.ijhcs.2015.01.005>
- [J.1] Kyungsik Han, **Patrick C. Shih**, and John M. Carroll. 2014. Local News Chatter: Augmenting community news by aggregating hyperlocal microblog content in a tag cloud. *International Journal of Human-Computer Interaction* 30, 12 (Sep. 2014), 1003-1014. <http://dx.doi.org/10.1080/10447318.2014.925773>

## Conference Papers

- [C.24] Shengnan Yang, Pei-Ying Chen, **Patrick C. Shih**, Jeffrey Bardzell, and Shaowen Bardzell. 2018. Cross-Strait Frenemies: Chinese Netizens VPN in to Facebook Taiwan. In *Proceedings of the ACM Conference on Computer Supported Cooperative Work & Social Computing (CSCW '18)*. ACM Press.
- [C.23] Juan Fernando Maestre and **Patrick C. Shih**. 2017. Impact of Initial Trust on Video-Mediated Social Support. In *Proceedings of the Australian Conference on Computer-Human Interaction (OZCHI '17)*. ACM Press.
- [C.22] Gege Gao, Aehong Min, and **Patrick C. Shih**. 2017. Gendered Design Bias: Gender Differences of In-Game Character Choice and Playing Style in League of Legends. In *Proceedings of the Australian Conference on Computer-Human Interaction (OZCHI '17)*. ACM Press.
- [C.21] Jeremiah Parry-Hill, **Patrick C. Shih**, Jennifer Mankoff, and Daniel Ashbrook. 2017. Bridging Between Volunteers and Clinicians: Challenges and Opportunities of Distributed DIY-AT. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI '17)*. ACM Press, 6184-6194. (25% acceptance rate).
- [C.20] Xianghua Ding, **Patrick C. Shih**, and Ning Gu. 2017. Socially embedded work: A study of wheelchair users performing online work in China. In *Proceedings of the ACM Conference on Computer Supported Cooperative Work & Social Computing (CSCW '17)*. ACM Press, 642-654. (35% acceptance rate).
- [C.19] Jin Y. Jang, Kyungsik Han, Dongwon Lee, Haiyan Jia, and **Patrick C. Shih**. 2016. Teens engage more with fewer photos: Temporal and comparative analysis on behaviors in Instagram. In *Proceedings of the ACM Conference on Hypertext and Social Media (HT '16)*. ACM Press, 71-81. (30% acceptance rate).
- [C.18] Joslenne Pena, **Patrick C. Shih**, and Mary Beth Rosson. 2016. Scenario-based design of technology to support teaching in inverted classes. In *Proceedings of the iConference (iConf '16)*. iSchools, 1-10. (30% acceptance rate).
- [C.17] **Patrick C. Shih**, Kyungsik Han, and John M. Carroll. 2015. Engaging community members with digitally curated social media content at an arts festival: A case study about leveraging crowd-sourcing for community heritage curation. In *Proceedings of the Digital Heritage International Congress (DH '15)*. IEEE Press, 321-324. (57% acceptance rate).
- [C.16] Jin Y. Jang, Kyungsik Han, **Patrick C. Shih**, and Dongwon Lee. 2015. Generation Like: Comparative characteristics in Instagram. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI '15)*. ACM Press, 4039-4042. (23% acceptance rate).

- [C.15] **Patrick C. Shih**, Victoria Bellotti, Kyungsik Han, and John M. Carroll. 2015. Unequal time for unequal value: Implications of differing motivations for participation in timebanking. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI '15)*. ACM Press, 1075-1084. (23% acceptance rate). **[Best Paper Honorable Mention Award (top 5%)]**
- [C.14] **Patrick C. Shih**, Kyungsik Han, Erika S. Poole, Mary Beth Rosson, and John M. Carroll. 2015. Use and adoption challenges of wearable activity trackers. In *Proceedings of the iConference (iConf '15)*. iSchools, 1-12. (36% acceptance rate). **[Best Paper Award Nomination (top 3%)]**
- [C.13] Saijing Zheng, Mary Beth Rosson, **Patrick C. Shih**, and John M. Carroll. 2015. Understanding student motivation, behaviors and perceptions in MOOCs. In *Proceedings of the ACM Conference on Computer Supported Cooperative Work & Social Computing (CSCW '15)*. ACM Press, 1882-1895. (28% acceptance rate)
- [C.12] **Patrick C. Shih**, Kyungsik Han, and John M. Carroll. 2014. Community Poll: Externalizing public sentiments in social media in a local community context. In *Proceedings of the AAAI Conference on Human Computation & Crowdsourcing (HCOMP '14)*. AAAI Press, 201-209. (32% acceptance rate)
- [C.11] Yu Wu, **Patrick C. Shih**, and John M. Carroll. 2014. Design for supporting dialectical constructivist learning activities. In *Proceedings of the International Conference on Education and New Learning Technologies (EDULEARN '14)*. IATED, 4156-4164.
- [C.10] Kyle Williams, Lichi Li, Madian Khabza, Jian Wu, **Patrick C. Shih**, and C. Lee Giles. 2014. A web service for scholarly big data information extraction. In *Proceedings of the IEEE International Conference on Web Services (ICWS '14)*. IEEE Press, 105-112. 20% acceptance rate).
- [C.9] **Patrick C. Shih**, Kyungsik Han, and John M. Carroll. 2014. Community Incident Chatter: Informing local incidents by aggregating local news and social media content. In *Proceedings of the International Conference on Information Systems for Crisis Response and Management (ISCRAM '14)*. ISCRAM Association, 772-776. (56% acceptance rate).
- [C.8] Victoria Bellotti, Sara Cambridge, Karen Hoy, **Patrick C. Shih**, Lisa R. Handalian, Kyungsik Han, and John M. Carroll. 2014. Towards community-centered support for peer-to-peer service exchange: Rethinking the timebanking metaphor. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI '15)*. ACM Press, 2975-2984. **[Best Paper Honorable Mention Award (top 5%)]** (23% acceptance rate).
- [C.7] Kyungsik Han, **Patrick C. Shih**, Mary Beth Rosson, and John M. Carroll. 2014. Enhancing community awareness and participation to local heritage with a mobile application. In *Proceedings of the ACM Conference on Computer Supported Cooperative Work & Social Computing (CSCW '14)*. ACM Press, 1144-1155. (27% acceptance rate).
- [C.6] Jana Schumann, **Patrick C. Shih**, David F. Redmiles, and Graham Horton. 2012. Supporting initial trust in distributed idea generation and idea evaluation. In *Proceedings of the ACM Conference on Supporting Group Work (GROUP '12)*. ACM Press, 199-208. (37% acceptance rate).
- [C.5] Benjamin Koehne\*, **Patrick C. Shih\***, and Judith S. Olson. 2012. Remote and alone: Coping with being the remote member on the team. In *Proceedings of the ACM Conference on Computer Supported Cooperative Work (CSCW '12)*. ACM Press, 1257-1266. (40% acceptance rate). **[\* These authors contributed equally to this work and are listed in alphabetical order]**
- [C.4] Norman M. Su and **Patrick C. Shih**. 2011. Virtual spectating: Hearing beyond the video arcade. In *Proceedings of the British Computer Society Conference on Human-Computer Interaction (BCS-HCI '11)*. ACM Press, 269-278. (29% acceptance rate)
- [C.3] **Patrick C. Shih**, Gina Venolia, and Gary M. Olson. 2011. Brainstorming Under Constraints: Why Software Developers Brainstorm in Groups. In *Proceedings of the British Computer Society Conference on Human-Computer Interaction (BCS-HCI '11)*. ACM Press, 74-83. (29% acceptance rate).
- [C.2] Leslie S. Liu, **Patrick C. Shih**, and Gillian R. Hayes. 2011. Barriers to the adoption and use of personal health record systems. In *Proceedings of the iConference (iConf '11)*. ACM Press, 363-370. (32% acceptance rate).
- [C.1] **Patrick C. Shih**, David H. Nguyen, Sen H. Hirano, David F. Redmiles, and Gillian R. Hayes. 2009. GroupMind: Supporting brainstorming through a collaborative mind-mapping tool. In *Proceedings of the ACM Conference on Supporting Group Work (GROUP '09)*. ACM Press, 139-148. (36% acceptance rate).

#### Book Chapters

- [B.3] John M. Carroll, **Patrick C. Shih**, Jessica Kropczynski, Guoray Ca, G., Mary Beth Rosson, and Kyungsik Han. 2017. The Internet of places at community-scale: Design scenarios for hyperlocal neighborhood. In *Enriching Urban Spaces with Ambient Computing, the Internet of Things, and Smart City Design*, Shin'ichi Konomi and George Roussos (Eds.). IGI Global, 1-24.
- [B.2] Joslenne Pena, **Patrick C. Shih**, and Mary Beth Rosson. 2016. Instructors as end-user developers: Technology usage opportunities in the inverted classroom. In *Handbook of Applied Learning Theory and Design in Modern Education*, Elena Raïlean, Gabriela Walker, Atilla Elçi, and Liz Jackson (Eds.). IGI Global, 560-571. **[European Exhibition of Creativity and Innovation Conference (Euroinvent) Diploma and Silver Medal Award]**
- [B.1] John M. Carroll, **Patrick C. Shih**, Blane Hoffman, Jing Wang, and Kyungsik Han. 2014. Presence and hyperpresence: Implications for community awareness. In *Interacting with Presence: HCI and the Sense of Presence in Computer-Mediated Environments*, Giuseppe Riva, John Waterworth, and Dianne Murray (Eds.). De Gruyter Open, 70-82.

#### Extended Abstracts and Work-in-Progress Papers with Proceedings (Peer-Reviewed)

- [E.4] Saijing Zheng, Mary Beth Rosson, **Patrick C. Shih**, and John M. Carroll. 2015. Designing MOOCs as interactive places for collaborative learning. In *Proceedings of the ACM Conference on Learning @ Scale (L@S '15)*. ACM Press, 343-346.
- [E.3] Yu Wu, Jessica Kropczynski, **Shih., P. C.**, and John M. Carroll. 2014. Exploring the ecosystem of software developers on Github and other platforms. In *Proceedings of the Companion Publication of the ACM Conference on Computer Supported Cooperative Work & Social Computing (CSCW Companion '14)*. ACM Press, 265-268.

- [E.2] Kyungsik Han, **Patrick C. Shih**, and John M. Carroll. 2013. Aggregating community information to explore social connections. In *Proceedings of the AAAI Conference on Weblogs and Social Media: When the City Meets the Citizen Workshop (ICWSM '13)*. AAAI Press, 5-8.
- [E.1] Bill Tomlinson, Joel Ross, Paul Andre, Eric P. S. Baumer, Donald J. Patterson, Joseph Corneli, Martin Mahaux, Syavash Nobarany, Marco Lazzari, Birgit Penzenstadler, Andrew W. Torrance, David J. Callele, Gary M. Olson, M. Six Silberman, Marcus Stünder, Fabio R. Palamedi, Albert A. Salah, Eric Morrill, Xavier Franch, Florian F. Mueller, Joseph Kaye, Rebecca W. Black, Marisa L. Cohn, **Patrick C. Shih**, Johanna Brewer, Nitesh Goyal, Pirjo Näkki, Jeff Huang, Nilufar Baghaei, and Craig Saper. 2012. Massively distributed authorship of academic papers. In *Proceedings of the Extended Abstracts of the ACM Conference on Human Factors in Computing Systems (CHI EA '12)*. ACM Press, 11-20. (45% acceptance rate)

#### Workshop, Posters, and Demos without Proceedings (Lightly Peer-Reviewed)

- [W.6] Lee Hiler, Brook Foulk, Christena Nippert-Eng, and **Patrick C. Shih**. 2017. Detecting Biological Samples Using Olfactory Sensors. Poster presented at the *Animal Behavior Conference*.
- [W.5] Kyungsik Han, Kristin Cook, and **Patrick C. Shih**. 2016. Exploring effective decision making through human-centered and computational intelligence methods. Poster presented at the *ACM Conference on Human Factors in Computing: Workshop on Human Centered Machine Learning (CHI '16)*.
- [W.4] **Patrick C. Shih** and Christena Nippert-Eng (2016, May). From Quantified Self to Quantified Other: Engaging the public on promoting animal well-being. *ACM Conference on Human Factors in Computing: Workshop on HCI Goes to the Zoo (CHI '16)*.
- [W.3] Sarah-Alice Hanna, Jessica Kropczynski, **Shih., P. C.**, and John M. Carroll. 2015. Using a mobile application to encourage community interactions at a local event. Poster presented at the *ACM Richard Tapia Celebration of Diversity in Computing Conference (TAPIA '15)*.
- [W.2] Kyungsik Han, **Patrick C. Shih**, Victoria Bellotti, and John M. Carroll. 2014. Timebanking with a smartphone application. Poster and demo presented at the *Collective Intelligence Conference (CI '14)*.
- [W.1] **Patrick C. Shih** and Gary M. Olson. 2009. Using visualization to support idea generation in context. *ACM Conference on Creativity and Cognition Conference: Workshop on Creativity and Cognition in Engineering Design (C&C '09)*.

#### Patents

- [P.1] Kean G. Kuiper, Frank E. Levine, Enio M. Pineda, and **Patrick C. Shih**. 2010. Call stack sampling for a multi-processor system. *U.S. Patent and Trademark Office*, U.S. Patent No. 20100017583.

#### Dissertation and Thesis

- [T.2] **Patrick C. Shih**. 2011. *Brainstorming beyond the laboratory: Idea generation practices in software development firms*. University of California, Irvine. ProQuest/UMI No. 3490146.
- [T.1] **Patrick C. Shih**. 2005. *Fault-tolerance for distributed publish-subscribe systems*. Carnegie Mellon University. OCLC No. 320526509.

#### Invited Talks

- [T.11] "From Quantified Self to Quantified Other." Law, Science and Technology Seminar Series, TC Beirne School of Law and School of Information Technology and Electrical Engineering, University of Queensland. June 5, 2017.
- [T.10] "Toward Personalized Machine Learning: Fine-tuning Personalized Activity and Behavioral Data with End-User Interactive Visualization." Pacific Northwest National Laboratory. June 23, 2016.
- [T.9] "Temporal and Comparative Analysis of Teen and Adult Behaviors on Instagram." Intelligent & Interactive Systems Talk Series, Indiana University Bloomington. April 27, 2016.
- [T.8] "Supporting Civic Activities with Machine and Human Computation." School of Computing, Clemson University. February 13, 2015.
- [T.7] "Supporting Civic Activities with Machine and Human Computation." Department of Information and Library Science, Indiana University Bloomington. February 4, 2015.
- [T.6] "Supporting Civic Activities with Machine and Human Computation." Department of Information Systems, University of Maryland, Baltimore County. January 17, 2015.
- [T.5] "Supporting Civic Activities with Machine and Human Computation." Department of Computer Science, University of Bath. January 5, 2015.
- [T.4] "Supporting Civic Activities with Machine and Human Computation." Institute of Information Systems and Applications, National Tsing Hua University. December 17, 2014.
- [T.3] "Supporting Civic Activities with Machine and Human Computation." School of Computing, University of Leeds. December 15, 2014.
- [T.2] "Usability and Bad Design." Human factors and Ergonomics Society, The Pennsylvania State University. February 10, 2014.
- [T.1] "Technology in Use: Notes from the Field." Teaching Community Seminar, The Pennsylvania State University. February 27, 2013.

#### Media Coverage

- [M.18] "Two IGI Global Titles Receive Awards." IGI Global News. June 8, 2017.

- [M.17] “[인천 실험민 70 명 임진각 방문] ‘고향땅 저 앞인데… 왜 갈 수 없나.’” Gyeongin Daily, Gyeonggi-do, South Korea. May 26, 2017.
- [M.16] “Smartphone Apps Help Geographical Communities – and Pets.” Center for Computer-Mediated Communication. November 11, 2016.
- [M.15] “Faculty, students at IU Bloomington receive grants for international research, teaching.” IU Newsroom. February 3, 2016.
- [M.14] “Patrick Shih receives Mellon Innovating International Research, Teaching and Collaboration Fellowship.” SoIC News. January 22, 2016.
- [M.13] “ILS Welcomes Three New Faculty.” SoIC News. July 30, 2015.
- [M.12] “Instagram określi twoją dojrzałość?” NextWeb Media, Warsaw, Poland. July 14, 2015.
- [M.11] “New version of Arts Festival app enables users to create own experiences.” Penn State News. July 6, 2015.
- [M.10] “Why & How Teens, Adults Use Instagram.” Inked. June 23, 2015.
- [M.9] “Instagram user demographic study reveals how adult and teens use photo-sharing app.” iDigitalTimes. June 3, 2015.
- [M.8] “Yes, teens and adults use Instagram differently.” ThirdParent. June 3, 2015.
- [M.7] “IST researchers examine how teens, adults use Instagram.” Penn State News. May 28, 2015.
- [M.6] “Carroll awarded \$279K grant to develop community engagement app.” Penn State News. October 29, 2014.
- [M.5] “Penn State’s Center for Human-Computer Interaction building an innovative community, one interaction at a time.” iConnect Magazine. September 24, 2014.
- [M.4] “Arts Fest goes digital with new app.” Onward State. July 9, 2014.
- [M.3] “Get the ‘insider experience’ with Central Pennsylvania Festival of the Arts app.” Penn State News. July 7, 2014.
- [M.2] “Time is of the essence for new banking system developed at IST.” Penn State News. June 25, 2014.
- [M.1] “IST researchers aim to increase community engagement through local news app.” Penn State News. November 1, 2013.

## TEACHING AND CURRICULUM DEVELOPMENT

## Indiana University Bloomington

*Instructor*

|           |   |         |             |
|-----------|---|---------|-------------|
| CSCI P535 | Pervasive Computing (Cross-listed with I527)              | N = TBA | Fall 2017   |
| INFO I527 | Mobile and Pervasive Design (Cross-listed with CSCI P535) | N = TBA | Fall 2017   |
| UNIV 184G | Bridge to Informatics (DePauw University)                 | N = 11  | Spring 2017 |
| ILS Z516  | Human-Computer Interaction                                | N = 23  | Fall 2016   |
| ILS Z604  | Social Computing and Computer-Supported Cooperative Work  | N = 6   | Spring 2016 |
| ILS Z516  | Human-Computer Interaction (Co-Instructor: Younei Soe)    | N = 25  | Fall 2015   |

*Guest Lecturer*

|                |  |  |             |
|----------------|--|--|-------------|
| ILS Z586       | Digital Curation, Instructor: Devan Donaldson  |  | Fall 2016   |
| INFO I407/I507 | Introduction to Health Informatics, Instructor: Kay Connelly   |  | Fall 2016   |
| ILS Z516       | Human-Computer Interaction, Instructor: Younei Soe   |  | Spring 2016 |
| UNIV 184D      | Bridge to Informatics (DePauw University), Instructor: Katie Siek  |  | Spring 2016 |
| ILS Z701       | Introduction to Doctoral Research in Information Science,<br>Instructors: Howard Rosenbaum and Pnina Fichman |  | Fall 2015   |
| INFO I407/I507 | Introduction to Health Informatics, Instructor: Kay Connelly   |  | Fall 2015   |

## The Pennsylvania State University

*Instructor*

|         |                       |        |             |
|---------|-----------------------|--------|-------------|
| IST 413 | Usability Engineering | N = 39 | Fall 2014   |
| IST 413 | Usability Engineering | N = 39 | Spring 2014 |
| IST 413 | Usability Engineering | N = 42 | Spring 2013 |

*Guest Lecturer*

|         |  |  |             |
|---------|--|--|-------------|
| IST 473 | Digital Design and Innovation, Instructor: Lisa (Lee) B. Erickson  |  | Spring 2015 |
| IST 331 | Organization and Design of Information Systems: User and System Principles,<br>Instructor: Frank E. Ritter |  | Spring 2012 |
| IST 522 | IST 522 Models, Theories and Frameworks of HCI, Instructor: John M. Carroll                                |  | Spring 2012 |
| IST 521 | IST 521 Human Computer Interaction: The User and Technology,<br>Instructor: Mary Beth Rosson               |  | Spring 2012 |

## University of California, Irvine

*Teaching Assistant*

|          |  |  |             |
|----------|--|--|-------------|
| ICS 52   | Introduction to Software Engineering, Instructor: Ban Al-Ani               |  | Winter 2008 |
| ICS 139W | Communications Skills for Computer Scientists, Instructor: Venita De Souza |  | Fall 2007   |

*Project Mentor*

|         |  |  |             |
|---------|--|--|-------------|
| INF 190 | UbiComp Projects, Instructor: Gillian R. Hayes |  | Winter 2008 |
|---------|--|--|-------------|

*Guest Lecturer*

|         |   |  |             |
|---------|---|--|-------------|
| INF 131 | Human Computer Interaction, Instructor: Yang Wang |  | Summer 2009 |
|---------|---|--|-------------|

## Carnegie Mellon University

*Teaching Assistant*

|        |  |  |             |
|--------|--|--|-------------|
| 18-342 | 18-342 Fundamentals of Embedded Systems,<br>Instructors: Priya Narasimhan & Rajeev Gandhi<br><b>[Best Teaching Assistant Award Nomination]</b> |  | Fall 2004   |
| 18-845 | 18-845 Internet Services, Instructor: David O'Hallaron   |  | Spring 2004 |

**PROFESSIONAL AND ACADEMIC SERVICES****Program Chair**

Information Systems for Crisis Response and Management (ISCRAM) 2014

**Journal Editorial Review Board**

International Journal of Information Systems for Crisis Response and Management (IJISCRAM) 2016, 2017

**Conference Program Committee**

Human Factors in Computing Systems (CHI) 2016, 2018  
 Computer Supported Cooperative Work & Social Computing (CSCW) 2015, 2018  
 Supporting Group Work (GROUP) 2018  
 Chinese CHI (Chinese CHI) 2015, 2016, 2017  
 Web Science (WebSci) 2016, 2017  
 Human Factors in Computing Systems Late-Breaking Work (CHI LBW) 2017  
 Mobile Systems and Pervasive Computing (MobiSPC) 2017  
 iConference (iConf) 2015, 2016  
 Designing Interactive Systems (DIS) 2016  
 Information Systems for Crisis Response and Management (ISCRAM) 2014  
 Human-Centered Computing (HCC) 2014  
 Presence (ISPR) 2012, 2014

**Grant Reviewer**

National Science Foundation Graduate Research Fellowship Program (NSF GRFP) Panelist 2016, 2017  
 National Science Foundation Smart and Connected Health (NSF SCH) Reviewer 2015

**Journal Paper Reviewer**

International Journal of Human-Computer Studies (IJHCS) 2015, 2017  
 International Journal of Environmental Research and Public Health (IJERPH) 2015, 2017  
 ACM Transactions on Computer-Human Interaction (TOCHI) 2017  
 PLOS ONE 2016  
 Interacting with Computers (IwC) 2016  
 Information, Communication & Society (ICS) 2016  
 PeerJ Computer Science (PeerJ CS) 2016  
 Journal of Visual Languages and Computing (JVLC) 2016  
 International Journal of Disaster Risk Reduction (IJDRR) 2016  
 Zoo Biology (ZOO BIOL) 2016  
 The Visual Computer (TVCI) 2014, 2015  
 Human-Computer Interaction (HCI) 2015  
 Future Internet (Future Internet) 2015  
 Information and Software Technology (INFSOF) 2013

**Conference Paper Reviewer**

Human Factors in Computing Systems (CHI) 2011, 2012, 2013, 2014, 2015, 2016, **2017\***  
 Computer Supported Cooperative Work & Social Computing (CSCW) 2012, 2013, 2014, 2015, **2016\***, 2017  
 iConference (iConf) 2017  
 Chinese CHI (Chinese CHI) 2015, 2016, 2017  
 Designing Interactive Systems (DIS) 2016, 2017  
 Computer Supported Collaborative Learning (CSCL) 2015, 2017  
 International Conference on Human-Computer Interaction (INTERACT) 2017  
 Interactive Surfaces and Spaces (ISS) 2017  
 Hawaii International Conference on System Sciences (HICSS) 2017  
 Australian Conference on Computer-Human Interaction (OZCHI) 2017  
 Mobile Systems and Pervasive Computing (MobiSPC) 2017  
 Pervasive and Ubiquitous Computing (UbiComp) 2016  
 Web Science (WebSci) 2016  
 International Conference on Information Systems (ICIS) 2016  
 Creativity and Cognition (C&C) 2015  
 International Symposium on Wearable Computers (ISWC) 2015  
 Americas Conference on Information Systems (AMCIS) 2015  
 Human-Centered Computing (HCC) 2014  
 Human-Computer Interaction with Mobile Devices and Services (MobileHCI) 2013

**[\* Special Recognitions for Exceptional Reviews]****Doctoral Consortium Committee**

Association for Information Science and Technology (ASIST) 2017

**Marketing and Communication Committee**

Information Systems for Crisis Response and Management (ISCRAM) 2014



**Publicity Chair**

International Symposium on End User Development (IS-EUD) 2015

**Proceedings Chair**

Information Systems for Crisis Response and Management (ISCRAM) 2014

**Session Chair**Human Factors in Computing Systems (CHI) 2016, 2017  
iConference (iConf) – 2015, 2016**Student Volunteer Chair**

Computer Supported Cooperative Work &amp; Social Computing (CSCW) 2011

**Student Volunteer**Computer Supported Cooperative Work & Social Computing (CSCW) 2008, 2010 Team Leader  
Supporting Group Work (GROUP) 2009**University-related Activities**

IUB Center of Excellence for Women in Technology (CEWiT) Emerging Scholars Research Experiences for Undergraduate Women (REU-W), Advisor Since 2017  
 IU Bloomington Faculty Council, Committee Member Since 2017  
 IU Bloomington Faculty Council – Faculty Affairs Committee, Committee Member Since 2016  
 IUB SoIC Undergraduate Research Opportunities in Computing (UROC), Advisor Since 2015  
 IUB SoIC Spring Projects and Research Symposium, Judge Since 2015  
 IUB SoIC Fall Projects and Research Symposium, Judge Since 2015  
 IUB SoIC Director of Dean's External Affairs Search Committee, Committee Member 2017-18  
 IUB SoIC HCI/Interaction Design, Course Coordinator 2016-17  
 IUB SoIC Human Computer Interaction Consortium (HCIC), Coordinator 2016-17  
 IUB SoIC Web Development Manager Search Committee, Committee Member 2016-17  
 IUB SoIC Director of Computing Outreach Education Search Committee, Committee Member 2016-17  
 IUB Faculty-Student Mentoring Initiative (FMI), Advisor 2016-17  
 IUB SoIC CHI Writing Workshop, Organizer 2016-17  
 IUB SoIC On-Campus Visit Day Faculty Panel, Panelist 2016-17  
 IUB Groups STEM Summer Research Experience Program (SREP), Advisor Summer 2016, 2017  
 IUB SoIC Research Experiences for Undergraduates (REU), Advisor Summer 2016, 2017  
 IUB SoIC Proactive Health Informatics Faculty Search Committee, Committee Member 2015-16  
 IUB ILS On-Campus Visit Day Faculty Panel, Panelist 2015-16  
 IUB ILS MIS & MLS Social Computing Specialization Director, Director 2015-16  
 IUB ILS Graduate Admission and Scholarship Committee, Committee Member 2015-16  
 IUB ILS Graduate Programs Subcommittee on MIS Curriculum, Committee Member 2015-16  
 Penn State IST Scholarship Committee, Committee Member 2014-15  
 Penn State IST Awards Committee, Committee Member 2014-15  
 Penn State IST College Assessment Committee, Committee Member 2014-15  
 Penn State IST Distributed Research Experiences for Undergraduates (DREU), Advisor Summer 2014  
 Penn State Postdoc Research Exhibition, Judge 2013-15  
 Penn State College of Engineering Research Symposium, Judge 2013-14  
 Penn State Graduate Student Research Exhibition, Judge 2012-14  
 Penn State IST Undergraduate Commencement Ceremony, Faculty-at-large 2012-14  
 Penn State IST Web Committee, Committee Member 2012-15  
 Penn State IST Human Computer Interaction Curriculum Committee, Committee Member 2012-15  
 Penn State IST Human Computer Interaction Special Interests Group, Faculty Member 2012-15  
 UC Irvine Informatics Graduate Student Association, Board Committee & Social Chair 2010-11  
 Engineering Society of UCLA, Junior Class Representative 2002-03  
 IEEE, Micromouse Team Officer 2001-02  
 Eta Kappa Nu National Engineering Honor Society, Project Committee 2001-02  
 Tau Beta Pi National Engineering Honor Society, Resume Book Committee Chair 2001-02

**MENTORSHIP****Indiana University Bloomington***Doctoral Students*

Lucas Cook, Research Committee Since 2017  
 Aehong Min, Chair Since 2016  
 Gege Gao, Chair Since 2016  
 Anna N Baglione, Chair Since 2016  
 Daehyoung Lee, Minor Advisor Since 2016  
 Tom Ongwere, Advisory Committee Since 2016  
 Juan Fernando Maestre, Chair Since 2015  
 Andreas Bueckle, Minor Advisor Since 2015  
 Chase Matthew McCoy, Advisory Committee Since 2015

|  |             |
|--|-------------|
| Shannon Yang, Advisory Committee   | Since 2015  |
| Vincent Malic, Independent Study Advisor   | Since 2015  |
| Zheng Gao, Independent Study Advisor   | Since 2015  |
| Pei-Ying Chen, Independent Study Advisor   | Since 2015  |
| Dahee Chung, Research Committee  | 2015 – 2017 |
| Sara Tena Garcia, Dissertation External Examiner, Universidad Carlos III de Madrid | 2015 – 2016 |

*Master's Students*

|  |             |
|--|-------------|
| Rounak Choudhary, Independent Study Advisor  | 2015 – 2017 |
| Yu-Chen Huang, Independent Study Advisor     | 2015 – 2017 |
| Revathy Sridharan, Independent Study Advisor | 2015 – 2017 |

*Undergraduate Students*

|   |             |
|---|-------------|
| Cody Banister, Advisor, SoIC Undergraduate Research Opportunities in Computing (UROC)   | Since 2016  |
| Julia Dunbar, Advisor, SoIC Research Opportunities for Undergraduates (REU)             | Summer 2017 |
| Ciabhan L. G. Connelly, Advisor, SoIC Research Opportunities for Undergraduates (REU)   | Summer 2017 |
| Maxine Marie Girard, Advisor, SoIC Research Opportunities for Undergraduates (REU)      | Summer 2017 |
| Meagan Price, Advisor, SoIC Research Opportunities for Undergraduates (REU)             | Summer 2017 |
| Gabrielle S. Cantor, Advisor, SoIC Research Opportunities for Undergraduates (REU)      | Summer 2017 |
| Sergio Ramrez Martin, Advisor, SoIC Research Opportunities for Undergraduates (REU)     | Summer 2017 |
| Ali A. Talib, Advisor, Groups STEM Summer Research Experience Program (SREP)            | Summer 2017 |
| William Cole Smith, Advisor, Groups STEM Summer Research Experience Program (SREP)      | Summer 2017 |
| Qian (Judy) Dai, Advisor, SoIC Undergraduate Research Opportunities in Computing (UROC) | 2016 – 2017 |
| Vanessa Pereira, Advisor, SoIC Research Opportunities for Undergraduates (REU)          | Summer 2016 |
| Grace Bastin, Advisor, SoIC Research Opportunities for Undergraduates (REU)             | Summer 2016 |
| Alize Dickey, Advisor, Groups STEM Summer Research Experience Program (SREP)            | Summer 2016 |
| Marille Velez, Advisor, Groups STEM Summer Research Experience Program (SREP)           | Summer 2016 |
| Lee Hiler, Advisor, SoIC Undergraduate Research Opportunities in Computing (UROC)       | 2015 – 2017 |

*Visiting Scholars*

|   |             |
|---|-------------|
| Hong Qiao, Faculty Host, Associate Professor,<br>School of Management Science and Engineering, Shandong Normal University | 2015 – 2017 |
|---|-------------|

**The Pennsylvania State University***Doctoral Students*

|  |             |
|--|-------------|
| Kyungsik (Keith) Han, Dissertation Committee               | 2012 – 2015 |
| Yu Wu, Mentor, Dissertation                                | 2012 – 2015 |
| Saijing Zheng, Mentor, Dissertation                        | 2013 – 2015 |
| Jing Wang, Mentor, Dissertation                            | 2012 – 2013 |
| Sara Tena Garcia, Mentor, Universidad Carlos III de Madrid | Summer 2013 |

*Master's Students*

|  |             |
|--|-------------|
| Joslenne Pena, Mentor, Master's Thesis                             | 2013 – 2015 |
| Saloni J. D. Vaghela, Advisor, Master's Thesis                     | 2014 – 2015 |
| Unsuik Heo, Mentor, Department of Computer Science and Engineering | 2014 – 2015 |

*Undergraduate Students*

|  |             |
|--|-------------|
| Brett Holdon, Advisor, Honors Thesis   | 2014 – 2015 |
| Liam Neigh, Advisor, Summer Undergraduate Research Fellowship (SURF)   | Summer 2014 |
| Sarah Alice Hanna, Mentor, Distributed Research Experiences for Undergraduates (DREU),<br>Barnard College of Columbia University | Summer 2014 |
| Diana Zhang, Advisor, Summer Undergraduate Research Fellowship (SURF)  | Summer 2013 |

**University of California, Irvine***Master's Students*

|  |             |
|--|-------------|
| Jana Schumann, Mentor, Otto-von-Guericke-University, Magdeburg | Summer 2011 |
|--|-------------|

*Undergraduate Students*

|  |             |
|--|-------------|
| Sen Hirano, Mentor, Undergraduate Research Project | Spring 2008 |
|--|-------------|