# Vineet Pandey

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## Education

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|---|---|---|
| **UC San Diego** | Ph.D., Computer Science / Human Computer Interaction<br>Advisor:Scott Klemmer | *2013 -* |
| **BITS Pilani, India** | B. Eng. (Hons.), Computer Science<br>Undergraduate Thesis: *Integer Representations towards Efficient Counting in the Bit Probe Model* | *2011* |

## Experience

**Design Lab, UC San Diego** *Oct 2014 - contd.*
**Graduate Student**, Advisor: Scott Klemmer *Online learning, Citizen science*

· Research theme: Performing novel, important work with online learners by combining online learning materials with personal experiences.

**Institute of Science and Technology, Austria** *Summer 2015*
**Visiting Student**, Mentor: Krishnendu Chatterjee *Peer assessment, Game Theory*

· Created an evolutionary game-theoretic model for peer feedback in online classes.
· Developed an instructor tool to undertand how quantity of feedback might vary with parameters in the feedback system, such as value and cost of feedback.

**Microsoft Research, Redmond** *Summer 2014*
**Summer Intern**, Mentor: Arvind Arasu *Database, Security*

· Developed a high-performance data-structure for integrity checks in database query processing with Cipherbase team. Paper under submission.

**Advanced Technology Group (ATG), NetApp, Bangalore** *July 2011 - May 2013*
**Member of Technical Staff** *Systems, Storage*

· Developed future vaulting system prototype; implemented network communication over a cluster.
· Reduced recovery time for node failover by 60%, implemented instantaenous replication of metadata in a high availability configuration
· Granted one patent and published two in-house research papers
· 20%-time project towards combining deduplication and encryption techniques for cloud storage.

**Seoul National University (SNU), South Korea** *Jan - June 2011*
**Undergraduate Thesis**, Mentor: Srinivasa Rao Satti *Theory, External memory data structures*

· 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. **Gut Instinct: Creating scientific theories with online learners** Vineet Pandey, Amnon Amir, Justine Debelius, Embriette Hyde, Tomasz Kosciolek, Rob Knight, Scott Klemmer. CHI 2017.
2. **Framing Feedback: Choosing Review Environment Features that Support High Quality Peer Assessment** Catherine M. Hicks, Vineet Pandey, C. Ailie Fraser, Scott Klemmer. CHI 2016.
3. **Confidentiality and Integrity in Database Query Processing** Under submission. Summer internship work at MSR Redmond.
4. **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 2011.

## Extended Abstracts

1. **Integrating citizen science with online learning to ask better questions** Vineet Pandey, Scott Klemmer, Amnon Amir, Justine Debelius, Embriette Hyde, Tomasz Kociek, Rob Knight. HCOMP 2016.
2. **Game-theoretic models identify useful principles for peer collaboration in online learning platforms** Vineet Pandey, Krishnendu Chatterjee. CSCW 2016.
3. **Connecting stories and pedagogy increases participant engagement in discussions** Vineet Pandey,Yasmine Kotturi,Chinmay Kulkarni,Michael Bernstein,Scott Klemmer. Learning@Scale 2015.
4. **Technical Report - An HCI View of Configuration Problems** Tianyin Xu, Vineet Pandey, Scott Klemmer. arXiv.
5. **Analysis of Tree Indexing Structures for Flash Memory** SeungBum Jo, Vineet Pandey, S. Srinivasa Rao. Student Symposium, 18th International Conference on High Performance Computing, 2011.

## Patents

- **Patent related to confidentiality and integrity in outsourced databases**. Vineet Pandey, Microsoft Research DB team members. Patent in submission.
- **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). Patent granted in 2015.

## Professional Activities, Mentoring, Teaching

1. **Reviewer:** CSCW 2017, CHI 2017
2. **Mentor:** Brian Soe, Chen Yang, Crystal Kwok, Rachel Chen, Robert Goebel (High school student) - with Catherine Hicks and Scott Klemmer
3. **Teaching Assistant:** Graduate Human-Computer Interaction (COGS 230/CSE 216), Undergrduate Human-Computer Interaction (COGS 120/CSE 170), Undergraduate Machine Learning (CSE 151), Introduction to Design (DSGN1)
3. **HCI Area Lead** for CSE Visit Day 2015 at UCSD

## 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
- 2006-2010: Multiple leadership roles during undergraduate studies with CS student body, entrepenurship cell and general student organizations

## Undergraduate Research Experience

**Participant**, Microsoft Research Summer School — *Summer 2010*
Talks and activities around using technology to solve socio-economic problems

**Summer Intern**, Chinese University of Hong Kong — *Summer 2009*
Constructing a convolutional multicast code for any network with cycles — *Networks Theory*

**Research Intern**, Indian Statistical Institute, Kolkata — *Jan-April 2009*
Finding nearby devices without exchanging exact locations — *Security, Privacy*

**Trainee**, Vikram Sarabhai Space Centre, Trivandrum — *Summer 2008*
Prototype design of crew health monitoring system — *Circuit Design*