Stephen Lee   Curriculum vitae

CONTACT INFORMATION	School of Computer Science 140 Governors Drive University of Massachusetts Amherst, MA 01003-9264	Mobile: +1-413-461-8670 E-mail: stephenlee86@gmail.com

INTERESTS

Distributed Systems, Cloud Computing, Cyber-physical systems, Green computing and sustainability

EDUCATION

University of Massachusetts, Amherst, MA   **2013 - Present**

Ph.D Student, Computer Science
Advisor: Prof. Prashant Shenoy

Chennai Mathematical Institute, Chennai, India   **2008 - 2011**

M.S., Computer Science
Thesis: Personalized knowledge creation using student's profile information
Advisor: Prof. Madhavan Mukund

St. Stephen's College, Delhi, India   **2004 - 2007**

B.Sc.(G), Computer Science

PROFESSIONAL EXPERIENCE

Tata Research Development and Design Center, Pune, India

Researcher   **May '11- Aug '13**

- Design and implemented tools for data center management and analysis.

Ignite, Tata Consultancy Services, Chennai, India

Software Engineer   **Nov '07 to Apr '11**

- Full-stack web development of tools to enable learning and assessment in training center.

Tata Interactive Systems, Mumbai, India

Summer Intern   **Jun '05 - Jul '05**

- Developed automation plugins for QuarkTool

PUBLICATIONS

[1] Srinivasan Iyengar, **Stephen Lee**, David Irwin, Prashant Shenoy. *Analyzing Energy Usage on a City-scale using Utility Smart Meters*. Proceedings of the 3rd ACM International Conference on Embedded Systems for Energy-Efficient Built Environments (ACM BuildSys). 2016.

[2] **Stephen Lee**, Srinivasan Iyengar, David Irwin, Prashant Shenoy. *Shared Solar-powered EV Charging Stations: Feasibility and Benefits*. Proceedings of the seventh Intl. Green and Sustainable Computing (IGSC), Hangzhou, China, Nov 2016.

[3] Vani Gupta, **Stephen Lee**, Prashant Shenoy, Ramesh Sitaraman, Rahul Urgaonkar. *How to Cool Internet-Scale Distributed Networks on the Cheap*. Proceedings of the seventh ACM Intl. Conference on Future Energy Systems (ACM e-Energy), Waterloo, Canada, June 2016.

[4] Akansha Singh, **Stephen Lee**, David Irwin, Prashant Shenoy. *SunShade: Software-defined Solar Power*. Proceedings of the seventh ACM Intl. Conference on Future Energy Systems (ACM e-Energy), Waterloo, Canada, June 2016 (Poster).

[5] Aditya Mishra, Ramesh Sitaraman, David Irwin, Ting Zhu, Prashant Shenoy, Bhavana Dalvi, **Stephen Lee**. *Integrating Energy Storage in Electricity Distribution Networks*. Proceedings of the sixth ACM Intl. Conference on Future Energy Systems (ACM e-Energy), Bengaluru, India, July 2015.

[6] **Stephen Lee**, Rahul Urgaonkar, Ramesh Sitaraman, Prashant Shenoy. *Cost Minimization using Renewable Cooling and Thermal Energy Storage in CDNs*. Proceedings of the 12th IEEE International Conference on Autonomic Computing (ICAC), July 2015.

[7] Vani Gupta, **Stephen Lee**, Prashant Shenoy, Ramesh Sitaraman, Rahul Urgaonkar. *Towards cooling Internet-Scale Distributed Networks on the Cheap*. Proceedings of the ACM Sigmetrics Conference, Portland, Oregon, June 2015. (Poster).

[8] Prateek Sharma, **Stephen Lee**, Tian Guo, David Irwin, Prashant Sharma. *Expect the Unexpected: Designing Derivative Clouds*. Proceedings of the Tenth European Conference on Computer Systems, EuroSys 2015, April 2015.

PATENTS

[1] Raman Srinvasan, Priyadarshini. Sridhar, Usha Rani, Swarna Srinivasan, **Stephen Lee**, Prema Subramaniam. *Personalized Content Generation*. Application No: 574/MUM/2011

[2] **Stephen Lee**, Mariyam L., Makarand K., Anjali G., Rahul Kelkar, Harrick Vin. *Analytical method for target state determination of datacenter having heterogeneous sub-systems*. Application No: 3521/MUM/2012

[3] Shruti Bhattacharya, Swaminathan Natarajan, **Stephen Lee**, Arpit Mandliya, Suman Singh, Kunal Ramdasi. *Evaluating Total Cost Of Ownership Based On System Design*. Application No: 1445/MUM/2013

PROJECTS

- OpenStack Trusted Advisory (Security):   *Prof. Prashant Shenoy*
  - Created libraries for managing application level security for OpenStack
- Remodel: *Prof. Emery Berger*
  - Implemented a 'make' program that builds in parallel non-conflicting commands in a makefile
- eTransform: *Tata Research Development and Design Center*
  - Work on development on tools for data center consolidation and migration schedule optimization
- Personalized Knowledge Center: *Ignite, Tata Consultancy Services*
  - Worked on the creation of aptitude questions using information generated using a person's profile information
- OpenSeeSame, TCS Online Assessment Platform: *Ignite, Tata Consultancy Services*
  - Involved in the design and development of the application
  - Managed the deployment and performance testing of the application
- TCS Trainee Management Platform: *Ignite, Tata Consultancy Services*
  - Developed applications for tracking and analyzing trainee's performance
  - Manages training content (e.g. recorded lectures and presentations)

TEACHING EXPERIENCE

Teaching Assistant, University of Massachusetts, Amherst, MA

Course: Programming Methodology	**Fall 2014**
Course: Programming with Data Structures	**Spring 2014**
Course: Problem Solving with the Internet	**Fall 2013**

TECHNOLOGY

- **Programming Skills**: Python, Java/J2EE, HTML/CSS, JavaScript, NodeJS, Flex, C, C++
- **Databases**: MySQL
- **Version Control**: Git, SVN, CVS

AWARDS AND
RECOGNITIONS

- Passed the PhD qualifying exam (Portfolio) with distinction in 2015. Distinction awarded to two students per year.
- Winner of the HackUMass hackathon 2015
- Travel grants awarded for attending Sigmetrics 2015, ACM eEnergy 2015
- Received scholarship from Tata Consultancy Services for my Masters education at Chennai Mathematical Institute (CMI)
- Semi-finalist (Promising Innovation category) in Tata Innovista for building TCS Online Assessment Online Platform.