
Education

UC San Diego, CA 2013 - 19	Ph.D. Candidate, Computer Science & Engineering <i>Gut Instinct: Creating Scientific Theories with Online Learners</i>
BITS Pilani, India 2011	Bachelor of Engineering (Honors), Computer Science <i>Integer Representations towards Efficient Counting in the Bit Probe Model</i>

Research Experience

- Design Lab, UC San Diego** - *Graduate Student*, Advisor: **Scott Klemmer** Oct 2014 - present
- Scientific social computing systems for people to perform personally-meaningful scientific work & help scientists make discoveries about the microbiome, w/ Rob Knight & American Gut Project.
- Institute of Science and Technology, Austria** - *Visiting Student w/ Krish Chatterjee* Summer 2015
- Created an evolutionary game-theoretic model to explain how quantity of peer feedback in online classes varies with value and cost of feedback
- Database group, Microsoft Research, Redmond** - *Summer Intern w/ Arvind Arasu* Summer 2014
- Developed a high-performance data-structure for integrity checks in database query processing
- Advanced Technology Group, NetApp, Bangalore** - *Research Staff* July 11 - May 13
- Designed a future vaulting system prototype in a clustered OS & implemented network communication
 - Reduced recovery time for a datacenter node failure by 60% w/ instantaneous metadata replication
 - 20%-time project towards combining deduplication and encryption techniques for cloud storage
 - One patent & two in-house research papers
- Seoul National University, South Korea** - *Undergraduate Thesis w/ Srinivasa Rao Satti* 2011
- Developed theoretical bounds on the performance claims of flash memory data structures. Represented integers in close to optimal number of bits to support increment-like operations

Publications

1. **Galileo: Scaling Citizen-led Experimentation with a Procedural Training Platform**
Submitted Vineet Pandey, Tushar Koul, Chen Yang, Daniel McDonald, Rob Knight, Scott Klemmer
2. **Docent: Transforming Personal Intuitions to Scientific Hypotheses through Content Learning and Process Training** *Learning@Scale 2018* Vineet Pandey, Justine Debelius, Embriette Hyde, Tomasz Kosciolk, Rob Knight, Scott Klemmer
3. **Gut Instinct: Creating Scientific Theories with Online Learners** *CHI 2017* Vineet Pandey, Amnon Amir, Justine Debelius, Embriette Hyde, Tomasz Kosciolk, Rob Knight, Scott Klemmer
4. **Concerto: A High Concurrency Key-Value Store with Integrity** *SIGMOD 2017* Arvind Arasu, Ken Eguro, Raghav Kaushik, Donald Kossmann, Pingfan Meng, Vineet Pandey, Ravi R.
5. **Framing Feedback: Choosing Review Environment Features that Support High Quality Peer Assessment** *CHI 2016* Catherine Hicks, Vineet Pandey, Ailie Fraser, Scott Klemmer
 - Taught in CMU's *Designing large-scale (peer) learning systems class* by Chinmay Kulkarni
6. **An HCI View of Configuration Problems** *arXiv* Tianyin Xu, Vineet Pandey, Scott Klemmer.
7. **Integer Representations towards Efficient Counting in the Bit Probe Model** Gerth S. Brodal, Mark Greve, Vineet Pandey, S. Srinivasa Rao. *Journal of Discrete Algorithms 2014, TAMC 11*

Extended Abstracts

1. (Upcoming) **Citizen Microbiology: Moving beyond crowdsourcing to active, participatory science by the public** *American Society of Microbiology 2019*. V. Pandey, S. Klemmer, D. McDonald, R. Knight

2. **Gut Instinct: Creating Scientific Theories with Online Communities** *CSCW Doctoral Consortium 2018* **V. Pandey**
3. **Transitioning the American Gut Project to the Microsetta Initiative** *American Society of Microbiology 2018* D. McDonald, A. Aksenov, A. Melnik, P. Dorrestein, L. Smarr, R. Sinha, **V. Pandey**, S. Klemmer, R. Knight
3. **Integrating Citizen Science with Online Learning to Ask Better Questions** *HCOMP 2016* **V. Pandey**, S. Klemmer, Amnon Amir, Justine Debelius, E. Hyde, Tomasz Kosciulek, R. Knight
4. **Education Across Borders: Technology Supported Mentoring and Teambuilding.** *HCI Across Borders, CHI 2016 Workshop* **Vineet Pandey**
6. **Game-Theoretic Models Identify Useful Principles for Peer Collaboration in Online Learning Platforms** *CSCW 2016* **Vineet Pandey**, Krishnendu Chatterjee
7. **Connecting Stories and Pedagogy Increases Participant Engagement in Discussions** *Learning@Scale 2015* **Vineet Pandey**, Yasmine Kotturi, Chinmay Kulkarni, Michael Bernstein, Scott Klemmer
8. **Analysis of Tree Indexing Structures for Flash Memory** *Student Symposium, 18th International Conference on High Performance Computing, 2011* SeungBum Jo, **Vineet Pandey**, S. Srinivasa Rao

Patents

- **Controlling Verification of Key-Value Stores.** Arvind Arasu, Ken Eguro, Raghav Kaushik, Donald Kossmann, Pingfan Meng, **Vineet Pandey**, Ravi R. (Microsoft Research). 2018.
- **System and Method for efficiently migrating data from legacy storage systems to newer object based storage systems.** **Vineet Pandey**, Chhavi Sharma, Ranjit Kumar, Kaladhar Voruganti, Parag Deshmukh (NetApp). Submitted 2015.

Talks and Demos

Academic

- Stanford HCI, Nov 2018
- CSCW Doctoral Consortium, Nov 2018
- Precision Medicine@Scripps Research Translational Institute, La Jolla, CA, Oct 2018
- Learning@Scale, London, June 2018
- *MIT Teaching Systems Lab*, Apr 2018
- *MIT Innovation Lab*, Apr 2018
- *South Asia Initiative, UC San Diego*, March 2018
- *CHI*, Denver, CO, May 2017
- *CSE Visit Day*, UC San Diego 2017, 2018

Community outreach

- (Submitted) Citizen Science Association, Raleigh, NC. March 2019
- MyLymeData, San Ramone, CA, Apr 2018
- Research Expo UC San Diego, 2016, 2017, 2018
- Nerd Nite, San Diego, August 2018
- Maker Faire, San Diego, 2017
- Digestive Disease Week, Chicago, 2017
- Health Data Exploration 2017, UC San Diego. **First Prize** in Posters category
- Beer and cheese communities: San Difuego, QUAFF, San Diego, 2018

Professional Activities, Mentoring, Teaching

1. **Reviewer:** CSCW, CHI 2017, 2018
2. **Mentor: PhD:** Sam Lau **MS:** Tushar Koul
BS: Chen Yang, Orr Toledano, Dingmei Gu, Liby Lee, Kaung Yang, Cody Doan, Aliyah Clayton, Brian Soe, Crystal Kwok, Rachel Chen, **High school:** Robert Goebel
3. **Teaching Assistant:** Graduate Human-Computer Interaction (COGS 230/CSE 216), Undergraduate Human-Computer Interaction (COGS 120/CSE 170), Undergraduate Machine Learning (CSE 151), Introduction to Design (DSGN 1)
4. **Human-Computer Interaction Area Lead** for CSE Visit Day 2015 at UC San Diego
5. **Scientific Advisor** for ColonyB - a Game with a Purpose to cluster microbiome data

Honors & Responsibilities

- 2013-14: CSE department fellowship [Awarded to all incoming CSE PhD students]
- 2012: Honorable Mention in *Innovation* and *Teamwork* categories at NetApp CTO Innovation awards
- 2006: Selected for Bachelors in Statistics, Indian Statistical Institute [30 students across India]
- 2005: Qualified for Indian National Olympiad in Informatics [Top 1.5% of 50000]
- 2004: National Talent Search Scholar [Top 1% of 100000]
- 2004-2006: All India Ranks 4, 6, and 9, National Cyber Olympiads
- 2015-2016: President of Association of Indian Graduate Students at UC San Diego

Undergraduate Research Experience

Participant , Microsoft Research Summer School Talks and activities around using technology to solve socio-economic problems	<i>Summer 2010</i>
Summer Intern , Chinese University of Hong Kong Constructing convolutional multicast codes for any arbitrary network with cycles	<i>Summer 2009</i> <i>Networks Theory</i>
Research Intern , Indian Statistical Institute, Kolkata Finding nearby devices without exchanging exact locations	<i>Jan-April 2009</i> <i>Security, Privacy</i>
Trainee , Vikram Sarabhai Space Centre, Trivandrum Prototype design of crew health monitoring system	<i>Summer 2008</i> <i>Circuit Design</i>

REFERENCES

1. **Scott Klemmer** srk-admin@ucsd.edu
Professor, Computer Science and Cognitive Science
UC San Diego
2. **Don Norman** dnorman@ucsd.edu
Director of The Design Lab
Professor Emeritus of Psychology and Cognitive Science, and Electrical and Computer engineering
UC San Diego
3. **Jim Hollan** hollan@ucsd.edu
Distinguished Professor of Cognitive Science & Professor of Computer Science
UC San Diego
4. **Rob Knight** robknight@ucsd.edu
Professor, Department of Pediatrics and Computer Science
UC San Diego