

THE WRAP:NEWS

INSTITUTE FOR SUSTAINABLE FUTURES FEBRUARY 2014

Huge demand, savings if smart work centres built in Western Sydney



Hub Sydney co-working space photographer Nathan Dyer

Thousands of workers in Western Sydney could save up to \$15 million in transport costs and shave up to an hour off their daily commute if new smart work centres were built, according to a new report by the UTS Institute for Sustainable Futures (ISF).

The report found a smart work centre strategically placed in Liverpool, Blacktown or Penrith would be attractive to up to 2,000 workers in technology-enabled occupations on any given day, said ISF Research Principal Kerryn Wilmot.

"Our study determined that these workers could save up to \$15 million per year in travel time, fuel savings and avoided tolls if full demand were realised," Ms Wilmot said.

Smart work centres in these areas would also result in public benefits through savings in time, direct costs and reduced congestion.

"We calculated that the annual public benefit would be \$6.4 million for a centre at Liverpool, \$8.1 million for one at Blacktown and \$6 million for Penrith," Ms Wilmot said.

A lack of quality public transport connections and employment opportunities are common concerns in many areas of western

Sydney, with many workers facing a daily commute of over 90 minutes.

"While some workers are able to work from home occasionally, many find it difficult as their home is not conducive to work and lacks the interaction of a formal workplace," Ms Wilmot said.

"Smart work centres provide fully-serviced formal workplaces closer to home and operate with a community atmosphere that engenders creativity and innovation."

ISF prepared the report, Smart Work Centres: An Analysis of Demand in Western Sydney, on behalf of Regional Development Australia Sydney, the Western Sydney Regional Organisation of Councils and Penrith Business Alliance.

In launching the report, Alan Pendleton, Chair of RDA Sydney, said that smart work centres located strategically in Western Sydney have the potential to reduce the need for long commutes.

"Instead of travelling into central offices five days a week, workers in these occupations may be able to work one or two days a week from centres located near transport hubs much closer to their homes."

Karin Bishop, CEO of WSROC, said with an estimated 200,000 workers leaving western Sydney every day to work in other parts of Sydney, smart work centres are a natural fit for the region.

"This is a win-win situation. People can work closer to home and the community can benefit through reduced congestion and environmental costs."

[Download the full report from the ISF website.](#)

In this issue

Smart work centres

Making hard decisions in complex situations

A global young scientist and an agenda setter

New faces at ISF

Breaking the solar gridlock

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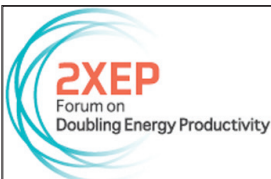
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Making hard decisions in complex situations



The Institute has hosted Prof. Raimo Härmäläinen from Aalto University in Finland as a Distinguished Visiting Scholar (DVS) this summer. Prof. Härmäläinen is well known as the designer of many widely used decision support systems and software, and for his work in dynamic game theory and decision analysis.

He is a leading authority on environmental decision making and participation and a pioneer in the field of systems thinking, contributing to an extensive field of research with the development of the concept 'systems intelligence'.

Since Prof Härmäläinen and ISF's Prof Cynthia Mitchell met in 2009 they have remained in contact and taken an interest in each others research with an intention to collaborate more closely. Prof Härmäläinen is an international leader in MCDM (Multi-criteria decision making) and ISF has developed a very strong reputation in the water sector in the last few years for conducting first-class MCDM work. So the DVS appointment has provided an opportunity to develop a meaningful connection around MCDM and systems intelligence, share these insights both externally and internally to UTS and provide the beginnings of a long

term research collaboration with Aalto University.

Systems thinking is gaining ground as a concept in many of the primary areas of ISF's work including transport, water, energy and international development. We are therefore pleased to have an opportunity to strengthen our systems practice by engaging with another global leader in the field (the third in as many years).

Whilst at ISF, Prof. Härmäläinen has met with ISF postgraduates and staff on an individual basis. He has also held three extended Roundtables focusing on systems intelligence and MCDM. He is finishing his visit with a Masterclass in multi-criteria analysis for a select group of researchers, consultants, policy makers and students with an interest in using effective and transparent multi-criteria decision analysis to increase communication as well as clarify complex issues and produce transparent decision recommendations.

This Masterclass builds on the annual systems professional development workshops offered through ISF over the last three years by international leaders in this field.

Prof. Härmäläinen is the author of over 180 publications and conference papers on decision making, control and dynamic games, energy modelling and environmental decision making and participation, and biological systems. His publications list can be found at: <http://sal.aalto.fi/en/personnel/raimo.hamalainen/publications>

A global young scientist and an agenda setter

Two of our passionate young women researchers have received special recognition this year already.



Chancellor's Post Doctoral Fellow at the Institute, [Dr Dana Cordell](#) was selected as one of the delegation of Global Young Scientists to attend [GYSS@one-north](#) in Singapore last month.

The GYSS@one-north was a specially curated 5-day programme designed to bring together bright young scientists and researchers (primarily PhD students and post-docs under the age of 35) and internationally eminent scientists and technology leaders from all over the world to discuss solutions to global challenges.

Five to ten top young scientists were selected from each of 22 countries to be mentored by 16 Nobel Prize Laureates and Field Medalists. Participants were selected based on their demonstrated passion and interest in research; their strong academic achievement in an area of research and support from their academic advisor or supervisor. Dana was nominated by the University of Technology, Sydney and selected by the Australian Research Council to attend GYSS@one-north.



[Associate Professor Juliet Willetts](#) has been named a finalist in the NAB Women's Agenda Leadership Awards in The Agenda Setter category. This category is for inspirational and successful women who make a difference, provide real solutions in the world today and are instrumental in building a smarter planet.

As a Research Director at the Institute, Juliet has led close to a decade of sustained efforts to address the huge disparity in access to water, sanitation and hygiene (WASH), a basic human right, in neighbouring countries of Asia and the Pacific, as well as in Africa. Her advocacy has had measurable impacts to increase Australia's contribution towards achieving these goals.

Juliet is also empowering another generation to make similar change. She has provided high quality, supportive supervision of several doctoral students and has mentored a growing number of other researchers at ISF.

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New faces at ISF



We are pleased to welcome [Craig Archer](#) to the position of Research Manager. In this position he will be responsible for research management services and the linking of researchers with the management team and units across the University. His role includes responsibilities for the development, implementation and management of procedures and systems that support the delivery of high quality, high impact research.

Craig has worked at UTS since 2000 and joined the Institute in January this year. Prior to this Craig was Manager of Consulting & Expert Opinion Services at accessUTS Pty Ltd, the University's consulting arm.

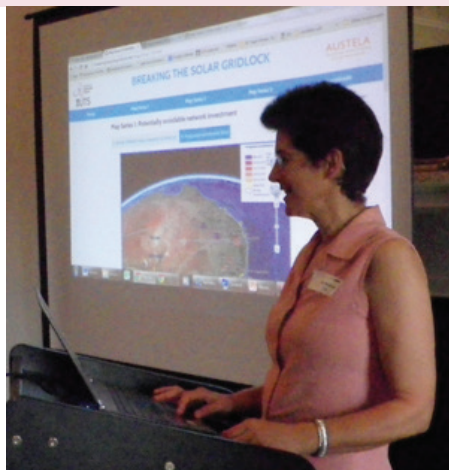
Craig holds a Bachelor of Music Education and after a short teaching career worked in arts administration roles for ABC Concerts and Musica Viva Australia. Craig has a wealth of project management experience in the arts and higher education sectors.



[Xavier Mayes](#) also joins ISF in the new position of Marketing and Communications Manager to lead strategic marketing and communication activities that demonstrate the Institute's unique capabilities, strong partnerships, and research impact. Xavier is responsible for developing and implementing a new strategy to improve both internal communications and public aware-

ness of the Institute's work through media, digital and social platforms. Xavier has worked recently on internal communications and media relations in the Marketing and Communication Unit at UTS. He has previously coordinated the marketing and communications of a renewable energy campaign at the Nature Conservation Council of NSW and worked as a publicist for Icon and Dendy Films. Xavier is currently completing a Master of Sustainability and Climate Policy through Curtin University and is on the board of the Blue Mountains Renewable Energy Cooperative. In what's left of his spare time he likes to get his hands dirty in his backyard vege garden.

Breaking the solar gridlock



ISF researcher Jay Rutovitz presenting at the Breaking the Solar Gridlock workshops

The results of a research study to investigate whether Concentrating Solar Power (CSP) systems could offer a cost-effective alternative to traditional network upgrades have been presented at a series of workshops and online.

Led by the Institute, the Breaking the Solar Gridlock project was undertaken with funding from the Australian

Renewable Energy Agency (ARENA), the Australian Solar Thermal Energy Association (AUSTELA) and Ergon Energy.

Solar thermal can provide reliable power 24 hours a day thanks to storage and easy hybridisation with other energy sources.

The project found that CSP can offer a commercially viable alternative to traditional network augmentation in some locations. CSP could avoid the need for network augmentation in more than 90 per cent of cases examined which had good solar resources. The study identified \$0.8 billion of potentially avoidable network investment, and 533 MW of cost effective CSP which could be installed at grid constrained locations in the next 10 years. This would reduce greenhouse emissions by 1.9 million tonnes per year.

The University of NSW and IT Power collaborated with the Institute on the project, and seven electricity network companies operating in the NEM provided essential data.

The workshops held this month in Brisbane and Adelaide focused on the tools developed to assist users with siting CSP plants and evaluating their economic performance, including potential income streams from network payments. These tools are available at

<http://breakingthesolargridlock.net/>

Andrew Want (AUSTELA chairperson): "A key part of AUSTELA's role is to show how CSP can benefit Australia. This project is a great example of how collaboration between industry, academics, and electricity system stakeholders can illuminate the value of CSP in Australia's energy sector."

