

# 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> <a href="http://www.cs.umass.edu/~srini">www.cs.umass.edu/~srini</a> <i>GitHub:</i> <a href="http://www.github.com/sriisking">www.github.com/sriisking</a>
RESEARCH INTERESTS	Smart homes/grids, Energy analytics, Cyber-Physical Systems, statistical methods for large datasets, machine learning for computational sustainability	
EDUCATION	<b>University of Massachusetts</b> , Amherst, Massachusetts USA Ph.D. Candidate, Computer Science (expected graduation date: May 2018) <ul style="list-style-type: none"><li>• Advisor: Prashant Shenoy</li></ul> M.S., Computer Science, May 2016  <b>College of Engineering</b> , Pune, Maharashtra India B.Tech., Computer Science, May, 2008	
HONORS AND AWARDS	<ul style="list-style-type: none"><li>• 1<sup>st</sup> prize in the third annual HackUMass 2015</li><li>• 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)</li></ul>	
ACADEMIC EXPERIENCE	<b>University of Massachusetts</b> , Amherst, Massachusetts USA <i>Research Assistant</i> <span style="float: right;"><b>January, 2014 - present</b></span> Includes current Ph.D. research, Ph.D. and Masters level coursework and research/consulting projects.  <b>University of Massachusetts</b> , Amherst, Massachusetts USA <i>Teaching Assistant</i> <span style="float: right;"><b>September, 2013 - December, 2013</b></span> Duties at various times have included office hours and leading weekly classroom discussion.	
PROFESSIONAL EXPERIENCE	<b>Tata Research Development and Design Centre</b> , Pune, Maharashtra India <i>Research Associate</i> <span style="float: right;"><b>August, 2008 - August, 2013</b></span> <ul style="list-style-type: none"><li>• 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.</li><li>• Involved in conceptualization, design, implementation and deployment of a crowdsourcing initiative to get English to Hindi translation.</li></ul>	
PUBLICATIONS	Stephen Lee, <b>Srinivasan Iyengar</b> , David Irwin, Prashant Shenoy. 2017. <i>Distributed Rate Control for Smart Solar Arrays</i> . Proceedings of the 8th ACM International Conference on Future Energy Systems ( <i>ACM eEnergy</i> ).  David Irwin, <b>Srinivasan Iyengar</b> , Stephen Lee, Aditya Mishra, Prashant Shenoy, Ye Xu. 2017. <i>Enabling Distributed Energy Storage by Incentivizing Small Load Shifts</i> . ACM Transactions on Cyber-Physical Systems Volume 1 Issue 2 ( <i>ACM TCPS</i> )  <b>Srinivasan Iyengar</b> , Navin Sharma, David Irwin, Prashant Shenoy, Krithi Ramamritham. (To	

appear). *A Cloud-based Black Box Solar Predictor for Smart Homes*. ACM Transactions on Cyber-Physical Systems - Special Issue on Smart Homes, Buildings, and Infrastructures (*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.