

# Aditya Johri

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## Current Position

*George Mason University, Fairfax, VA*

**Associate Professor**

January 2014 – Present

Department of Information Sciences and Technology

**Director**

Engineering Education and Cyberlearning Laboratory (EECL) (<http://ist.gmu.edu/eecl>)

**Department Chair**

August 2014 – December 2015

Department of Information Sciences and Technology

*Virginia Polytechnic Institute and State University, Blacksburg, VA*

**Affiliate Faculty**

January 2014 – Present

Departments of Engineering Education, Industrial & Systems Engineering, & Computer Science

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## Previous Positions

*Virginia Polytechnic Institute and State University, Blacksburg, VA*

**Associate Professor** (Tenured)

August – December 2013

**Assistant Professor**

August 2007 – July 2013

Department of Engineering Education; *Affiliated appointments*, Departments of Computer Science (CS), Industrial and Systems Engineering (ISyE), Science and Technology in Society (STS); Center for Human-Computer Interaction (CHCI), Center for Innovated-based Manufacturing (CIbM); and, Interdisciplinary Graduate Education Program in Human Centered Design (IGEP-HCD)

Visiting Research Faculty, *Indian School of Business, Hyderabad, India*

Nov. – Dec. 2010

Researcher-in-Residence, *Microsoft Research Labs, Bangalore, India*

September 2010

Visiting Researcher, *Information Systems, University of Siegen, Germany*

July – August 2006

Research Intern, *HCI Group, FXPAL, Palo Alto, CA*

June – August 2005

Software Engineer, *Wipro Systems, Bangalore, India*

June 1998 – July 1999

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## Education

**Ph. D. Stanford University, Palo Alto, CA**

July 2007

*Learning Sciences and Technology Design*

**MFA George Mason University, Fairfax, VA**

Aug. 2016 - Present

*Creative Writing (Nonfiction) GPA: 4.0/4.0 (Coursework Completed; Expected graduation: Spring 2019)*

**M.S. Georgia Institute of Technology, Atlanta, GA**

August 2002

*Information, Design, and Technology*

**M.A. University of Georgia, Athens, GA**

August 2000

*Mass Communication*

**Bachelor of Engineering, Delhi College of Engineering, Delhi, India**

June 1998

*Mechanical Engineering*

## Honors and Awards

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- [A23] Nominated for 2017 Career Connection Faculty Award (Awarded by University Career Services; student self-nominate faculty for this award).
- [A22] AERA Division I Outstanding Publication Award for Books in 2014 for *Cambridge Handbook of Engineering Education Research* (jointly with Barbara M. Olds), April 2015.
- [A21] 2013 Virginia Tech's Center for Innovation in Learning's XCaliber Certificate of Excellence for a team making exemplary contributions to technology-enriched learning (jointly with Akshay Sharma).
- [A20] Engineering Dean's Faculty Fellow Award for Extraordinary Performance in Research 2013-2015, College of Engineering, Virginia Tech.
- [A19] Finalist for '2013 Virginia Outstanding Faculty Awards (Category: Rising Star)' awarded by the State Council for Higher Education in Virginia (SCHEV). Only one nomination per academic institution is allowed; Top 25% of nominations were finalists (5 out of 20) in this category.
- [A18] Best Paper Nomination, Computers in Education Division, Annual Conference of American Society of Engineering Education, San Antonio, TX, June 2012.
- [A17] Winner, Design for All Foundation Awards 2012, Non-profit Category, Entry: "Immune – A Cell Phone Based Vaccination System" (jointly with Akshay Sharma).
- [A16] Finalist, World Design Impact Award 2012, International Council of Societies of Industrial Design (ICSID), Entry: "Bahikhaata, A Financial Literacy Tool" (jointly with Akshay Sharma).
- [A15] Selected to participate in competitive National Academy of Engineering's Frontiers of Engineering Education (FOEE) Symposium, Nov. 13-16, 2011, Irvine, CA.
- [A14] Recognized by Virginia Tech's Office of the Vice President for Research as "Virginia Tech Scholar of the Week" for the week of June 27, 2011.
- [A13] Selected to participate in competitive NSF-sponsored 2011 Summer Research Institute for the Science of Socio-Technical Systems (CSST'11), June 5-9, Captiva Island, FL (~30% applicants selected).
- [A12] Best Note Award, ACM Conference on Computer Supported Cooperative Work (CSCW) 2011, March 2011, Hangzhou, China. (Awarded to top 1% or 3 out of 268 submissions)
- [A11] Virginia Tech College of Engineering Dean's Award for Outstanding New Assistant Professor in Recognition of Extraordinary Performance, 2010.
- [A10] National Science Foundation Early CAREER Award, 2009-2014.
- [A9] New Faculty Fellow Award, National Academy of Engineering (CASEE), Frontiers in Engineering Conference, October 2008, Saratoga Springs, NY. (Nine out of 30 applicants selected)

- [A8] Best faculty paper proposal award, "Cognition in the Rough" PDW, MOC Division, Academy of Management, 2008 (Top proposal out of 54 proposals).
- [A7] Selected to Participate in Competitive NSF Cyberinfrastructure & Engineering Education Workshop, Included Travel Grant (09/04/08-09/05/08).
- [A6] Selected to Participate in Competitive Junior Faculty Consortium, Organizational Communication and Information Systems (OCIS) Division, Academy of Management, 2008, Sponsored by NSF, Fellowship Amount: \$1,000
- [A5] Selected to Participate in Competitive Junior Faculty Consortium, International Conference of Learning Sciences, Utrecht, the Netherlands, 2008, Sponsored by NSF, Fellowship Amount: \$1,000
- [A4] Doctoral Consortium Fellowship, International Conference of Learning Sciences, Bloomington, IN, 2006. Sponsored by NSF, Fellowship Amount: \$500
- [A3] Doctoral Consortium Fellowship, Computer Supported Collaborative Learning, Taipei, Taiwan, 2005. Sponsored by NSF, Fellowship Amount: \$2,500
- [A2] 1<sup>st</sup> Place at Stanford Social e-Challenge Business Plan Competition, 2003 (Project: e-Immunization); the project was later prototyped in AP, India and won the 9th e-Governance Award in 2006.
- [A1] Stanford University School of Education Quillen Fellowship & Research Award 2002-03.

## Grants

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**Total External Funding (including collaborative): ~\$9 Million; Personal Share: ~\$3.5 Million; Personal Share at GMU: ~\$1.5 Million (since January 2014); PI on 12 NSF awards/contract; Co-PI on 4 NSF awards; Senior Personnel on 2 NSF Awards.**

### *External Grants*

#### **GMU**

- [G18] NSF-REU (1757064): REU Site: Undergraduate Research in Educational Data Mining. Role: Senior Personnel; PI: H. Rangwala; Award Amount: \$359,982
- [G17] NSF-DUE-IUSE (1712129): Deeper Learning of Data Science (DLDS): Studying Real-world Experiences of Engineering Professionals to Prepare the Future Workforce. Role: PI; Amount: \$300,000
- [G16] NSF-DUE (1707837): EAGER: Social Media Participation as Indicator of Actors, Awareness, Attitudes, and Activities Related to STEM Education. Role: PI, Amount \$299,292. Co-PI: H. Purohit
- [G15] NSF-IIS-CHS (1733634): RAPID: Collaborative Research: Technology Adoption during Environmental Jolts: Mobile Phone Use and Digital Services Appropriation during India's Demonetization Crisis. Role: PI; \$49,974. (Collaborator: Joyojeet Pal, University of Michigan; Total Amount \$100K)

- [G14] NSF-BIGDATA: IA: DKA (IIS#1447489): Collaborative Research: Learning Data Analytics: Providing Actionable Insights to Increase College Student Success; PI: Huzefa Rangwala; Co-PIs: Aditya Johri, Jaime Lester; Award Date: 09/01/2014-2018; Award Amount: \$776,202.00
- [G13] NSF-EEC (#1408674): EAGER: Collaborative Research: Data Ecosystems for Catalysing Transformative Research in Engineering Education. Role: PI; Amount: \$168.5K (REU Supplement: \$18.5K) (2014-2016)
- [G12] NSF-EEC (#1424444): TILES: Trajectories of Informal Learning Among Engineering Students. PI. Johri, A. Co-PIs: Bland, L. & Islam, K. \$460K (REU Supplement: 10K) 2014-2018.
- [G11] NSF-DUE (#1444277): Deep Insights Anytime, Anywhere (DIA2) - Central Resource for Characterizing the TUES Portfolio through Interactive Knowledge Mining and Visualizations. Johri, A. (PI), Domeniconi, C. (co-PI). Ramakrishana, N. (co-PI, VT), Wang, A. (co-PI, VT). Total: \$3.2 Million (Collaborators: Purdue, Stanford & ASU); Share: \$722, 251. 09/14-08/17. (GMU Transfer: \$372,000)

### *Virginia Tech*

- [G10] NSF-ACI (#1355955): EAGER: Kinetic Computing Sculpture: A functional parallel cluster of Raspberry Pi computers that inspire computational thinking, PI: Kirk Cameron; Role: Co-PI; Amount: \$181, 395. (2013-2015)
- [G9] NSF-EEC (#0954034): Early CAREER Award, "Investigating Global Engineering Work Practices to Prepare 21<sup>st</sup> Century Engineers" (Role: PI, \$406,987; \$50,000 supplement by VT COE); 01/10-12/14.
- [G8] NSF-DUE-TUES, Advancing Personalized Engineering Learning Via an Adaptive Concept Map, (Role: Co-PI; PI: Chris Williams, \$198, 753). 09/11-12/14.
- [G7] NSF-EEC (#0935124): Collaborative Research: Interactive Knowledge Networks for Engineering Education Research (Role: PI; Co-PI: G. Alan Wang; Total: \$400K, VT: \$132,474). 09/10-08/12
- [G6] NSF Cooperative Agreement Project (Contract): Understanding the impact of NSF CCLI (Engineering) Investments. Sponsor: NSF. Amount: \$25,000. Role: PI. Collaborative project with Purdue (PI: Madhavan); Funding was with Purdue University. Dates: 05/17/2010-10/31/2010.
- [G5] NSF-EEC (#0835892): AdWiki: Cultivating a Wiki-Based Online Community of Practice for Advising Engineering Students (Role: PI, Co-PI: Jenny Lo, \$99,927) 09/08-08/10
- [G4] NSF-IIS (#0757540): Examining Creativity with IT in Engineering Design (X-CITED) (Role: PI, Co-PIs: Deborah Tatar, Vinod Lohani, \$209,641). 09/08-08/11
- [G3] NSF-EEC (#0935143): Collaborative Proposal (IEECI Exploratory): Identifying Practices and Tools to Promote Newcomer Participation in Cyberlearning Environments (Role: PI, Total: \$200K, VT: \$99,401).
- [G2] NSF-EEC (#0832002): Building Connections within the Engineering Education Research Community (PI: Lisa McNair, Role: Co-PI, \$367, 154) 09/08-08/10
- [G1] NSF-EEC BRIGE (#0824337): Investigating Engineering Student Identity Formation, (PI: Olga Pierrakos; Role: Senior Personnel, \$174,643; Share: \$10,000) 09/08-08/12

## *Internal Grants*

### *GMU*

[IG8] Provost Curriculum Improvement Grant in “Computing, Engineering, and Science Education” with Jill Nelson, Total: \$24,000

[IG7] Faculty Learning Community (FLC) in “Engineering Education,” Stearns Center for Teaching and Learning, PI: Aditya Johri, Co-PI: Jaime Lester, Margret Hjalmarson, Total: \$3,500

[IG6] 4-VA Initiative Grant “Mechanical Objects and the Engineering Learner: An Experimental Study of How the Presence of Objects Affects Students’ Performance on Engineering Related Tasks,” Role: co-PI; PI: Diana Bairaktarova, Virginia Tech; Role: Collaborator, Total: \$30,000; GMU Portion: \$5,000

### *Virginia Tech*

[IG5] VT College of Engineering Dean’s Faculty Fellow, \$5,000 per annum for three years (Availed for 2013)

[IG4] Pratt Fellowship for International Research; Sponsor: Virginia Tech College of Engineering; Amount: \$6,000; Role: PI (100%); Date: August 2010 – May 2011

[IG3] Small Grant for Exploratory Research; Sponsor: Virginia Tech Office of International Research, Education, and Development; Amount: \$2,500; Role: PI (100%); Date: 2009-2010

[IG2] Virginia Tech Knowledge Networks; Sponsor: Institute for Critical Technology & Applied Sciences, Virginia Tech; Amount: \$35,000; Role: PI (67%); Co-Investigator: Wang, G. A. (33%); Dates: 2008-2009

### *Stanford*

[IG1] MediaX at Stanford, “Impression Formation in Distributed Teams,” PI: P. Hinds; Amount: \$45,000; Assisted with proposal writing; Funded my dissertation research; Dates: 2005-2006.

## *Industry Sponsorship*

### *Virginia Tech*

[InG1] Sun Microsystems Grant, Amount: \$10,000; Role: PI (100%); Date: August 2009 – May 2010.

## Publications\*

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33 Journal Articles, 94 Refereed Conference Proceedings Papers, 2 Co-authored Books, 2 Co-edited Books, 4 Co-edited/Edited Journal Special Issues & 10 Book Chapters.

Electronic copies of select publications: <http://mason.gmu.edu/~johri/publications> and <http://bit.ly/1J2auoo>

Google Scholar Profile: <http://bit.ly/1GlllyT>

Total Citations: 1314; h-index: 20; i10-index: 31;

Citations since 2013 (~post-tenure): 1109 h-index: 19; i10-index: 27

## Edited Books

[EB2] Lester, J., Klein, C., **Johri**, A., & Rangwala, H. (Eds.) (2018). *Learning Analytics in Higher Education: Current Innovations, Future Potential, and Practical Applications*. Routledge, NY.

[EB1] **Johri**, A. & Olds, B. (2014). *Cambridge Handbook of Engineering Education Research*. Cambridge University Press, New York, NY.

- *Awarded Best Publication for Books in 2014 by American Educational Research Association (AERA) Division I 'Education in the Professions'*

- *Invited editorial in JEE*

- *Cited in NSF Solicitation 14-602 and NAE Consensus Study on "Understanding the Engineering Education-Workforce Continuum"*

## Books

[B2] Lester, J., Klein, C. Rangwala, H. & **Johri**, A. (2017). *Learning Analytics in Higher Education*. ASHE Monograph Series, Vol. 3, Issue 5.

[B1] **Johri**, A. & Sharma, A. (2013). *Designing Development: Case Study of an International Education and Outreach Program*. Morgan & Claypool Press, San Rafael, CA.

## Journal Special Issues Edited

[JE4] **Johri**, A., Vorvoreanu, M. & Madhavan, K. (2016). Data Sharing in Engineering Education. Special Issue of *Advances in Engineering Education*, Spring 2016.

[JE3] **Johri**, A., Roth, W-M. & Olds, B. (2013). Representations and Engineering Learning. Special issue of *Journal of Engineering Education*, 6 articles.

[JE2] **Johri**, A. (2011). Global, Technological, and Environmental Challenges in Engineering. Introduction to theme issue of *Engineering Studies*. August 2011, 3 articles; **1 article in the Top 10 most cited articles in the journal**.

[JE1] **Johri**, A. (2010). Situated Engineering and the Workplace. Introduction to theme issue of *Engineering Studies*, Dec. 2010, 4 articles; **2 articles in the Top 10 most cited articles in the journal**.

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\* **Underlined** authors denote student authors funded by a grant on which I was PI or co-PI; \* Denotes direct advisees; All proceedings papers were also presented at the conference

## Journal Articles (Impact factor listed where available)

### In Press/Online First

- [J33] Malik, A., Hamari, J., Koski, J. & **Johri, A.** (In Press). Uses and gratifications of Pokémon Go: Why do people play mobile location-based augmented reality games? *International Journal of Human-Computer Interaction*.
- [J32] \***Almatrafi, O.** & **Johri, A.** (In Press). Systematic Review of Discussion Forums in Massive Online Open Courses (MOOCs). *IEEE Transactions on Learning Technologies*.
- [J31] Klein, C., Lester, J., Rangwala, H. & **Johri, A.** (In Press). Learning Analytics Tools in Higher Education: Adoption at the Intersection of Institutional Commitment and Individual Action. *The Review of Higher Education*.

### 2018

- [J30] \***Almatrafi, O.**, **Johri, A.** & Rangwala, H. (2018). Needle in a Haystack: Identifying Learner Posts that Require Urgent Response in MOOC Discussion Forums. *Computers & Education*, Vol. 118: 1-9. (**Impact Factor: 3.819**)

### 2017

- [J29] \***Teo, H.**, **Johri, A.** & Lohani, V. (2017). Analytics and Patterns of Knowledge Creation: Experts at Work in an Online Engineering Community. *Computers & Education*, Vol. 112, pp. 18-36. (**Impact Factor: 3.819**)
- [J28] Li, B., Mooring, J., Blanchard, S., **Johri, A.**, Leko, M., Cameron, K. (2017). SeeMore: A kinetic parallel computer sculpture for educating broad audiences on parallel computation. *Journal of Parallel and Distributed Computing*, Volume 105, Pages 183-199. (**Impact Factor: 1.976**)

### 2016

- [J27] Sweeney, M., Rangwala, H., Lester, J. & **Johri, A.** (2016). Next-Term Student Performance Prediction: A Recommender Systems Approach. *Journal of Educational Data Mining*. (**Impact Factor: 3.68**)
- [J26] **Johri, A.**, Yang, S., Vorvoreanu, M. & Madhavan, K. (2016). Perceptions and Practices of Data Sharing in Engineering Education. *Advances in Engineering Education*. Spring 2016, Volume 5, Issue 2.

### 2015

- [J25] \***Goncher, A.** & **Johri, A.** (2015). Contextual Constraining of Students' Design Practices. *Journal of Engineering Education*, 104(3): 252-278. (**Impact Factor: 2.059**)<sup>†</sup>  
- Lead article; Invited to appear as JEE Selects in ASEE Prism to showcase work to a wider audience (one article per issue invited)
- [J24] **Moore, J.**, Williams, C., North, C., **Johri, A.** & Paretto, M. (2015). Effectiveness of Adaptive Concept Maps for Promoting Conceptual Understanding: Findings from a Design-Based Case Study of a Learner-Centered Tool. *Advances in Engineering Education*.<sup>‡</sup>

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<sup>†</sup> Ranked in the top 5 journal in all of education for the past decade

<sup>‡</sup> *Advances in Engineering Education* is a new open access journal published by the American Society of Engineering Education (ASEE)

[J23] **Johri, A.** (2015). Impressions in Action: The Socially Situated Construction of Expertise Impressions in the Workplace. *Journal of Organizational Ethnography*, 4(1): 44-63.

#### 2014

[J22] Madhavan, K., Elmqvist, N., Vorvoreanu, M., Chen, X., Wong, Y., Xian, H., Dong, Z. & **Johri, A.** (2014), DIA2: Web-based Cyberinfrastructure for Visual Analysis of Funding Portfolios. *IEEE Transactions on Visualization and Computer Graphics (TVCG)*, 20(12): 1823-1832. **(Impact Factor: 1.919)**

[J21] \***Chowdhury, B. & Johri, A.** (2014). U.S. Graduate Engineering Students' Perception of and Strategies Towards Acquiring External Funding. *International Journal of Engineering Education*, 30(4): 1136-1144. **(Impact Factor: 0.36)**

[J20] Madhavan, K., **Johri, A.**, Xian, H. Wang, G. A. & Liu, X. (2014). Tools for Large-scale Data Analytic Examination of Relational and Epistemic Networks in Engineering Education. *Advances in Engineering Education*, Vol. 4, Issue 2, paper 2.  
- *Invited to appear as AEE Selects in ASEE Prism (one article per issue invited)*

[J19] Sharma, A. & **Johri, A.** (2014). Learning and Empowerment: Designing a Financial Literacy Tool to Teach Long-term Investing to Illiterate Women in Rural India. *Learning, Culture & Social Interaction*, 3, pp. 21-33. **(Impact Factor: 0.933)**

[J18] **Johri, A.**, \*Teo, H. J., Lo, J., Dufour, M. & Schram, A. (2014). Millennial Engineers: Digital Media and Information Use Among Engineering Students. *Computers in Human Behavior*, 33: 286–301. **(Impact Factor: 2.273)**

[J17] Liu, X., Wang, G. A., **Johri, A.** Zhou, M., & Fan, W. (2014). Harnessing Global Expertise: A Comparative Study of Expertise Profiling Methods for Online Communities. *Information Systems Frontiers*, Vol. 16(4): 715-727. **(Impact Factor: 0.761)**

#### 2013

[J16] **Johri, A.**, Dufour, M., Lo, J., & Shanahan, D. (2013). AdWiki: Socio-technical Systems Engineering for Managing Advising Knowledge in Higher Education. *International Journal of Sociotechnology and Knowledge Development*, 5(1): 37-59.

[J15] **Johri, A.**, Williams, C. B., and Pembridge, J. (2013). Creative Collaboration: A Case Study of the Role of Computers in Supporting Representational and Relational Interaction in Student Engineering Design Teams. *International Journal of Engineering Education*, Vol. 29, Issue 1, pp.33-44. **(Impact Factor: 0.36)**

[J14] \*Mitra, R., **Johri, A.** & Nov, O. (2013). Effect of External Events on Newcomer Participation in Open Source Online Communities. *First Monday*, Vol. 18, No. 6, 3-June-2013. **(Acceptance Rate: 15%)**

#### 2012

[J13] Madhavan, K., Vorvoreanu, M., Elmqvist, N., **Johri, A.**, Ramakrishnan, N., Wang, G. A. & McKenna, A. (2012). Portfolio Mining. *IEEE Computer*, 45(10):pp.95-99. **(Invited article) (Impact Factor: 1.438)**

[J12] **Johri, A.** (2012). Learning to Demo: The Sociomateriality of Newcomer Participation in Engineering Research Practices. *Engineering Studies*, Vol. 4, Issue 3, pp. 249-269. **(Impact Factor: 0.814)**



- [J11] **Johri, A.** (2012). From a Distance: Impression Formation and Impression Accuracy Among Distributed Coworkers. *Computers in Human Behavior*, Vol. 28(6):1997-2006. **(Impact Factor: 2.273)**
- [J10] Pipek, V., Wulf, V. & **Johri, A.** (2012). Bridging Artifacts and Actors: Expertise Sharing in Organizational Ecosystems. *Journal of Computer Supported Cooperative Work*. 21(2-3):261-282. **(Impact Factor: 1.485)**
- [J9] **Johri, A.,** & **\*Teo, H.** (2012). Assessing the Effectiveness of Open Organizing as a Model for Re-designing Design Learning. *International Journal of Engineering Education*, Vol. 28, Issue 2, pp. 374-380. **(Impact Factor: 0.36)**
- [J8] **Johri, A.** & Pal, J. (2012). Capable and Convivial Design: A Framework for Designing Information and Communication Technology for Human Development. *Information Technology and Development*, 18(1): 61-75. **(Impact Factor: 0.421)**

## 2011

- [J7] **Johri, A.** (2011). The Socio-materiality of Learning Practices and Implications for Learning Technology. *Research in Learning Technology*, Vol. 19, Issue 3, 207-217. **(Impact Factor: 0.784)**
- [J6] **Johri, A.** & Lohani, V. (2011). Increasing Engineering Representational Literacy through the Use of Pen-based Computing. *International Journal of Engineering Education*, Vol. 27, No. 5, 958-967. **(Impact Factor: 0.36)**
- [J5] **Johri, A.** & **Nair, S.** (2011). The Role of Design Values in Information Systems Development for Human Benefit. *Information Technology and People*, Vol. 24, Issue 3, 281-302. **(Impact Factor: 0.938)**
- [J4] **Johri, A.** & Olds, B. (2011). Situated Engineering Learning: Bridging Engineering Education Research and the Learning Sciences. *Journal of Engineering Education*, 100(1):151-185. **(Impact Factor: 2.059) (200+ citations)**
- [J3] **Johri, A.** (2011). Sociomaterial Bricolage: The Creation of Location-Spanning Work Practices by Global Software Engineers. *Information and Software Technology*, 53(9): 955-968. **(Impact Factor: 1.328)**

## 2010 and Prior

- [J2] **Johri, A.** (2010). Open Organizing: Designing Sustainable Work Practices for the Engineering Workforce. *International Journal of Engineering Education*, 26(2):278-286. **(Impact Factor: 0.36)**
- [J1] Evans, M. & **Johri, A.** (2008): Facilitating Guided Participation through Mobile Technologies. *Journal of Computing in Higher Education*, 20(2): 92-105. **(Impact Factor: 0.826)**

## Conference Proceedings (Reviewed/Refereed; includes full papers, short papers & posters)<sup>§</sup>

2018

- [P94] **Johri**, A. (2018). Lifelong Learning Ecology of FLOSS: Participatory and Personalized Learning Over Time and Space. *Proceedings of ACM OpenSym Conference on Open Collaboration 2018*.
- [P93] **Johri**, A. & \*Teo, H. J. (2018). Achieving Equilibrium through Coworking: Work-Life Balance in FLOSS through Multiple Spaces and Media Use. *Proceedings of ACM OpenSym Conference on Open Collaboration 2018*.
- [P92] Malik, A., **Johri**, A. Handa, R., Karbasian, H. & Purohit, H. (2018). #EngineersWeek: Broadening our Understanding of Community Engagement through Analysis of Twitter Use during the National Engineers Week. *Proceedings of 125th ASEE Annual Conference, Salt Lake City, USA*.
- [P91] \*Le, H., **Johri**, A. & Malik, A. (2018). A Situated Information Perspective on Engineering Workplace Learning: A Case Study of Cybersecurity Professionals. *Proceedings of 125th ASEE Annual Conference, Salt Lake City, USA*.
- [P90] **Johri**, A., Heyman-Schrum, C., Ruiz, D., Malik, A., Karbasian, H., Handa, R., & Purohit, H. (2018). More Than an Engineer: Intersectional Self-Expressions in a Hashtag Activism Campaign for Engineering Diversity. *Proceedings of ACM COMPASS. (Acceptance Rate: 28.5%)*
- [P89] Malik, A., **Johri**, A., Handa, R., Karbasian, H. & Purohit, H. (2018). #ILookLikeAnEngineer: Using Social Media Based Hashtag Activism Campaigns as a Lens to Better Understand Engineering Diversity Issues. *Proceedings of ASEE CONECD Conference, Crystal City, VA, USA*.
- [P88] Pal, J., Chandra, P., Kameswaran, V., Parameshwar, A., Joshi, S. & **Johri**, A. (2018). Digital Payment and its Discontents: Street shops and the Indian Government's Push for Cashless Transactions. *Proceedings of CHI 2018. (Acceptance Rate: 25%)*
- [P87] Chen, Y., **Johri**, A. & Rangwala, H. (2018). Running Out of STEM: A Comparative Study across STEM Majors of College Students At-Risk of Dropping Out Early. *Proceedings of Learning Analytics and Knowledge (LAK). (Acceptance Rate: 30%)*
- [P86] Karbasian, H., Purohit, H., Handa, R., Malik, A. & Johri, A. (2018). Real-Time Inference of User Types to Assist with more Inclusive and Diverse Social Media Activism Campaigns. *Proceedings of AAAI AIES 2018. (Acceptance Rate: 37%)*

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### <sup>§</sup> Note on Conference Acceptance Rates:

- Acceptance rate for ICLS and CSCL conferences is between 30-55%. Full papers in their proceedings are considered journal equivalent publications.
- Acceptance rates for ACM conferences are between 20-30% for full/short papers and ~50% for Extended Abstracts. Full and short papers in their proceedings are considered journal equivalent publications.
- HICSS acceptance rate is around 40-50% (it is the most highly cited IEEE conference).
- The "Submit-to-Publish" acceptance rate for ASEE and FIE is around 50-60%; of the initial N number of abstracts submitted, 50-60% are accepted as full papers after two rounds of review of full papers.

\*Denotes direct supervision. Underlined authors are students or postdocs directly funded by a grant on which I'm a PI. In case of equal contribution, the norm in my lab is to give students and postdocs first authorship.

[P85] **Johri, A., Karbasian, H., Malik, A., Handa, R. & Purohit, H.** (2018). How Diverse Users and Activities Trigger Connective Action via Social Media: Lessons from the Twitter Hashtag Campaign #ILookLikeAnEngineer. *Proceedings of HICSS 2018*. (**Acceptance Rate: 50%**)

## 2017

[P84] **Johri, A. & Yang, S.** (2017). Scaffolded Help for Informal Learning: How Experts Support Newcomers' Productive Participation in an Online Community. *Proceedings of Communities and Technologies (C&T) 2017*. (**Acceptance Rate: 50%**)

[P83] Bland, L., Xu, X., Kusano, S. & **Johri, A.** (2017). The Development of Engineering Students' Metacognitive Skills in Informal Engineering Learning Activities. *Proceedings of ASEE Annual Meeting*.

[P82] Bland, L., Xu, X., Kusano, S. & **Johri, A.** (2017). Examining Learner-driven Constructs in Co-curricular Engineering Environments: The Role of Student Reflection in Assessment Development. *Proceedings of ASEE Annual Meeting*.

[P81] **Johri, A.** (2017). Situated Cognition Genres: A Situated Learning Approach for Examining Informal Learning in an Online Community of Makers. *Proceedings of ASEE Annual Meeting*.

[P80] Almatrafi, O., **Johri, A.**, Rangwala, H. & Lester, J. (2017). Retention and Persistence among STEM Students: A Comparison of Direct Admit and Transfer Students across Engineering and Science. *Proceedings of ASEE Annual Meeting*.

[P79] Pal, J., Viswanathan, A. & **Johri, A.** (2017). Mediating Access: How Visually-Impaired Users Leverage Collaborative Learning to Keep Up with Mobile Phone Innovations. *Proceedings of CSCL 2017*. (**Acceptance Rate: 35%**)

[P78] Almatrafi, O. & **Johri, A.** (2017). Showing and Telling: Response Dynamics in an Online Community of Makers. *Proceedings of CSCL 2017* (**Acceptance Rate: 31%**).

[P77] Pal, J., Viswanathan, A., Chandra, P., Nazareth, A., Kameshwaran, V., Subramonyam, H., **Johri, A.**, Ackerman, M. & O'Modhrain, S. (2017) Agency in assistive technology adoption: Visual impairment and smartphone use in Bangalore. *Proceedings of the CHI 2017*. (**Acceptance Rate: 25%**)

## 2016

[P76] Bairaktarova, D. & **Johri, A.** (2016). The Role of Virtual Objects in Performing Engineering Related Task. Work in Progress Paper, *Proceedings of Frontiers in Education Conference*.

[P75] Revelle, M., Domeniconi, C. & **Johri, A.** (2016). Persistent Roles in Online Social Networks. *Proceedings of ECML PKDD 2016*. (**Acceptance Rate: 28%**)

[P74] **Johri, A.** (2016). Demo or Die: Narrative Construction as Articulation Work for Promoting Early Stage Digital Innovations. *Proceedings of ACM Group 2016*. (**Acceptance Rate: 30%**)

[P73] Ren, Z., Rangwala, H. & **Johri, A.** (2016). Predicting Performance on MOOC Assessments using Multi-Regression Models. *Proceedings of Educational Data Mining 2016*. (**Acceptance Rate: 50%**)

- [P72] \*Gelman, B., Revelle, M., Domeniconi, C., **Johri**, A & Veeramachaneni, K. (2016). Acting the Same Differently: A Cross-Course Comparison of User Behavior in MOOCs. *Proceedings of Educational Data Mining 2016*. (**Acceptance Rate: 50%**)
- [P71] Bland, L., \*Kusano, S. & **Johri**, A. (2016). Engineering Competitions as Pathways to Development of Professional Engineering Skills. *Proceedings of ASEE 2016*.
- [P70] **Johri**, A., Bland, L. & \*Kusano, S. (2016). Informal Learning in Engineering. *Proceedings of ASEE 2016*.
- [P69] \*Almatrafi, O., **Johri**, A., Rangwala, H. & Lester, J. (2016). Identifying Course Trajectories of High Achieving Engineering Students through Data Analytics. *Proceedings of ASEE 2016*.
- [P68] Gelman, B., Beckley, C. **Johri**, A., \*Yang, S. & Domeniconi, C. (2016). Online Urbanism: Interest-based Subcultures as Drivers of Informal Learning in an Online Community. *Proceedings of ACM Learning at Scale Conference 2016*. (**Acceptance Rate: 22%**)

## 2015

- [P67] Revelle, M., Domeniconi, C., Sweeney, M. & **Johri**, A. (2015). Finding Community Topics and Membership in Graphs. *Proceedings of ECML PKDD 2015*. (**Acceptance Rate: 23%**)
- [P66] Revelle, M., Domeniconi C. & **Johri**, A. (2015). Evidence of Temporal Artifacts in Social Networks. *Proceedings of MUSE Workshop, ECML PKDD, 2015, Porto, Portugal*.
- [P65] Rouly, M., Rangwala, H. & **Johri**, A. (2015). What Are We Teaching? Automated Evaluation of CS Curricula Content Using Topic Modeling. *Proceedings of ICER 2015*. (**Acceptance Rate: 26%**)
- [P64] Molla Alameh, E., Vorvoreanu, M.,\* Yang, S., **Johri**, A. & Madhavan, K. (2015). A Comparative Analysis of Information Sharing and Access to Engineering Education Research Data. *Proceedings of ASEE 2015*.
- [P63] London, J., McKenna, A., Vorvoreanu, M., **Johri**, A. & Madhavan, K. (2015). Developing and Advancing a Cyberinfrastructure to Gain Insights into Research Investments: An Organizing Research Framework. *Proceedings of ASEE 2015*.
- [P62] \*Almatrafi, O., Islam, K., **Johri**, A, Mondalu, A. & Nagappan, K. (2015). An Empirical Study of Face-to-Face and Distance Learning Sections of a Core Telecommunication Course. *Proceedings of ASEE 2015*.
- [P61] \*Kusano, S. & **Johri**, A. (2015). Developing Global Engineering Competency through Participation in "Engineers Without Borders". *Proceedings of ASEE 2015*.
- [P60] \*Chowdhury, B., Cameron, K., Blanchard, S. & **Johri**, A. (2015). SeeMore: An Interactive Kinetic Sculpture Designed to Teach Parallel Computational Thinking. *Proceedings of ASEE 2015*.
- [P59] **Johri**, A. (2015). Sociomaterial Bricolage: Engineering Learning as the Practice of Making Sense by Making Do. *Proceedings of CSCL 2015*. (pp. 691-692) (Poster) (**Acceptance Rate: 45%**)
- [P58] **Johri**, A. (2015). Digital Materiality as the Fabric for Socio-Temporal Organizing of Learning: A Case Study of Open Source Software Development. *Proceedings of CSCL 2015*. (pp. 761-762) (Poster) (**Acceptance Rate: 45%**)

- [P57] \*Ahmed, S., \*Yang, S. & Johri, A. (2015). Does Online Q&A Activity Vary Based on Topic: A Comparison of Technical and Non-technical Stack Exchange Forums. *Proceedings of ACM Learning at Scale 2015* (Work-in-Progress Poster). (**Acceptance Rate: 80%**)
- [P56] \*Yang, S., Domeniconi, C., Revelle, M., Sweeney, M., Gelman, B., Beckley, C., & Johri, A. (2015). Uncovering Trajectories of Informal Learning in Large Online Communities of Creators. *Proceedings of ACM Learning at Scale, 2015*. (**Acceptance Rate: 25%**)
- [P55] Johri, A. (2015). Supporting Global Virtual Work through Blogs and Micro-Blogging. *Proceedings of HICSS 2015*. (**Acceptance Rate: 56%**)
- [P54] Vorvoreanu, M., Sears, D. & Johri, A. (2015). Teaching and Learning in a Social Media Ecosystem: A Case Study. *Proceedings of HICSS 2015*. (**Acceptance Rate: 41%**)

## 2014

- [P53] \* Kusano, S. & Johri, A. (2014). A Sense of Autonomy: Students' Self-Assessment of Design-Based Informal Learning Experiences in Engineering. *Proceedings of ASEE Annual Conference 2014*.
- [P52] \*Chowdhury, B., \*Kusano, S., Johri, A. & Sharma, A. (2014). Peer Scaffolding in an Interdisciplinary Studio-based Design Course. *Proceedings of ASEE Annual Conference 2014*.
- [P51] Qiao, Z., Wang, G. A. & Johri, A. (2014). Users' Behavior Comparison between Active and Inactive Newcomers in Online Knowledge Communities. *Proceedings for South East Decision Sciences Institute (SE DSI) Conference'14*, Wilmington, North Carolina, Feb. 19-21, 2014.
- [P50] Johri, A. & \*Srinivasan, J. (2014). The role of data in aligning the 'unique identity' infrastructure in India. In *Proceedings of the 17th ACM conference on Computer supported cooperative work & social computing (CSCW '14)*. ACM, New York, NY, USA, 697-709. (**Acceptance Rate: 27%**)
- [P49] \*Teo, H. J. & Johri, A. (2014). Fast, functional, and fitting: expert response dynamics and response quality in an online newcomer help forum. In *Proceedings of Computer supported cooperative work & social computing (CSCW '14)*. ACM, New York, NY, USA, 332-341. (**Acceptance Rate: 27%**)

## 2013

- [P48] Goncher, A., Johri, A. & Boles, W. (2013) Student focus and prioritization of design parameters in first-year engineering design projects. *Proceedings of 24th Annual Conference of the Australasian Association for Engineering Education*.
- [P47] \*Srinivasan, J. & Johri, A. (2013). Creating machine readable men: legitimizing the 'Aadhaar' mega e-infrastructure project in India. In *Proceedings of Information and Communication Technologies and Development*. ACM, New York, NY, USA, 101-112. (**Acceptance Rate: 19%**)
- [P46] \*Teo, H. J., Johri, A. & Brogan, D. S. (2013). Towards an Understanding of ECE Students' Use of Online Homework Help Forums. *Proceedings for FIE 2013*.
- [P45] \*Teo, H. J., Johri, A. & Lohani, V. (2013). Assessment of Online Participation through Social Network Measures: A HLM Approach. *Proceedings of FIE 2013*. (Poster)

- [P44] Moore, J. P., Williams, C. B., North, C. & **Johri**, A. (2013). Promoting Conceptual Understanding in Engineering Statics Through the Use of Adaptive Concept Maps. *2013 ASEE Annual Conference*, Atlanta, GA.
- [P43] \*Teo, H. J., **Johri**, A. & \*Mitra, R. (2013). Experts Learn More (than Newcomers): An Exploratory Study of Argumentation in an Online Help Forum. *Proceedings of Computer Supported Cooperative Learning 2013*, Wisconsin, MI, USA. (Full paper). (**Acceptance Rate: 36%**)
- [P42] \*Teo, H. J., **Johri**, A. & \*Mitra, R. (2013). Visualizing and Analyzing Productive Structures and Patterns in Online Communities Using Multilevel Social Network Analysis. *Proceedings of Computer Supported Cooperative Learning 2013*, Wisconsin, MI, USA. (Short paper). (**Acceptance Rate: 39%**)
- [P41] Madhavan, K. P. C., **Johri**, A. & Xian, H., Vorvoreanu, M., Wang, G. A. & \*Khandeparker, A. (2013). iKNEER: Interactive System to Assess and Visualize Relational and Epistemic Networks. *Learning and Knowledge Analytics 2013*, Leuven, Belgium. (Poster).
- [P40] \*Teo, H. J., **Johri**, A. & \*Mitra, R. (2013). Productive Structures and Patterns - Multilevel Social Network Analysis of a Java Programming Help Forum. *Learning and Knowledge Analytics 2013*, Leuven, Belgium. (Poster).

## 2012

- [P39] **Johri**, A. & Sharma, A. (2012). Learning From Working on Others' Problems: Engaging Students in Long-term Global Projects for Reciprocal Learning. *Proceedings of ASEE Annual Conference 2012*.
- [P38] **Johri**, A., \*Teo, H. J., Lo, J., Dufour, M. & Schram, A. (2012). Digital Engineers: Results of a Survey Study Documenting Digital Media and Device Use Among Freshmen Engineering Students. *Proceedings of ASEE Annual Conference 2012*. (**Best Paper Nominee, Computers in Education Division, Top 5 out of 68 papers submitted to the division**)
- [P37] Williams, C.W, Moore, J. P., **Johri**, A., Peirce, R. S., and North, C. (2012). Advancing Personalized Engineering Learning via an Adaptive Concept Map. *Proceedings of ASEE Annual Conference 2012*.
- [P36] Singh, V., Kathuria, S. & **Johri**, A. (2012). Newcomer integration and learning in technical support communities for Open Source Software. *Proceedings of ACM Conference on Computer Supported Collaborative Work*, Feb. 11-15, 2012, Seattle, WA. (Interactive Paper)

## 2011

- [P35] **Johri**, A., Wang, A., Liu, X. & Madhavan, K. (2011). Utilizing Topic Modeling Techniques to Identify Emergence and Growth of Research Topics in Engineering Education, *Proceedings of IEEE FIE 2011*.
- [P34] \*Goncher, A. & **Johri**, A. (2011). Do Authentic Constraints Inspire Innovative Solutions? Findings from a Case Study of a Freshmen Engineering Design Project. *Electronic Proceedings of MUDD VIII Design Workshop*, Harvey Mudd College, Claremont, CA, May 28-29.
- [P33] **Johri**, A. & \*Teo, H. (2011). Leveraging Advances in Open Innovation to Re-design Design Learning. *Electronic Proceedings of MUDD VIII Design Workshop*, Harvey Mudd College, Claremont, CA, May 28-29.

- [P32] \*Goncher, A. & **Johri**, A. (2011). The Identification and Emergence of Constraints in Engineering Design Projects. *Proceedings of 2011 Annual Conference and Exposition of the American Society of Engineering Education*.
- [P31] Madhavan, K., Xian, H., **Johri**, A., Vorvoreanu, M., Jesiek, B.K., & Wankat, P.C. (2011). Understanding the Engineering Education Research Problem Space Using Interactive Knowledge Networks. *Proceedings of the American Society of Engineering Education Annual Conference and Exposition*.
- [P30] Singh, V., **Johri**, A. & \*Mitra, R. (2011). Types of Newcomers in an Online Developer Community. *Proceedings of the ACM Conference on Computer Supported Cooperative Work*, March 2011, pp. 717-720. (*Interactive Paper*)
- [P29] **Johri**, A., Nov, O. & \*Mitra, R. (2011). Environmental Jolts: Impact of Exogenous Factors on Online Community Participation. *Proceedings of the ACM Conference on Computer Supported Cooperative Work*, March 2011, pp.649-652. (*Interactive Paper*)
- [P28] **Johri**, A. (2011). Look Ma, No Email! Blogs and IRC as Primary and Preferred Communication Tools in a Distributed Firm. *Proceedings of the ACM Conference on Computer Supported Cooperative Work*, March 2011, pp. 305-308. (**Best Note Award, Top 1% of submissions, 3 out of 268**)
- [P27] \*Mitra, R., Singh, V. & **Johri**, A. (2011). Cyberlearning Ecosystem - Users, Technology and Tools. *Proceedings of iConference 2011*, Feb. 8-11, Seattle, USA, pp. 719-721.
- [P26] **Johri**, A., Nov, O. & \*Mitra, R. (2011). "Cool" or "Monster"? Company Takeovers and Their Effect on Open Source Community Participation. *Proceedings of iConference 2011*, Feb. 8-11, Seattle, USA, pp. 327-331. (**Acceptance Rate: 63%**)
- 2010**
- [P25] \*Goncher A., Kothaneth S. & **Johri** A. (2010). Team Communication and Innovative Design Practices: The Effect of Team Adoption and Implementation of the Tablet PC. *Proceedings of the 54th Human Factors and Ergonomics Conference*. Sept 27th to Oct.1, 2010, San Francisco, pp.1971-1975.
- [P24] **Johri**, A. & Olds, B. (2010). Engineering Learning. *Proceedings of International Conference of the Learning Sciences*, Chicago, IL, June 2010, pp.503-504. (*Workshop*)
- [P23] \*Goncher, A., **Johri**, A. & Sharma, A. (2010). Use-Value and Functionality versus Aesthetics and Experience: Inculcation of Design Ideologies in Engineering and Industrial Design Students. *Proceedings of the Frontiers in Education Conference*, Arlington, VA, 2010.
- [P22] **Johri**, A., Lo, J. Dufour, M. & Shanahan, D. (2010). AdWiki: Designing and Implementing a Socio-Technical Infrastructure for Engineering Student Advising. *Proceedings of the Frontiers in Education Conference*, Arlington, VA, 2010.
- 2009**
- [P21] **Johri**, A., Chen, H. & Lande, M. (2009). Creativity and Cognition in Engineering Design: Theoretical and Pedagogical Perspectives. *Proceedings of Creativity and Cognition 2009*, ACM Press, Berkeley, CA.
- [P20] \*Goncher, A., **Johri**, A., Kothaneth, S. & Lohani, V. (2009). Exploration and Exploitation in Engineering

Design: Examining the Effects of Prior Knowledge on Creativity and Technology Use. In *Proceedings of 39th ASEE/IEEE Frontiers in Education Conference, October 18 - 21, 2009, San Antonio, TX.* p.M1J-1-M1J-7.

- [P19] Pembridge, J., **Johri**, A. & Williams, C. (2009). Transformative Design Practices: Comparing Face-to-Face and Technology-Mediated Design Experiences among Engineering Students. *Proceedings of 39th ASEE/IEEE Frontiers in Education Conference, October 18 - 21, 2009, San Antonio, TX.* pp. W2H-1-W2H-7.
- [P18] **Johri**, A. (2009). Preparing Engineers for a Global World: Identifying and Teaching Sensemaking and Practice Forming Strategies. *Proceedings of 39th ASEE/IEEE Frontiers in Education Conference, October 18 - 21, 2009, San Antonio, TX.* pp. M2D-1-M2D-6.
- [P17] Pierrakos, O., Beam, TK., Constantz, J., **Johri**, A., & Anderson, R. (2009). On the Development of a Professional Identity: Engineering Persisters Vs Engineering Switchers. *Proceedings of 39th ASEE/IEEE Frontiers in Education Conference, October 18 - 21, 2009, San Antonio, TX.* pp. M4F-1-M4F-6
- [P16] **Johri**, A. (2009). Work in Progress – Reorganizing Engineering Pedagogy: Preventing Student Disengagement by Increasing Dialogic Learning. *Proceedings of 39th ASEE/IEEE Frontiers in Education Conference, October 18 - 21, 2009, San Antonio, TX.* pp. M3J-1-M3J-2.
- [P15] Beam, TK., Pierrakos, O., Constantz, J., **Johri**, A., & Anderson, R. (2009). Preliminary Findings on Freshmen Engineering Students' Professional Identity: Implications for Recruitment and Retention. *Proceedings of 2009 ASEE Annual Conference and Exposition, Austin, Texas, June 14-17.* AC 2009-993.
- [P14] **Johri**, A. (2009). Open Organizing: Designing Sustainable Work Practices for the Engineering Workforce. *Electronic Proceedings of MUDD Design Workshop, Harvey Mudd College, May 2009.*
- 2008**
- [P13] Lohani, V. K., Castles, R., **Johri**, A., Spangler, D. & Kibler, D. (2008). Analysis of Tablet PC Based Learning Experiences in Freshman to Junior Level Engineering Courses, *Proc. 2008 ASEE Annual Conference, June 22-25, 2008, Pittsburgh.* AC 2008-1763.
- [P12] **Johri**, A. & Lohani, V. (2008). Representational Literacy and Participatory Learning: Analyzing Tablet Experiences in Large Classes. In *Proceedings of 38th ASEE/IEEE Frontiers in Education Conference Saratoga Springs, NY.* pp. S3J-1-S3J-6.
- [P11] **Johri**, A. (2008). Boundary Spanning Knowledge Broker: An Emerging Role in Global Engineering Firms. In *Proceedings of 38th ASEE/IEEE Frontiers in Education Conference Saratoga Springs, NY.* pp. S2E-7-S2E-12.
- [P10] Evans, M., **Johri**, A., Glasson, G., Cagiltay, K, Pal, J., & Sarkar, P. (2008). ICT4D and the Learning Sciences. In *the proceedings of International Conference of Learning Sciences 2008.* Vol. 3, pp.229-236. **(Acceptance Rate: 50%)**
- [P9] Newstetter, W., **Johri**, A., & Wulf, V. (2008). Laboratory Learning: Industry and University Research as Sites for Situated and Distributed Cognition. In *the Proceedings of International Conference of Learning Sciences 2008.* Vol. 3, pp.290-297. **(Acceptance Rate: 50%)**



[P8] **Johri, A.** & Lohani, V. (2008). Creating a Participatory Learning Environment in Large Classes Using Pen-Based Computing. *Proceedings of International Conference of Learning Sciences 2008*. Vol. 1, pp.398- 405. (**Acceptance Rate: 32%**)

[P7] **Johri, A.** & Lohani, V. (2008). Analysis of Tablet PC Based Learning Experiences in Engineering Classes. *In the proceedings of International Conference of Learning Sciences 2008*. Vol. 3, pp.51-52. (**Acceptance Rate: 50%**)

#### **2007- Prior**

[P6] **Johri, A.** (2007). The Socio-Technical Process of Newcomer Participation: Findings from a Field Study. *International Conference of Computer Supported Collaborative Learning*, Rutgers, NJ, July 16 –21, 2007. pp. 438-439. (Poster) (**Acceptance Rate: 50%**)

[P5] **Johri, A.,** Pipek, V., & Wulf, V. (2007). Bridging Artifacts and Actors: Supporting Knowledge and Expertise Sharing Work Practices through Technology. *Computer-Human Interaction and Management of Information Technology*, Boston, MA, March 30-31, 2007. pp. 1-2. (Poster) (**Acceptance Rate: 32%**)

[P4] Barron, B., Tackman, J., Martin, C. Mercier, E., **Johri, A.,** Johnson et al. (2004) Equity and the Development of Technological Fluency. *The Proceedings of the Sixth International Conference of the Learning Sciences (ICLS)*. Mahwah, NJ: Erlbaum.

[P3] Broglio, R. & **Johri, A.** (2002). Living Inside the Poem: Enhancing English Literature Classes with MOOs. In P. Bell, R. Stevens, & T. Satwicz (Eds.), *Proceedings of the Fifth International Conference of the Learning Sciences (ICLS)* (pp. 512-513). Mahwah, NJ: Erlbaum. (Poster) (**Acceptance Rate: 50%**)

[P2] **Johri, A.** (2002). Designing for Change: Findings from an Ethnographic Study of a Complex Learning Environment. In P. Bell, R. Stevens, & T. Satwicz (Eds.), *Proceedings of the Fifth International Conference of the Learning Sciences (ICLS)*. Mahwah, NJ: Erlbaum. (Poster) (**Acceptance Rate: 50%**)

[P1] Civjan, J., **Johri, A.,** Avery, C. & Herrington, T. (2002). VisOC: A Tool for Visualizing Online Communication in Educational Settings. In P. Bell, R. Stevens, & T. Satwicz (Eds.), *Proceedings of the Fifth International Conference of the Learning Sciences (ICLS)*. Mahwah, NJ: Erlbaum. (Poster) (**Acceptance Rate: 50%**)

#### **Book Chapters (Peer reviewed (PR)/Editorially Reviewed (ER))**

[B10] Revelle, M., Domeniconi, C. & **Johri, A.** (2019). Temporal Artifacts from Edge Accumulation in Social Interaction Networks. In A. Esposito et al. (eds.) *Neural Advances in Processing Nonlinear Dynamic Signals*, 102, Springer. (**ER**)

[B9] **Johri, A.** (2018). Absorptive Capacity and Routines: Understanding Barriers to Learning Analytics Adoption in Higher Education. Lester, J., Klein, C., Rangwala, H. & **Johri, A.** (Eds.). *Learning Analytics in Higher Education: Current Innovations, Future Potential, and Practical Applications*. Routledge, NY. (**ER**)

[B8] **Johri, A.** (2014). Engineers' Knowing in Practice: Reconciling Sociality and Materiality through Action. Fenwick, T. & Nerland, M (Eds.). *Reconceptualising Professional Learning in Turbulent Times: changing knowledges, practices, and responsibilities*. Routledge. (**ER**)

- [B7] **Johri, A.** (2014). Using Qualitative and Ethnographic Research Methods to Conduct Interpretive Research in Engineering Education. Johri, A. & Olds, B. (Eds). *The Cambridge Handbook of Engineering Education Research*, Cambridge University Press, New York, NY, pp.571-570. **(PR)**
- [B6] **Johri, A., Bolds, B. M. & O'Connor, K.** (2014). Situative Frameworks for Engineering Learning Research. Johri, A. & Olds, B. (Eds). *The Cambridge Handbook of Engineering Education Research*, Cambridge University Press, New York, NY. (Revised from Johri & Olds (2011) article in *JEE*) **(PR)**
- [B5] **Johri, A. & Jesiek, B.** (2014). Global and International Issues in Engineering Education. Johri, A. & Olds, B. (Eds). *Cambridge Handbook of Engineering Education Research*, Cambridge University Press, New York, NY. **(PR)**
- [B4] Stevens, R., **Johri, A. & O'Connor, K.** (2014). Professional Engineering Work. Johri, A. & Olds, B. (Eds). *The Cambridge Handbook of Engineering Education Research*, Cambridge University Press, New York, NY. **(PR)**
- [B3] **Johri, A.** (2006). Interpersonal Assessment: Assessing Peer Knowledge and Behavior in Online Learning Environments. In Roberts, T. (Ed). *Self, Peer, And Group Assessment in E-Learning*. Idea Group Publishing. pp. 283-312. **(PR; Competitive; 30% Acceptance Rate)**
- [B2] **Johri, A.** (2005). Online, Offline, and In-Between: Analyzing Mediated-Action among American and Russian Students in an Online Class. In Roberts, T. (Ed). *Computer-Supported Collaborative Learning in Higher Education*. Idea Group Publishing. pp. 259-280. **(PR; Competitive; 30% Acceptance Rate)**
- [B1] Avery, C., Civjan, J., & **Johri, A.** (2005). Assessing Student Interaction in the Global Classroom Project: Visualizing Communication and Collaboration Patterns Using Online Transcripts. In Cook, K. C., & Grant-Davie, K. (Eds). *Online Education: Global Questions, Local Answers*. pp. 245-266. Baywood Pub. **(ER)**

### **Column in ASEE Prism – Digital Lens**

- [DL4] **Johri, A.** (2018). "An Engineering Conundrum: What will we do when machines do everything," January 2018.
- [DL3] **Johri, A.** (2017). "A Go-to Resource for Engineers: Participants in online forums not only share what they know but also generate new knowledge," October 2017.
- [DL2] **Johri, A.** (2017). "Am I My Machine's Keeper? Devices that learn from and influence users pose new ethical dilemmas," January 2017.
- [DL1] **Johri, A.** (2016). "Gotta Catch Them All? A global gaming sensation holds lessons for engineering educators that go well beyond technology fads." September 2016.

### **Articles, Guest Editorials, and Book Reviews (Editorially Reviewed)**

- [E7] Concher\*, A. & **Johri, A.** (2015). JEE Selects: How Context Shapes Learning. *ASEE Prism*, November.
- [E6] **Johri, A.** (2015). Opening Up Engineering Education Research: It's Time for a Dialogue on Data Sharing. *ASEE Prism*.

- [E5] Madhavan, K., **Johri**, A., Xian, H. Wang, G. A. & Liu, X. (2014). Knowing What We Know, and Who Knows What: An Online Portal to Allow Engineering Educators to Learn About Their Field. *AEE Selects, ASEE Prism*.
- [E4] **Johri**, A. & Olds, B. (2014). Cambridge Handbook of Engineering Education Research and Reflections on the Field. Guest Editorial, *Journal of Engineering Education*, July 2014.
- [E3] **Johri**, A. & \*Teo, H. J. (2013). Using Data Analytics to Examine Expert/ Novice Behavior in Informal Online Communities. *Bulletin of the IEEE Technical Committee on Learning Technology*, 15(2):2-5.
- [E2] **Johri**, A. (2010). Creating Theoretical Insights in Engineering Education. Guest Editorial, *Journal of Engineering Education*, July 2010.
- [E1] **Johri**, A. (2010). Global and Virtual Teamwork: Review Essay. Book Review, *Journal of Engineering Education*, January 2010. (*Editorially Reviewed*)

### **Refereed Workshops & Symposia Organized**

- [W08] **Johri**, A., Rangwala, H., Agarwal, V. & Srikanth, S. (2015). Assessment and Big Data. ICDM 2015.
- [W07] Wyche, S. P., Oreglia, E., Sengers, P., Ames, M. G., **Johri**, A., Steinfeld, C. & Hoadley, C. (2012). Learning from Marginalized Users: Reciprocity in HCI4D. Workshop at CSCW 2012, February 12.
- [W06] **Johri**, A. & Olds, B. (2010). Engineering Learning. Pre-conference Workshop at ICLS 2010, Chicago, IL, June 2010.
- [W05] **Johri**, A. & Madhavan, K. (2010). Introduction to Cyberinfrastructure for Engineering Education Research, Learning and Outreach. Invited Workshop at NSF EEC Awardees Conference, Reston, VA, Feb. 1-2, 2010.
- [W04] **Johri**, A., Chen, H. & Lande, M. (2009). Creativity and Cognition in Engineering Design: Theoretical and Pedagogical Perspectives. *Workshop at Creativity and Cognition 2009*, Berkeley, CA.
- [W03] Evans, M., **Johri**, A., Glasson, G., Cagiltay, K, Pal, J., & Sarkar, P. (2008). ICT4D and the Learning Sciences. Symposium organized at the *International Conference of Learning Sciences 2008*.
- [W02] Newstetter, W., **Johri**, A., & Wulf, V. (2008). Laboratory Learning: Industry and University Research as Sites for Situated and Distributed Cognition. Symposium organized at the *International Conference of Learning Sciences 2008*.
- [W01] **Johri**, A. & Wulf, V. (2007). Communities of Practice in Highly Computerized Work Settings. Workshop organized at *Communities and Technologies Conference (C&T 2007)*, East Lansing, Michigan.

### **Invited Contribution to National-level Policy Reports/Initiatives**

- [NP5] "Discovery in a Research Portfolio: Tools for Structuring, Analyzing, Visualizing and Interacting with Proposal and Award Portfolios," Final Report, NSF CISE and SBE AC Subcommittee, November 2010.
- [NP4] American Society for Engineering Education (ASEE) report on "Innovations in Engineering Education," November 2008, Atlanta, GA.

- [NP3] NSF Report "Thought Leaders Workshop on the Future of Engineering Education," June 2008
- [NP2] NSF Workshop Report on "Cyberinfrastructure and Engineering Education," September 4-5, 2008, Arlington VA.
- [NP1] NSF Workshop Report on "Digital Video Inquiry in Learning and Education," November 25-26, 2002, Palo Alto, CA.

## Presentations

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### Refereed Conference Presentations

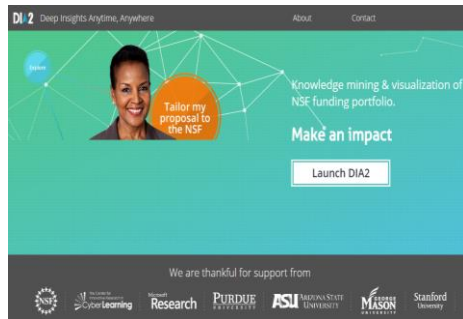
- [C24] Lester, J., Klein, C., Rangwala, H. & **Johri**, A. (2017). Learning Dashboards: How Data Accuracy, Context, and Trust Impact Student Sensemaking and Learning Behaviors. *Presentation at AERA 2017*.
- [C23] Chowdhury, B. & **Johri**, A. (2017). Collaborative Interdisciplinary Computational Thinking. *AERA Symposium on "Stories from the Field: Integrating Computational Thinking Across Curricular Domains"*.
- [C22] **Johri**, A., Vorvoreanu, M., Madhavan, K. (2016). Data Sharing in Engineering Education. Special Session *Presentation at ASEE 2016*.
- [C21] Lester, J., Klein, C., Rangwala, H. & **Johri**, A. (2016). Educational Data Mining and Higher Education. *AERA Symposium*.
- [C20] Lester, J., Klein, C., Rangwala, H. & **Johri**, A. (2015). Leveraging learning analytics for teaching and advising: Barriers and behaviors related to adoption by faculty and staff. *ASHE*, Denver, CO.
- [C19] **Johri**, A., Madhavan, K., Vorvoreanu, M., Lichtenstein, G., Chen, H., Sheppard, S. & McKenna, A. (2014). Lessons from the DIA2 project for undertaking cyberinfrastructure-based team science. *Science of Team Science Conference*, Austin, TX, August 6-8, 2014.
- [C18] **Johri**, A. (2014). Lessons for Large-scale Learning and Teaching for Higher Education Institutions from Online Forums. *ICA Preconference on Innovations in Higher Education*, Seattle, WA, May 22, 2014.
- [C17] **Johri**, A. (2014). Data Sharing Frameworks for Education Research. Position paper for "Sharing, re-use and circulation of resources in cooperative scientific work," *Workshop at CSCW 2014*, February, Baltimore, U.S.
- [C16] **Johri**, A. (2014). Technology as catalyst and context: Global software development through Postcolonial Third Spaces. Position paper for *Workshop on Global Software Development in a CSCW Perspective*, February, Baltimore, U.S.
- [C15] **Johri**, A. & Sharma, A. (2011). Designing for Development: Three Preliminaries Studies from Field Research in India. Workshop on *Mobile Collaboration in the Developing World* at ACM CSCW 2011, March 20, 2011.
- [C14] **Johri**, A. (2010). Leveraging the Digital Media Ecology in a Distributed Firm. Presented at the *International Symposium of Information Systems*, Hyderabad, India, Dec. 18, 2010.

- [C13] **Johri, A.** (2009). Using Case Studies and Case Preparation Kits to Teach Global Team Competency. *12th Annual Colloquium on International Engineering Education*, Ames, Iowa October 22-25, 2009.
- [C12] **Johri, A.** (2009). Multiplicity and Personalization: How Global Engineers Develop Successful Technology-Mediated Work Practices, *12th Annual Colloquium on International Engineering Education*, Ames, Iowa October 22-25, 2009.
- [C11] **Johri, A.** (2009). Demo or Die: The Collective Championing of Digital Innovations in an R&D Organization. *Academy of Management*, 2009, Chicago, IL.
- [C10] **Johri, A.** (2008). Why We See Coworkers Differently: Situational and Institutional Shaping of Impressions. Presented at Organizational Communication and Information Systems Division Session on Individuals and Distributed Work, *Academy of Management*, 2008, Anaheim, CA.
- [C9] **Johri, A.** (2006). Interpersonal Impression Formation in a Community of Practice. Presented at the Doctoral Consortium *International Conference of Learning Sciences*, June 2006, Bloomington, Indiana.
- [C8] **Johri, A.** (2005). Working Across the Pacific: A Field Study of Impression Formation among Distributed Coworkers in an R&D Organization, Presented at the Doctoral Consortium Workshop, *European Computer Supported Cooperative Work*, September 2005, Paris, France.
- [C7] **Johri, A.** (2005). Understanding Impression Formation and Impression Accuracy Among Distributed Coworkers. Presented at Organizational Communication and Information Systems Division, *Academy of Management*, 2005, Honolulu, HI.
- [C6] **Johri, A.** (2005) Knowing Others: Understanding Interpersonal Impression Formation Among Learners in Technology Mediated Communities of Practice. Presented at the Student Community Workshop, *Computer Supported Cooperative Learning*, May 2005, Taipei, Taiwan.
- [C5] **Johri, A.** (2005). Understanding and Developing a "Learning Relationship" in Computer Supported Learning Communities. Presented at the Fostering Learning Communities Workshop, *Computer Supported Cooperative Learning*, May 2005, Taipei, Taiwan.
- [C4] **Johri, A.** (2005). Sharing Interpersonal and Contextual Knowledge: Developing a Community of Practice in Distributed Online Learning Environments. *Annual Conference of American Educational Research Association*, 2005, Montreal, Canada.
- [C3] **Johri, A.** (2005). Using Structuration Theory to Analyze and Understand Technology Use in a Distributed Online Learning Environment. *Annual Conference of American Educational Research Association*, 2005, Montreal, Canada.
- [C2] **Johri, A.** (2003). When the Technology that Facilitates is also the Technology that Inhibits: Results from the Case Study of a Cross-Cultural Online Learning Environment. *Annual Conference of American Educational Research Association*, 2003, Chicago, IL.
- [C1] Barron, B., Martin, C., Mercier, E., Pilner, K., Mathias, A., **Johri, A.**, & Walter, S. (2003). Patterns of Participation in Fluency-Building Experiences in a High-tech Community: Implications for Bridging

### **Invited Presentations/Talks**

- [I12] **Johri**, A. (2012). "Designed Transparency: Can Information Technology Reduce Corruption in Emerging Economies," HCI Seminar Series, Center for Human-Computer Interaction, Virginia Tech.
- [I11] **Johri**, A. (2012). Designed Transparency: Can ICT Reduce Corruption? (February 2012), Telecommunication, Information Studies, and Media, Michigan State University, East Lansing, MI.
- [I10] **Johri**, A. (2012). Practicing Global Engineering: A Research, Education and Outreach Challenge. (January 2012), Center for Engineering Education and Outreach, Tufts University, Boston, MA.
- [I9] Madhavan, K.P.C., Xian, H., Vorvoreanu, M., **Johri**, A., Jesiek, B., Wang, A., & Wankat, P. (2010). The FIE Story - 1991 to 2009.<sup>2</sup> Invited video presentation featured at the Frontiers in Education Conference 2010. Available online at <http://www.youtube.com/watch?v:bKA4zJc3bsA>. (October 2010).
- [I8] **Johri**, A. (2010). Engineering and Development: Values and Design. Presented at Microsoft Research Labs, Bangalore, India, September, 2010.
- [I7] **Johri**, A. (2010). Computational Literacy: The Reshaping of Human Practices through Digital Representations. Presented at School of Education and Social Policy, Northwestern University, Chicago, IL, February 9, 2010.
- [I6] **Johri**, A. (2007). Innovation in a Flat and Networked World. Presented at GENENCOR Inc. Palo Alto, CA, July 10, 2007.
- [I5] **Johri**, A. (2006). Mediated Impressions: How Digital Technology Affects Impression Formation and Shapes Collaboration and Learning. SUNY Albany, December 2006.
- [I4] **Johri**, A. (2006). Technology and Collaboration in R&D Laboratories. Microsoft Research Labs, Bangalore, India, September 2006.
- [I3] **Johri**, A. (2006). Graduate Education in the U.S. Presented at the Annual Retreat of the Department of New Media and Information Systems, University of Siegen, Germany, August 2006.
- [I2] **Johri**, A. (2006). Interpersonal Impression Formation in a Community of Practice. University of Siegen, Germany, July 2006.
- [I1] **Johri**, A. (2005). Understanding Impression Formation and Impression Accuracy Among Distributed Coworkers. Fraunhofer FIT, Sankt Augustin, Germany, August 2005.

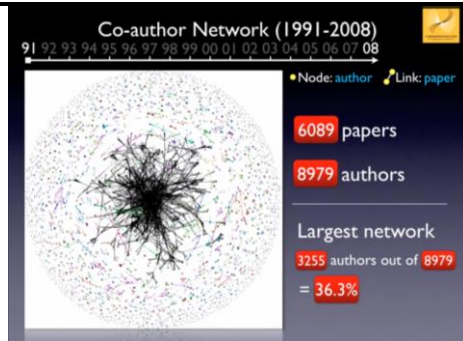
## System and Product Development Projects



### DIA2: Deep Insights Anywhere, Anytime – NSF#1444277 (2012–2017)

Deep Insights Anywhere, Anytime (DIA2) is a web-based knowledge mining and interactive visualization platform for research funded by the National Science Foundation (NSF). The system helps NSF program officers and grant applicants understand what has been funded so far, in what areas, and who are the researchers working in that area.

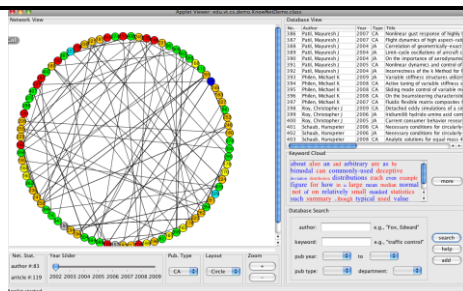
Available at: <http://www.dia2.org>



### iKneer: Interactive Knowledge Networks for Engineering Education Research – NSF#0935124 (2009 – 2011)

A large-scale effort to advance the field of engineering education; this project formed the prototype for DIA2. Our system currently holds over 150K documents related to engineering education. On the left is a screenshot from the video “The FIE Story” – a visual history of the conference *Frontiers in Education* (1991-2009) created using this system. In this video we provide a dynamic view of the conference from 1991 till 2009 and show the growth in the network of authors over the years.

Available at: <http://ikneer.org>



### VTKN: Virginia Tech Knowledge Networks – Funded by VT-ICTAS (2008-2010)

A small scale infrastructure developed for the College of Engineering at Virginia Tech to allow administration to better understand collaborative networks among faculty and within and across different departments. This project formed the prototype for the *iKneer* project.

Available at: <http://www.wang.bit.vt.edu/vtkn.html>



### laXmi: Financial Literacy Application – NSF# 0954054 & 0757540 (2009-2013)

“laXmi” is designed for Semi/Illiterate women in rural India to help them learn the basics of financial literacy and management of funds. It is based on an old traditional floor game which is part of the culture in rural India. The analogue game is complimented by an app that runs on an android phone/tablet. It is used by the NGO representative conducting the training session. More Info at:

<http://www.id4learning.com/laxmi.html>



### IMMUNE: Vaccination Information Management – NSF#0954054 & 0757540 (2009-2013)

IMMUNE uses a smartphone to empower a community health care worker to create, access and update the immunization records of any person enrolled in the program. It provides a user friendly, efficient and scalable method of managing vaccination records by the community health care worker while the parents of the child are required to safe keep only a pendent/bracelet/toy/sticker or a card with a unique QR code, which can be easily replaced. More info:

<http://www.id4learning.com/vaccination.html>

## Supervision of Post-Doctoral Associates & Graduate and Undergraduate Students

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### *Postdoctoral Associate*

1. Dr. Aqdas Malik (Dec. 2016 – Present) (Ph.D. Aalto University, Finland)
2. Dr. Stephanie Kusano (Jan. 2015-June 2015) (Ph.D. Virginia Tech)  
*Job after postdoc:* Evaluation and Assessment Postdoctoral Research Scholar, Provost's Office, University of Michigan
3. Dr. Seungwon Yang (Jan. 2014 - July 2015) (Ph.D. Virginia Tech)  
*Job after postdoc:* Assistant Professor, School of Library and Information Science (SLIS), Louisiana State University, Baton Rouge, LA
4. Dr. Janaki Srinivasan (Jan. 2013-March 2014) (Ph.D. University of California, Berkeley)  
*Job after postdoc:* Assistant Professor, IIT, Bangalore, India

### *Ph.D. and M.S. Advisee*

#### *Graduated\*\**

#### *PhD*

1. Andrea Goncher (Ph.D., Engineering Education; Graduated: December 2012)  
*Thesis:* Contextual Shaping of Student Design Practices: The Role of Constraint in First-Year Engineering Design  
*Job after graduation:* Postdoctoral Associate, Queensland University of Technology, Brisbane, Australia  
*Current Position:* Lecturer (Assistant Professor), Charles Sturt University, Bathurst, NSW, Australia  
- Accepted for competitive doctoral consortium at Creativity and Cognition, Oct. 2009  
- Fully funded to present dissertation research at Mudd Design Workshop, May 2011
2. Hon Jie Teo (Ph.D., Engineering Education; Graduated: August 2014; co-advised with Vinod Lohani)  
*Thesis:* Knowledge Creation Analytics for Online Engineering Learning  
*Job after graduation:* Assistant Professor, CUNY, College of Technology, Brooklyn, NY
3. Stephanie Kusano (Ph.D., Engineering Education) (*Virginia Tech*) (Co-advised with Lisa McNair; Graduated: December 2014)  
*Thesis:* Beyond the Classroom: Understanding the Educational Significance of Non-Curricular Engineering Design Experiences  
*Job after graduation:* Postdoctoral Associate at GMU  
*Current Position:* Evaluation and Assessment Postdoctoral Research Scholar, University of Michigan
4. Bushra Chowdhury (Ph.D., Engineering Education; Co-Chair: Vinod Lohani) (*Virginia Tech*); Topic: Collaborative Computational Thinking; Dissertation Defended: July 6, 2017  
*Job after graduation:* Data Scientist, DISYS Inc.

#### *M.S.*

5. Raktim Mitra (Chair, Co-Chair: H. Rahmandad, M.S. Thesis, Industrial and Systems Engineering; Graduated August 2011)  
*Thesis:* Collaborative learning in Open Source Software (OSS) communities: The dynamics and challenges in networked learning environments

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\*\* All Ph.D. students were fully funded on my grants throughout their doctoral work except for a mandatory semester of GTA position required by the department. M.S. students were fully funded by me throughout their program of study. For logistical reasons, I asked all students at VT to add a co-advisor after my decision to move to GMU. My department at VT did not have a M.S. program and the Ph.D. program started a year after I joined.



*Job: Analyst, Discover Financials; Current Position: Senior Manager, Lending Club*

6. Ashwin Khandeparker (Chair, M.S. Project, Computer Science; Graduated May 2011)  
*Thesis Project: Virginia Tech Knowledge Network (VTKN: Intradepartmental Collaboration within VT College of Engineering*  
*Job: Developer, Amazon Inc.*

#### *Current*

1. Omaira Almatrafi (Ph.D. IT) (Proposal defended; Progress meeting completed April 2018); *Topic: Learning Analytics*
2. Hieu-Trung Le (Ph.D. IT) (Proposal Defended: 12/06/2016); *Topic: Online Information Seeking Behavior of Cybersecurity Professionals*
3. Habib Karbasian (Ph.D. IT) (Co-Advisor: Hemant Purohit) (Proposal Defended: 4/30/2018)
4. Daniel Garrison (Ph.D. CS, Virginia Tech) (Co-chair with Denis Gracanin)

#### *Dissertation Committee Member (Current)*

1. Geetanjali Date (HBCSE, TIFR, India; Advisor: Sanjay Chandrasekharan); 2014-2019 (Expected); *Grassroots Innovation in Rural India (Proposal Defended: August 7, 2015)*

#### *Dissertation Committee Member (Graduated)*

1. Bryan Weaver (Geography, Advisor: Dieter Pfoser), Collaborative Geospatial Investigations, Defended April 30, 2018
2. Sachin Garg (Public Policy, Advisor: Philip Auerswald); 2013-2016 (expected); Big Data and Development: Focus on Land Records in the U.S. and India (Defended: August 2017)
3. Cory Brozina (Engineering Education, Virginia Tech, Advisor: David B. Knight); 2012-2016; *Educational Data Mining: Linking Multiple Datasets*
4. Jacob Moore (Engineering Education, Advisor: Chris Williams) 2010-2013 – *Adaptive Map Project*
5. Jean Mohammadi-Aragh (Engineering Education, Advisor: Chris Williams) 2009-2013 – *Student Attention in Technology-Rich Classrooms*
6. Joon Suk Lee (Computer Science, Advisor: Deborah Tatar) 2009-2013 – *Collaboration and Micro-coordination in Technology Mediated Settings*
7. Rachel McCord (Engineering Education, Advisor: Holly Matusovich) 2011-2013 – *Metacognition and Self-Regulation for Conceptual Learning in Engineering*

#### ***Student Supervision/Co-Supervision on Funded Projects (where I serve as PI or NSF REU Mentorship)<sup>††</sup>***

##### ***George Mason University***

44. Byron Biney (Swarthmore College) (REU, Summer 2018)
43. Olivia Kruse (Junaita College) (REU, Summer 2018)
42. Lorraine M. Drumheller (Ph.D. Higher Education), Fall 2017- Spring 2018, *Data Science Education*
41. Daniel Ruiz (B.S. Computer Engineering, VCU, REU) (Summer – Fall 2017)
40. Cassie Heyman-Schrum (William and Mary, REU) (Summer – Fall 2017)

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<sup>††</sup> Students listed here were funded by grants on which **I served as PI or as primary REU mentor**. Most students were supervised jointly with co-PIs or collaborators. The following collaborators co-supervised two or more students with me: H. Rangwala (GMU), L. Bland (GMU), C. Domeniconi (GMU), H. Purohit (GMU), A. Sharma (VT), & J. Lo (VT).

39. Venkata Chaitanya Neelamaraju (M.S. ECE) (Spring 2017)
38. Saif Ahmed (M.S. DAE), 2014-2015 – *Comparative Study of Technical/Non-Technical Forums; Summer Internship: HP Labs Data Mining Group*
37. Ben Gelman (B.S. & M.S. C.S., NSF REU/GRA) 2014-2016 – *Analysis of Scratch Online Community and Learning on MOOCS; Summer Internship: MIT CSAIL ALFA Group*
36. Chris Beckley (B.S. C.S., NSF REU) 2014 – *Analysis of Scratch Online Community; Job: Lockheed Martin*
35. Mack Sweeney (B.S. C.S., NSF REU) 2014 – *DIA2*
34. Qingzhe Li (Ph.D. C.S.) 2014 – *Android App Development*
33. Matt Revelle (Ph.D. C.S.) 2014- *DIA2*
32. Heba Elsherbeeney (PhD. Ed) 2014 – *TILES: Informal Engineering Learning Assessment Instrument*
31. Kathy Matson (PhD. Ed) 2014 – *TILES: Informal Engineering Learning Literature Review*
30. Laura Tokarczyk (PhD. Ed) 2014 – *TILES: Informal Engineering Learning Assessment Instrument Development*
29. Ashley Sgandurra (M.A. Ed) 2014 – *TILES: Informal Engineering Learning Assessment Instrument Development*
28. Xingya Xu (PhD. Ed) (Fall 2015 – Spring 2016) – *TILES: Informal Engineering Learning*
27. Habib Karbasian (PhD. CS) (Fall 2016) (joined research group as doctoral advisee Spring 2017)
26. Rajat Handa (M.S. DAE) (Fall 2016 – Spring 2017)

### **Virginia Tech**

25. Krunal Doshi (M.S. CS), GRA 2011-2012
24. Vaishali Nandy (Ph.D. Education), GRA, 2010-2013 – *Globally Distributed Work Case Studies*
23. Xiaomo Liu (Ph.D. CS) 2009-2011 – *Harnessing Global Expertise in Online Communities*
22. Gaurav Dongaonkar (M.S. ISE) 2010 – *Globally Distributed Work Case Studies*
21. Monique Dufour (Ph.D. STS) 2009-2011 – *NSF AdWiki*
20. James Pembridge (Ph.D. ENGE) 2008-2009 – *NSF Creative IT*
19. Varun Ramdas (M.S. ISE) 2007-2008 – *Globally Distributed Work*
18. Asta Schram (PhD. Education) 2009-2010 – *Digital Millennials*
17. Prasanna Kumar (Ph.D. ISE) 2009-2010 – *Analysis of Field Study Data of Global Work*
16. Shreya Kothaneth (Ph.D. ISE) 2008-2011 – *NSF Creative IT; served as dissertation co-chair 2009-2011*
15. Daniel Breakiron (B.S. CS) 2010 – *NSF AdWiki*
14. Younes Taleb (B.S. General Engineering) 2010 – *NSF AdWiki*
13. Andrew Ciambrone (B.S. General Engineering) 2012 – *NSF CAREER Award*
12. Vismay Shah (B.S. ISE) 2008-2010 – *Research on Engineering Education in India*
11. Daniel Shanahan (M.S. CS) 2009-2011 – *NSF AdWiki*
10. Jonathan Ballands (B.S. CS) 2010-2012 – *Android App Development for Immune*
9. Kevin Cherniawski (B.S. CS, University of Mary Washington NSF REU)
8. Erin Campbell (B.S. CS, Kalamazoo College, NSF REU) 2011 – *Android App Development for Immune*
7. Lina Garada (B.S. Industrial Design, NSF REU) 2011-2012 – *NSF Creative IT and Immune/LaXmi*
6. Daniel Calabrese (B.S. Industrial Design, NSF REU) 2011 – *Immune/LaXmi*
5. Greg Mitchell (B.S. Industrial Design) 2011 – *Immune/LaXmi*
4. Daniel Wainless (B.S. Industrial Design) 2011 – *Immune/LaXmi*
3. Dow Lodovico (B.S. Industrial Design) 2011 – *Immune/LaXmi*
2. Nihar Simal (B.S., ME) 2011 – *NSF CAREER Award – Analysis of Field Study Data on Global Work*
1. Sumitra Nair (Ph.D. STS) 2009-2010, *Field Study of NREGA*

### **Research Associate**

1. Dr. Bushra Chowdhury (Ph.D. Virginia Tech) (November 2017 – Present) – *Data Science for Beginners*
2. Elizabeth Grisham (Jan. 2017-July 2017) – *Engineers/Engineering in India*

## Teaching Experience<sup>††</sup>

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### Graduate

#### GMU

Instructor	AIT 602: Research Methods in IST* (7 students)	(4.71/5.00)	Spring 2018
Instructor	AIT 602: Research Methods in IST*	(--)	Spring 2016
Instructor	AIT 601: Foundations of IST* (8 Enrolled+2 Auditors)	(4.0/5.0)	Fall 2015
Instructor	AIT 510: Learning Analytics* (3 Enrolled+3 Auditors)	(5.0/5.0)	Fall 2014

#### VT

Instructor	ENGE 5984: Ethnographic and Qualitative Research (10 students)	(5.75/6.00)	Spring 2013
Instructor	ENGE 5014: Foundations of Engineering Education (13 students)*	(4.5/6.0)	Fall 2012
Instructor	ENGE 5014: Foundations of Engineering Education (24 students)	(4.5/6.0)	Fall 2011
Instructor	ENGE 5984: Global Engineering Work Practices (6 students)	(3.7/4.0)	Spring 2010
Instructor	ENGE 5984: Ethnographic & Qualitative Research (10 students)*	(4.0/4.0)	Fall 2009
Instructor	ENGE 5984: Global Engineering Work Practices (10 students)*	(4.0/4.0)	Spring 2009
Co-Instructor	ENGE 5014: Foundations of Eng Education* (10-12 students)	(3.6/4.0)	Fall 2008
Co-Instructor	ENGE 5014: Foundations of Eng Education* (10-12 students)	(--)	Spring 2008
Co-Instructor	ED211: Human-Computer Interaction in Education* (Stanford) (10 students)		Fall 2004

### Undergraduate

#### GMU

Instructor	IT 304: IT in the Global Economy – DL3 (30 students)	(4.36/5.00)	Spring 2018
Instructor	IT 304: IT in the Global Economy – DL1 (30 students)	(4.46/5.00)	Spring 2018
Instructor	IT 304: IT in the Global Economy – DL2 (36 students)	(2.89/5.00)	Fall 2017
Instructor	IT 304: IT in the Global Economy -DL2 (39 students)	(4.00/5.00)	Spring 2017
Instructor	IT 304: IT in the Global Economy -DL1 (42 students)	(3.47/5.00)	Spring 2017
Instructor	IT 304: IT in the Global Economy – DL (40 students)	(3.28/5.00)	Fall 2016

#### VT

Co-Instructor	ENGE/ID 2984: Engineering Design for Empowerment* (14 students)	(--)	Fall 2012
Instructor	ENGE 1214: Engineering Design Transitions (5 Students)	(5.0/6.0)	Fall 2012
Instructor	ENGE 1114: Engineering Design (400 students)	(4.88/6.0)	Spring 2012
Co-Instructor	ENGE/CS/ID 2984: Eng Design for Social Development* (20 students)	(5.0/6.0)	Fall 2011
Instructor	ENGE 1114: Engineering Design* (408 students)	(2.96/4.0)	Spring 2011
Co-Instructor	ENGE 1024: Engineering Explorations (450 students)	(3.3/4.0)	Fall 2007

### Guest Lectures in Other Courses

1. "Introduction to Engineering Education," PROV 701, Instructor: K. Schrum (2/21/2017)
2. "Writing a Grant Proposal", PROV 701, Instructor: J. Lester (2/7/2015 & 2/5/2016)
3. "Assessing Informal Engineering Learning," EDUC, Instructor: L. Bland (2/3/2015)
4. "Why a Science of Learning" presented at the Learning Sciences class, School of Education, September 10, 2012. Instructor: M. Evans

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<sup>††</sup> Courses marked \* are new offerings or a substantial redesign of a prior offering.

5. "Sociomateriality and Learning" presented at the Learning Sciences class, School of Education, November 8, 2011. Instructor: M. Evans
6. "ICT for Development" presented at the Freshmen Research Seminar, September 23, 2011.
7. "India in the Flat World and Beyond" presented as part of the Engineering Cultures course in the Department of Science & Technology Studies, Virginia Tech.
  - Presented twice (2009 and 2010) to over 100 students each semester and is now a regular part of the class lectures (Instructor: M. Wisnioski).
  - This lecture was also presented in Spring 2012 as part of the Rising Sophomore study abroad course (Instructor: S. Adams).
8. "Design Ethnography: Data Collection and Analysis". Presented in Graduate Class on "Design Cultures", (2008, 2011), Department of Science & Technology Studies, Virginia Tech. Instructor: Matt Wisnioski
9. Using Dyknow in Engineering Classes. Presentation and Demonstration in Graduate Class on Engineering Technology (2007), School of Education, Virginia Tech. Instructor: Michael Evans
10. Lecture on "Globalization and Work" presented as part of the Rising Sophomore study abroad course, March 2010. Instructor: J. Tront
11. Lecture on the topic of "Activity Theory" presented as part of the graduate course on "Sociocultural Influences on Learning", February 2011, School of Education. Instructor: C. Brandt
12. Workshop on "Introduction to Cyberinfrastructure for Engineering Education Research, Learning, and Outreach" with Krishna Madhavan (Purdue University), delivered at NSF Awardees Meeting Feb 1 & 2, 2010. Two sessions of the workshop were conducted.

### ***Course Development***

#### *At GMU*

IT 304: IT in the Global Economy

AIT 501: Learning Technologies & Learning Analytics

AIT 601: Foundations of IST

AIT 602: Research Methods in IST

#### *At VT*

ENGE 5984/ENGE 5714: Global Engineering Work Practices

ENGE 5984/ENGE 6714: Ethnographic and Qualitative Research

ENGE 5014: Foundations of Engineering Education

ENGE 2984: Engineering for Social Development

ENGE 1114: Engineering Design

### ***Program Development***

#### *At GMU*

IST Concentration in Ph.D. in IT: Spearheaded the effort to introduce a new concentration for the department, developed new courses.

#### *At VT*

Ph.D. in Engineering Education: Developed new courses and with two other colleagues (H. Griffin & M. Borrego) developed guidelines and study guide for Ph.D. qualifying exams.

## Service to the Institution and the Profession

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### Institutional Service

#### *George Mason University*

##### *Departmental Level*

In addition to the regular functions of a Department Chair:

- Co-led effort to create a Ph.D. concentration and introduce Ph.D. level courses within the IT PhD program (2014-2016); Resulted in a new concentration for the department: Information Science and Technology
- Led the effort to change the department name from Applied IT to Information Sciences and Technology; this resulted in a new vision and mission for the department
- Spearheaded the Academic Program Review (APR) for the department and ABET evaluation; both due in 2015

##### *University Level*

*Member, Search Committee for Term Faculty in Data Analytics, Computer Science, (Spring 2018)*

*VSE Representative to the Faculty Senate, Three year term starting Fall 2017-*

*Member, University Committee on Adult Learning and Executive Education (Fall 2017- )*

*Member, Search Committee for Associate Provost for Institutional Research and Assessment (Spring 2015)*

*Member, PW Campus Committee for Bull Run 2 (Spring 2014)*

*Member, Writing Across the Curriculum (2014-2015)*

#### *Virginia Tech*

##### *Departmental Level*

*Member, Department of Engineering Education Faculty Search Committee (2012-13)*

*Faculty Mentor, New faculty hired in 2013; assisted with on-boarding and grant writing efforts (2013)*

*Member, Department of Engineering Education Graduate Committee (2007-2009) (2012-2013)*

*Co-Chair, Department of Engineering Education Strategic Planning Committee (2009 – 2011)*

*Development of strategic plan in accord with faculty and advisory board*

*Member, Department Communication and Outreach Committee 2007-2009 (played a crucial role in recruiting the first full class of doctoral students in Fall 2008)*

*Member, Qualifying Exam Committee (2008-2013; once each year)*

*Undergraduate Advising: Around 50-100 freshmen/sophomore-level students each semester (2007-2010)*

##### *College Level*

*Member, International Program Faculty Committee (appointed by Dean, College of Engineering) (2011 -13)*

*Member, DyKnow Taskforce (2007-2009)*

*Marshall, Commencement Duties (Spring 2008-2011)*

*Reviewer, Reviewed NSF Career Proposals as part of a workshop organized by the college, also shared my proposal as an exemplar (2010-2013)*

*Founding contributor and Member, ICTAS Center on Innovation-based Manufacturing (CIBM)*

##### *University Level*

*Member of the team that created the Interdisciplinary Graduate Education Program in Human Centered Design (IGEP-HCD)*

*Member, Commission on Outreach and International Affairs (2012-2013)*

*Member, Commission on Equal Opportunity and Diversity (2008 – 2011), Virginia Tech*

*Institutional Partnership Taskforce 2008-2009*

## Campus Climate Taskforce 2009-2010

### **Service to the Profession**

*Member, NSF CISE/SBE AC Sub-Committee on Research Portfolio Analysis 2012*

*Director, ASEE ERM Division 2018-2019 (elected by the division members, ERM is the largest division within ASEE)*

#### *External Project Advisory Boards*

- NSF-EEC#1651511: CAREER: Characterizing Gendered Socialization of Newcomer Engineers to Promote Inclusive Practices and Retention of a Diverse Workforce (PI: K. Beddoes, UMass, Lowell) (2017-2022)
- NSF-IIS#1441149: EXP: Fostering Collaborative Drawing and Problem Solving through Digital Sketch and Touch (PI: E. Mercier; UIUC) (2014-2016)
- NSF-EHR #1439570: BCC: Collaborative Research: Community Building for Research on Mathematics Learning Using Data-Intensive Sources (PI: C. Maher, Rutgers) (2014-2016)

#### *Invited Participation in NSF Sponsored/Funded Workshops*

Computer Science Education (Summer 2009), Blacksburg, VA

MOOCs and Learning Analytics (Oct. 2013), Helsinki, Finland

Big Data and Education (March 2014), Fairfax, VA

Ethics of Big Data and Education (July 2015), Arlington, VA

Future of Engineering Education Research (October 2015), Pittsburgh, PA

#### *Program Committee Member*

European Conference on Computer-Supported Cooperative Work 2009, 2011

MobileHCI, International Conference on Mobile Human-Computer Interaction 2009

International Conference on Design of Cooperative Systems 2010, 2012

2<sup>nd</sup> Conference on Computer-Human Interaction and Management of Information Technology (CHIMIT 2010)

9<sup>th</sup> Annual Workshop on HCI Research in MIS, Pre-ICIS, St. Louis, Missouri, December 12, 2010

8<sup>th</sup> ACM Conference on Creativity and Cognition, Nov. 3-6, 2011, Atlanta, GA

ACM CHI 2012, Program Committee Member, Work-in-Progress Submissions

ACM Conference on Information and Communication Technology for Development (ICTD), 2013, 2015, 2017, 2019

ACM Conference on Computing and Sustainable Societies (COMPASS), 2018

*Editorial Board, Engineering Studies, 2018 - Present*

*Associate Editor, Engineering Studies, 2012-2017*

*Advisory Board, Advances in Engineering Education, 2018 – Present*

### **Reviewing**

#### *Grant Proposals*

National Science Foundation College of Reviewers for Undergraduate Education (CRUE), July 2018 – June 2021 (a new review model form NSF that consists of a standing panel of selected experts to review up to four proposals a year on an ad-hoc basis)

National Science Foundation Panel and Site Reviews (2008 – present): 20 panels for IIS, CISE, DUE, CDI, SBE, EEC divisions and cross-directorate solicitations and multiple ad-hoc reviews

Indo-US Science & Technology Forum (IUSSTF) Proposal Review

Apprenticeship Faculty Grant, ERM Division, ASEE, 2011

South Africa's National Research Foundation (NRF) 2015

NSERC – Canada Research Council 2018

*Conferences*

International Conference of Learning Sciences (ICLS) 2006, 2008, 2014, 2016

International Conference of Computer-Supported Cooperative Learning (CSCL) 2007, 2009, 2015

Annual Conference of American Society for Engineering Education (ASEE) 2014, 2015, 2016, 2017, 2018

American Education Research Association Conference (AERA) 2003, 2005

Annual Conference of the Academy of Management, 2006, 2007, 2008, 2009

Computer-Human Interaction Conference (CHI) 2003, 2005, 2006, 2009, 2010, 2017

Mobile HCI 2009

International Conference of Information Systems (ICIS) 2006, 2010, 2013

Persuasive Technology Conference, 2007

Computer Supported Cooperative Work (CSCW) 2006, 2008, 2011, 2012, 2013, 2014

HICSS, Learning Analytics Mini-track, 2012

Conference on Information and Communication Technology for Development (ICTD), 2013, 2015

The 6<sup>th</sup> International AAAI Conference on Weblogs and Social Media (ICWSM), 2012

ACM KDD 2014

ACM COMPASS 2018

*Journals (Ad-hoc reviewer)*

Journal of Engineering Education

International Journal of Engineering Education

Advances in Engineering Education

European Journal of Engineering Education

Engineering Studies

Nordic Journal of Working Life Studies

Mind Culture and Activity (MCA)

The Journal of the Learning Sciences

Journal of Computer Supported Cooperative Work (JCSCW)

International Journal of Human-Computer Studies

Information and Software Technology

Decision Support Systems

Journal of the American Society for Information Science and Technology

Journal of Information Technology Theory and Application

MIS Quarterly

Computers and Human Behavior

International Journal of Sociotechnology and Knowledge Development (IJSKD)

Management Learning

ACM Transactions of CHI (TOCHI)

Information Technology and International Development (ITID)

Information Technology and Development (ITD)

Royal Society Open Journal

### **Professional Memberships**

American Society of Engineering Education (ASEE)  
International Society of Learning Sciences (ISLS)  
Association for Computing Machinery (ACM)  
International Network of Engineering Studies (INES)  
International Communication Association (ICA)  
American Educational Research Association (AERA)

### **Media/Press Coverage**

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- “Philosopher Powers considers values in autonomous-vehicle debates,” references Prism Column, <https://www.philosophy.udel.edu/news/college/Pages/self-driving-ethics.aspx>
- “Learning to Demo” paper covered in the Engineering Commons Podcast, August, 8, 2013, <http://theengineeringcommons.com/episode-35-knowledge-network/>
- “Stop using email for everything: How some companies have found new ways to communicate and collaborate.” By Joel Mathis, Macworld.com Jun 18, 2012.
- “End of Email?” Financial Times, December 19, 2011.
- “Knowledge mining resource accelerates science, technology education, research.” Physorg.com, October 13, 2011.
- “Four Virginia Tech engineering faculty selected for National Academy of Engineering symposium,” October 11, 2011.
- “Advancing manufacturing jobs at home.” Roanoke Times, May 16, 2011.
- “SHORING UP: Federal aid to states and grants to researchers may bring only temporary relief to universities.” (Cover Story). PRISM, ASEE Magazine, January 2010.