

Srinivasan Iyengar

CONTACT INFORMATION	College of Information and Computer Sciences 140 Governors Drive University of Massachusetts Amherst Amherst, MA 01003 USA	<i>Voice:</i> (413) 559-1076 <i>E-mail:</i> srini@cs.umass.edu <i>WWW:</i> www.cs.umass.edu/~srini <i>GitHub:</i> www.github.com/sriisking
RESEARCH INTERESTS	Smart homes/grids, Energy analytics, Cyber-Physical Systems, statistical methods for large datasets, machine learning for computational sustainability	
EDUCATION	University of Massachusetts , Amherst, Massachusetts USA Ph.D. Candidate, Computer Science (expected graduation date: May 2018) <ul style="list-style-type: none">• Advisor: Prashant Shenoy M.S., Computer Science, May 2016 College of Engineering , Pune, Maharashtra India B.Tech., Computer Science, May, 2008	
HONORS AND AWARDS	<ul style="list-style-type: none">• 1st prize in the third annual HackUMass 2015• Student Travel grants - ACM BuildSys 2016 (Stanford), CompSust 2016 (Cornell), ACM eEnergy 2016 (Waterloo), Mathematics of Planet Earth 2014 - Workshop on Data-aware Energy Use (San Diego)	
ACADEMIC EXPERIENCE	University of Massachusetts , Amherst, Massachusetts USA <i>Research Assistant</i> January, 2014 - present Includes current Ph.D. research, Ph.D. and Masters level coursework and research/consulting projects. University of Massachusetts , Amherst, Massachusetts USA <i>Teaching Assistant</i> September, 2013 - December, 2013 Duties at various times have included office hours and leading weekly classroom discussion.	
PROFESSIONAL EXPERIENCE	Nokia Bell Labs , Naperville, Illinois USA <i>Summer Research Intern</i> June, 2017 - August, 2017 <ul style="list-style-type: none">• Designed machine learning algorithms to reduce latency in mobile network operations involving IoT devices. Exhaustively evaluated the different approaches on cellular IoT devices having diverse traffic patterns. Tata Research Development and Design Centre , Pune, Maharashtra India <i>Research Associate</i> August, 2008 - August, 2013 <ul style="list-style-type: none">• Involved in conceptualization, design and development of products in data privacy and performance test automation. Also, created valuable IP in terms of patents and publications.• Involved in conceptualization, design, implementation and deployment of a crowdsourcing initiative to get English to Hindi translation.	

PUBLICATIONS

Stephen Lee, **Srinivasan Iyengar**, David Irwin, Prashant Shenoy. 2017. *Distributed Rate Control for Smart Solar Arrays*. Proceedings of the 8th ACM International Conference on Future Energy Systems (*ACM eEnergy*).

Srinivasan Iyengar, Navin Sharma, David Irwin, Prashant Shenoy, Krithi Ramamritham. 2017. *A Cloud-based Black Box Solar Predictor for Smart Homes*. ACM Transactions on Cyber-Physical Systems Volume 1 Issue 4 (*ACM TCPS*)

David Irwin, **Srinivasan Iyengar**, Stephen Lee, Aditya Mishra, Prashant Shenoy, Ye Xu. 2017. *Enabling Distributed Energy Storage by Incentivizing Small Load Shifts*. ACM Transactions on Cyber-Physical Systems Volume 1 Issue 2 (*ACM TCPS*)

Srinivasan Iyengar, Stephen Lee, David Irwin, Prashant Shenoy. 2016. *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*).

Dong Chen, **Srinivasan Iyengar**, David Irwin, Prashant Shenoy. 2016. *SunSpot: Localizing Solar Arrays*. Proceedings of the 3rd ACM International Conference on Embedded Systems for Energy-Efficient Built Environments (*ACM BuildSys*).

Stephen Lee, **Srinivasan Iyengar**, David Irwin, Prashant Shenoy. 2016. *Shared Solar-powered EV Charging Stations: Feasibility and Benefits*. Proceedings of the 7th International Green and Sustainable Computing Conference (*IGSC*).

Srinivasan Iyengar, David Irwin, Prashant Shenoy. 2016. *Non-Intrusive Model Detection: Automated Modeling of Residential Electrical Loads*. Proceedings of the 7th ACM International Conference on Future Energy Systems (*ACM eEnergy*).

Srinivasan Iyengar, Sandeep Kalra, Anushree Ghosh, David Irwin, Prashant Shenoy, Benjamin Marlin. 2015. *iProgram: Inferring Smart Schedules for Dumb Thermostats*. Proceedings of the 2nd ACM International Conference on Embedded Systems for Energy-Efficient Built Environments (*ACM BuildSys*).

Srinivasan Iyengar, Navin Sharma, David Irwin, Prashant Shenoy, Krithi Ramamritham. 2014. *SolarCast: a cloud-based black box solar predictor for smart homes*. Proceedings of the 1st ACM Conference on Embedded Systems for Energy-Efficient Buildings (*ACM BuildSys*).

Srinivasan Iyengar, Shirish Subhash Karande, Sachin Lodha. 2013. *English to Hindi Translation Protocols for an Enterprise Crowd*. Proceedings of the 1st AAAI Conference on Human Computation and Crowdsourcing (*AAAI HCOMP*).

Pattisapu Nikhil Priyatam, **Srinivasan Iyengar**, Krish Perumal, Vasudeva Varma. 2013. *Dont Use a Lot When Little Will Do: Genre Identification Using URLs*. Journal for Research in Computing Science.

PAPERS IN PREPARATION

Srinivasan Iyengar, David Irwin, Prashant Shenoy. *Inferring Smart Schedules for Dumb Thermostats*.

PATENTS

US20120041989 A1, EP2420967 A1 - *Generating assessment data*

US9356966 B2, EP2779044 A1 - *System and method to provide management of test data at various lifecycle stages*

COURSE PROJECTS **Browsix - Browser based shell**

Instructor: Prof. Emery Berger, Course: Systems

- Implemented Browsix, a UNIX-like kernel and WebWorker-based process model in TypeScript. This involved implementing several core UNIX utilities, and a simple bash-like shell to compose pipelines of utilities.

Cloud Fusion - AWS backed File system

Instructor: Prof. Emery Berger, Course: Systems

- Implemented CloudFusion, a file system backed by Amazon's DynamoDB and S3 storage service using FUSE library.

OpenStack Trusted Advisory (Security)

Instructor: Prof. Prashant Shenoy, Course: Distributed Systems

- Created a library for administrators to control and monitor firewall and application level security for OpenStack
- This included network monitoring, discovering open ports, security group port scanning etc.

Solar power prediction for residential rooftop installations

Instructor: Prof. Dan Sheldon, Course: Computational Sustainability

- Used weather forecasts and historical data to predict future solar generation.

Noise Addition to deter Browser Fingerprinting

Instructor: Prof. Sridhar Mahadevan, Course: Machine Learning

- Studied performance of classification algorithms used for browser fingerprinting in the presence of gaussian and uniform noise.

COMPUTER SKILLS

- Languages: Python, Java, Go.
- Libraries: Complete SciPy stack (NumPy, SciPy, Scikit-learn, Statsmodel), Pyomo, Keras, TensorFlow.
- Web: Django web framework, JS, HTML, CSS
- Operating Systems: Unix/Linux, OSX, Windows.