

## **Prof. ALEX ROGERS**

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### **Education**

- B.Sc. (Hons.), Physics, University of Durham, UK; 1992
- Ph.D., Computer Science, University of Southampton, UK; 2000.

### **Recent Positions**

- Deputy Head (Teaching), Department of Computer Science, University of Oxford. October 2018 to present.
- Professor of Computer Science, University of Oxford, UK. October 2015 to present.
- Head of Agents, Interaction and Complexity Research Group, University of Southampton, UK. January 2015 to October 2015.
- Lecturer, Reader and Professor of Computer Science, University of Southampton, UK. January 2006 to October 2015.
- Senior Research Fellow, University of Southampton, UK. July 2003 to January 2006.
- Senior Scientist, Bios Group UK. September 2000 – July 2003.
- Wireline Field Engineer, Schlumberger Oilfield Services. April 1993 to December 1997.

### **Research**

- Artificial intelligence, machine learning and sensor systems.
- Application areas include future energy systems, citizen science platforms, and environmental monitoring. Current work addresses smart building energy management and the development of low-cost conservation technology.

### **PhD Supervision**

- Previously supervised 23 PhD students to completion.

### **Deployed Systems**

- GridCarbon smartphone app ([www.gridcarbon.uk](http://www.gridcarbon.uk))
- CicadaHunt smartphone app ([www.newforestcicada.info](http://www.newforestcicada.info))
- CO2 Modeller smartphone app ([www.co2modeller.info](http://www.co2modeller.info))

### **Enterprise**

- Co-founder of Joulo providing personalised home heating advice with a smart low-cost temperature sensor ([www.joulo.com](http://www.joulo.com)). Acquired by Quby Ltd. in 2015.
- Co-founder of Open Acoustic Devices developing AudioMoth: an open-source smart acoustic sensor ([www.openacousticdevices.info](http://www.openacousticdevices.info)).

### **Citations**

- h-index = 53
- i10-index = 158

## Selected Publications

Goodwin, P., Leduc, M., Partanen, A', Matthews, H. D., and Rogers, A. (2019) **A computationally efficient model for probabilistic local warming projections constrained by history matching and pattern scaling.** Geoscientific Model Development. To appear.

Hill, A. P, Davies, A., Prince, P., Snaddon, J. L., Doncaster, C. P. and Rogers, A. (2019) **Leveraging conservation action with open-source hardware.** Conservation Letters, 12(5), e12661.

Hill, A. P, Prince, P., Covarrubias, E. P, Doncaster, C. P., Snaddon, J. L. and Rogers, A. (2018) **AudioMoth: Evaluation of a smart open acoustic device for monitoring biodiversity and the environment.** Methods in Ecology and Evolution, 9(5), 1199-1211.

Zilli, D., Parson, O., Merrett, G. V. and Rogers, A. (2014) **A hidden Markov model-based acoustic cicada detector for crowdsourced smartphone biodiversity monitoring.** Journal of Artificial Intelligence Research, 51, 805-827.

Tran-Thanh, L., Stein, S. and Rogers, A. (2014) **Efficient crowdsourcing of unknown experts using bounded multi-armed bandits.** Artificial Intelligence, 214, 89-111.

Parson, O., Ghosh, S., Weal, M. J. and Rogers, A. (2014) **An unsupervised training method for non-intrusive appliance load monitoring.** Artificial Intelligence, 217, 1-19.

Rogers, A., Ghosh, S., Wilcock, R. and Jennings, N. R. (2013) **A scalable low-cost solution to provide personalised home heating advice to households.** In: Proceedings of the Fifth ACM Workshop On Embedded Systems For Energy-Efficient Buildings (BuildSys), Rome, Italy.

Robu, V., Gerding, E. H., Stein, S., Parkes, D. C., Rogers, A. and Jennings, N. R. (2013) **An online mechanism for multi-unit demand and its application to plug-in hybrid electric vehicle charging.** Journal of Artificial Intelligence Research, 48, 175-230.

Stranders, R., Munoz de Cote, E, Rogers, A. and Jennings, N. R. (2013) **Near-optimal continuous patrolling with teams of mobile information gathering agents.** Artificial Intelligence, 195, 63-105.

Ramchurn, S. D., Vytelingum, P., Rogers, A. and Jennings, N. R. (2012) **Putting the "Smarts" into the smart grid: A grand challenge for artificial intelligence.** Communications of the ACM, 55, (4), 86-97.

Osborne, M. A., Roberts, S. J., Rogers, A. and Jennings, N. R. (2012) **Real-time information processing of environmental sensor network data using Bayesian Gaussian processes.** ACM Transactions on Sensor Networks, 9, (1), 1:1-1:32.

Rogers, A., Farinelli, A., Stranders, R. and Jennings, N. R. (2011) **Bounded approximate decentralised coordination via the max-sum algorithm.** Artificial Intelligence, 175, (2), 730-759.

Farinelli, A., Rogers, A., Petcu, A. and Jennings, N. R. (2008) **Decentralised coordination of low-power embedded devices using the max-sum algorithm.** In: Proceedings of the Seventh International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS), Estoril, Portugal, 639-646.