



Orchestration of Renewable Integrated Generation in Neighbourhoods

Grant Agreement Number: 314742

D8.2 Academic papers published in peer-reviewed conference and journals

WP8 - Dissemination

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ORIGIN	WP8 - Dissemination
Deliverable	D8.2 – Academic papers published in peer-reviewed conference and journals

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1. Information covered by this deliverable

This deliverable details the papers published to date either via a journal or at a conference on ORIGIN and also ORIGIN related papers that are in the pipeline. In the original Description of Work, it was envisaged that four journal papers would be published and that the consortium would present at 2 international conferences. At the year 2 review, it was recommended that 4 papers would be published or presented at conferences in the final year. This has been achieved

To date four journal papers relating to ORIGIN have been published and eight ORIGIN related papers were presented at international conferences. An ORIGIN case study was also presented at two international conferences. A further four papers have been accepted at international conferences happening in November and December 15 and seven papers have either been submitted or are in the process of being submitted to other journals . ORIGIN also hosted two conferences, one in Findhorn in June 15 and one in Turin in September 15. More information on these two conferences can be found in D8.4.

The international conferences, which ORIGIN related content has been presented, covered / cover a wide geographical spread: four in Europe, four in Asia, two in North America, two in Australia and one on South America. The conferences also covered a range of suitable research areas including computational intelligence, building physics, solar research and human factors thus increasing the dissemination impact

2. Papers already published

Year 1 papers – Nov 12 to Oct 13 – journal and conference

Title	Comments	Link
Short Term Wind Speed Forecasting with Evolved Neural Networks	Paper published 2013 Genetic and Evolutionary Computation Conference (GECCO-July 2013- Amsterdam)	1
Feeder Load Composition Tracking for Smart Metered Low Voltage Circuits	Paper Published for CIRED 22 nd International conference on Electricity distribution June 2013 Stockholm	2
Assessing the potential of residential demand response systems to assist in the integration of local renewable energy generation	Paper published in journal 'Energy Efficiency'	3

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Year 2 papers – Nov 13 to Oct 14- journal and conference

Title	Comments	Link
Quantifying Building Utilization in Sheltered Accommodation for the Elderly through improved Occupancy Sensing	Conference paper for 'Symposium on Occupant Behaviour:OB14' Aug 2014 Nottingham	1
Accurate localized short term weather prediction for renewables planning	Paper written in year 2 but presented at IEEE Symposium on Computational Intelligence Applications in Smart Grid CIASG in Orlando, US in Dec 2014	2
Autarkic Energy Systems: Balancing Supply And Demand with Energy Storage and Controls in Local Energy Micro-grids	Paper written in year 2 but presented at Asia-Pacific Solar Research Conference in Sydney Dec 2014	3
Development of a detailed simulation model to support evaluation of water load shifting across a range of use patterns.	Paper presented at International Conference of Enhanced Building Operations, Beijing, China Sep 14	4

Year 3 papers – Nov 14 to Oct 15 - journal and conference

Title	Comments	Link
Model for Electric load profiles with high time resolution for German Households	Energy & Building 92 (2015) 170-179 DOI 10.1016/j.enbuild.2015.01.058	1
Orchestration of Renewable Generation in Low Energy Buildings and Districts using Energy Storage and Load Shaping	6th International Conference on Building Physics for a Sustainable Built Environment, Turin, Italy Jun 15 . It has also been accepted for the Energy Procedia Journal DOI 10.1016/j.egypro.2015.11.311	2
Analysing end-user energy rescheduling intentions using signal detection theory	6th International Conference on Applied Human Factors and Ergonomics (AHFE 2015) and the Affiliated Conferences, AHFE 2015, Las Vegas, USA Jul 15	3
Incorporating Practice Theory in Sub-Profile Models for Short Term Aggregated Residential Load Forecasting	Paper accepted for publication in IEEE Transactions on Smart Grid will be published as Open Access Gold DOI 10.1109/TSG.2015.2493205	4

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Also ORIGIN was included as a case study in the following presentations given by Professor Sue Roaf, Heriot-Watt University, at 2 international conferences , one held in Buenos Aires in November 14 and the other held in Jakarta in March 2015:

- Roaf S., (2014). Resilient Design Thinking: How can it be used to inform the Solar City Model? (including a case study of the Origin project), 5th International Solar Cities Congress (ISCI), Buenos Aires, 18 – 19 November 2014.
- Peacock A.D., Owens E.H., Roaf S., Corne D.W. (2015). Smart Community Energy Systems for Low Carbon Living, TAU Conference on Mitigating and Adapting Built Environments for Climate Change in The Tropics, Jakarta, Indonesia, 30 - 31 March 2015.

3. Conference papers accepted

The following ORIGIN related papers have been accepted at the following conferences:

- Roaf, S., J. Tubia, A. Peacock and E. Owens (2015). Changing Behaviours in energy micro-grids: a comparison between the Origin and the Nice Grid Projects, Asia Pacific Solar Research Conference, Brisbane, 8-10 December 2015
- Roaf, S., J. Tubia, A. Peacock, E. Owens and M. Oliphant (2015). Maximizing the benefits of Solar Energy in Smart Energy Communities, World Solar Energy Congress, Daegu, South Korea, 9-12 November 2015
- The effect of hot water use patterns on heating load and demand shifting opportunities, Building Simulation Conference 2015, 14th International Conference of the IBPSA 7-9 December 2015 Hyderabad, India [https://pure.strath.ac.uk/portal/en/publications/the-effect-of-hot-water-use-patterns-on-heating-load-and-demand-shifting-opportunities\(8fbd5827-a63f-4c86-b8ee-1f426ab18166\).html](https://pure.strath.ac.uk/portal/en/publications/the-effect-of-hot-water-use-patterns-on-heating-load-and-demand-shifting-opportunities(8fbd5827-a63f-4c86-b8ee-1f426ab18166).html)
- [Sanusi & Corne, 2015] "Feature selection for accurate short-term forecasting of local wind-speed", in proc. 2015 IEEE 8th International Workshop on Computational Intelligence and Applications, November 6-7, 2015, Hiroshima, Japan, pp. 121--126.

4. Journal papers submitted

The following ORIGIN related papers have been submitted or are in the process of being submitted to the following journals:

- Modelling the Effects of Variable Tariffs On Household's Electric Load Profiles by Use of

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Occupant Behaviour Submodels

Lead Author: David Fischer – Fraunhofer Institute for Solar Energy Systems, Freiburg, Germany
Submitted to IEEE Transactions on Smart Grids

- Assessing Intra-day Energy Demand in Buildings through Complex Dependency Modelling
Lead Author: Dr Bruce Stephen – University Of Strathclyde
Submitted to the International Journal of Sustainable Energy Planning and Management
- Design of Future Grid Connected Local Energy Networks with Renewables, Load Shifting, and Storage
Lead Author: Dr Paul Tuohy - University Of Strathclyde
Based on deliverable 6.1
Submitted to Renewable Energy
- We need to talk about energy - using participatory approaches to design home energy monitoring systems in Portugal and Italy
Lead Author: Dr Andrew Peacock – Heriot-Watt University
Based on deliverable 5.4 and 5.9
Currently being submitted to Applied Ergonomics
- Investigation to identify most appropriate energy market options for the Communities
Lead Author: Dr Paul Tuohy - University Of Strathclyde
Based on deliverable 6.2
Currently being submitted to Energy Policy
- Evaluating the impact of a dynamic wind tariff scheme in an Eco Community in Northern Scotland
Lead Author: Dr Andrew Peacock – Heriot-Watt University
Based on deliverable 7.7
Currently being submitted to Energy Policy
- A multi sensor approach to detect occupancy
Lead Author: Dr Joel Chaney – Heriot-Watt University
Base on deliverable 6.3
Currently being submitted to Energy and Buildings