

STAFF PROFILE—JEFF WALKER

Recently promoted Associate Professor Jeffrey Walker has established himself over the past 10 years as a world leader in environmental sensing, modeling and data assimilation, with a particular emphasis on fundamental research that has practical application.

Jeff has forged strong international links and actively collaborated with scientists from NASA and ESA to develop near-surface and subsequently rootzone soil moisture products. Such products are essential for achieving improved weather forecasts and climate predictions, enhanced agriculture water use efficiency, and quantitative drought monitoring.

This month Jeff and a number of researchers from Universities and organisations such as NASA, ESA and the University of Melbourne congregated at the Leeton-Narrandera Airport in south-western NSW to conduct near-surface soil moisture tests and airborne experiments that could bring about changes to farm management.

The data were collected by a plane fitted with more than \$600,000 worth of high-level technology, including a microwave radiometer (not for the pilot in case he got hungry) and combined with information researchers collecting on the ground, such as soil measurements and vegetation.

The reason for this research is to provide better soil moisture predictions and rainfall forecasts. In the future farmers will be able to log on to the internet and obtain predictions about soil moisture and expected crop yields on their land weeks ahead of planting dates. This will then enable farmers to make critical decisions about what to plant and when.



The research will be used in conjunction with the first-ever dedicated Soil Moisture and Ocean Salinity (SMOS) satellite to be launched by the European Space

Agency in 2007.

A/Prof. Walker was also the instigator and leader of the collaborative National Airborne Field Experiment in the Goulburn River Catchment in 2005.

Jeff's primary research motivation is to lead programs in socially relevant research that will have a positive impact on the

way we care for the environment so as to result in an improved quality of life for both current and future generations.

He believes that the key to this is through improved earth system state and flux monitoring, prediction and reporting, in a way

that is relevant to policy and decision making processes. His vision is that this goal will be realised through a combination of environmental sensing, earth system modelling, and optimal convergence of model predictions with observations through data assimilation.

This is a new area of research that has gained wide spread interest over recent years. Jeff has contributed significantly to the development of world-class ground and airborne environmental sensing infrastructure with identification of soil moisture remote sensing requirements and algorithm development. Jeff can be contact on 45590 and resides in D409.



Team leader Jeff Walker and the NAFE Group at Yanco, NSW

CEE 2006 RETREAT—LANCEMORE HILL



This month saw over 30 CEE Academic and Professional staff gather at Lancemore Hill, Kilmore for the 2006 Retreat. The Department was joined by the Dean of Engineering and visitors from other Engineering Departments and Faculties from around the University, with Mark Toner as the facilitator.

The Head of Department, Hector Malano said he could not recall a retreat being held at a more critical period of rapid change with the implementation of the Growing Esteem and the recommendations of the Broer's review creating significant challenges as well as opportunities for the department.

The retreat was structured around three themes:

Research: Performance and implementation of Sustainable Systems strategy

Education & Learning: Performance and postgraduate directions

Integration of teaching, research and knowledge transfer

The retreat agenda was structured to allow for a recap of where we stand at present in research, education and the integration with knowledge transfer and what challenges we face in moving forward and establishing our academic and



research strategic priorities in the context of the University's and Faculty's future agendas.

After opening addresses by the HoD, Hector Malano and the Dean, Jannie Van Deventer, Andrew Western set the scene by giving an overview of the Department's Research Profile, "Research Active" and the outcomes of recent strategic planning in the department.

Attendees then broke into groups for a session of scenario planning, evaluation and resulting opportunities lead by David Fox. The outcomes of the scenario planning will be available on the department's intranet in coming weeks.

The second day Graham Moore spoke about Teaching & Learning, in particular delivery and Master degrees options within the Melbourne Model, before Nick Haritos got groups to form to discuss options for accredited Graduate Degrees.

After lunch Hector Malano and Colin Duffield got discussions going again on Knowledge Transfer. Hot as it was, staff rallied to present their ideas for implementing new strategies in the future.

The day finished with a final summary and leaders being assigned to follow-up actions before everyone headed for home in the searing heat.

JOKES OF THE MONTH

Reaching the end of a job interview, the Human Resources Person asked the young Engineer fresh out of Uni, "And what starting salary were you looking for?"

The Engineer said, "In the neighborhood of \$75,000 a year, depending on the benefit's package."

The HR Person said, "Well, what would you say to a package of 5-weeks vacation, 14 paid holidays, full medical and dental, company matching retirement fund to 50% of salary, and a company car leased every 2 years - say, a red Corvette?"

The Engineer sat up straight and said, "Wow!!! Are you kidding?"

, "Certainly" replied the HR Person, "...but you started it."

Three college professors were driving down the highway at a very slow speed. A policeman pulled them over and explained that driving so slowly on the highway could be hazardous.

The driver pointed out the sign that read "20." He explained that he was going 20 mph because of the sign. The policeman pointed out that the sign indicated they were driving on Highway 20.

Somewhat embarrassed the professor apologized and promised to be more observant.

As the policeman turn to walk back to his car, he noticed the other two professors on the floor ...looking scared to death! He asked the driver, "What's wrong with them?" The driver replied, "We just turned off Highway 105."

Quote from Donald Rumsfeld

"Reports that say that something hasn't happened are always interesting to me, because as we know, there are known knowns; there are things we know we know.

We also know there are known unknowns; that is to say we know there are some things we do not know.

But there are also unknown unknown—the ones we don't know we don't know."

This quote won the "Foot in Mouth" award from the British Plain English Campaign in 2003

"FOOD FOR FAMILIES" CHRISTMAS APPEAL

The Digital Print Centre is once again supporting the "Food for Families" Christmas Appeal.

To do our bit there will be a box in the general office until the 15th December for staff to donate something to help others.

Suggested items include tinned food, longlife milk, cereals, noodles, pasta, rice, biscuits, jams, lollies, tea and toiletries (Shampoo, soap, toothpaste and deodorant).

Food items must be sealed and within the "use by date".

So next time you are in the supermarket grab an extra can for the appeal—remember most of these thing cost less than \$2.00

GREAT WALL OF CHINA

Water Shortages bring all sorts of questions and it has been to John Langford the media has turned for answers. John has appeared on Channel Seven News, Channel Two Landline. Spoken on 3AW and ABC National and appeared in print in all the major papers. John claims our media star this month.

On a recent visit to China as part of the Collarative Research Aust/China Centre John Langford and his wife Christina took time out of their busy schedule to visit the Great Wall of China and participate in a bit of local culture.

The one question John couldn't answer is why did they build the Great Wall??



WELCOME HENRY



Congratulations from the Department to Xiaobin Shen (Robert) and Jenny Zhou on the birth of Henry, who was born at 9:45am on the 4 November, 2006 at Box Hill Hospital. Mother and son doing well

SWITCH ON TO CEETV PRESENTATIONS

Recently Associate Professor Hector Malano and Dr Lu Aye made presentation at the Nossal 2nd annual Global Health Forum. Check out these presentation and more on CeeTV.

Associate Professor Hector Malano—Water Resources Management and Health

Dr Lu Aye—Vaccine Storage in Remote areas

Professor David Smith—Engineering a Future for Medicine

Professor Ray Ison—Social Learning and the Sustainable Management of Water

Dr Graham Moore— The Evolution Starts Here

CEE BIG END OF YEAR WINED-UP!!

Date: Friday, December 8th— **Time:** 5pm-10pm— **Venue:** Fitzroy Bowling Club

Details: This year's function will be an outdoors event at the Fitzroy Bowling Club which is located on Brunswick St, North Fitzroy on the edge of Edinburgh Gardens. There will be a BBQ dinner followed by an evening of social lawn-bowling on the green, and drinks on the lawns. There will be a small teams tournament organised (don't worry - this is lawn bowls so you don't have to be a fantastic athlete and you won't put your back out) followed by casual bowling afterwards. It's going to be great fun as we have a large lawn area with big shady trees, a whole bowling green to ourselves, and plenty of good food and drink available (including halal and vegetarian menu options!). The only costs to you will be any drinks you wish to buy after the bar-tab expires. Details on transport options and directions will follow shortly along with an RSVP email.

The Bowling Tournament: For all those wishing to be involved in the bowling fun (which hopefully should be everyone!) teams of four will be drawn up, and games will be approximately 20mins in a knockout-style tournament. There will also be a short 'how to bowl' presentation prior to the tournament. We will be playing for a special Bowling Championship Trophy currently being designed and constructed by the guys in the labs/workshops.

RSVP: Sam Davison on 46643—Unfortunately this event will be for staff and research students only.

SNAPSHOTS @ CEE

Graduate Certificate in University Teaching deadline for enrolment is the 17 January 2007.

Details of this course are available at: <http://www.cshe.unimelb.edu.au/GCU/T2007.html>

In line with our emphasis and support for new modes of teaching delivery, the Department is very supportive of those willing to attend the course. However, admission to the course is very competitive. If anyone is considering enrolling in this course, please contact Hector Malano well in advance of the deadline to discuss your application and maximize the chance of success.

Congratulations to Kim Hassall for winning the Interdisciplinary Award for Sustainability and Environmental Writing in 2006. The award was presented by the Community and Advisory Board for the Office for Environmental Programs Forum on the future of the Office for Environmental Programs and Graduate Environmental Program.

Congratulations to Vadim Kuzim after becoming one of three Laureate at the First Australian Festival of Russian Traditional and Experimental Literature Antipodes in Sydney last week. This is the second award Vadim has received for Literature.

Active Teaching/PBL

It would appear that a few staff in the department have actively approached the notion of "Active Teaching/PBL" in their classes. One such person is Nick Haritos who now continually tests his 1st year students with 'pop quizzes' on a random basis. So much so that the students have now dubbed him "Dangerous Nick".

Roger Hughes meanwhile tests his students knowledge by incorporating obvious errors in his handouts in the hope that at least one student will notice the errors.

Helen Goldsworthy bravely organised an excursion to the Hollowcore Precast Factory for her 4th year students and arranged Tuan Ngo to accompany them to the site. I am happy to report that Tuan and the students all made it back to Uni in one piece and minus any concrete footwear.

If you have any anecdotes regarding any new teaching method you are incorporating into your classes please send them to me via email (e.hammond@unimelb.edu.au) so that they can be shared with other staff.

STAFF PROMOTIONS

Congratulations from the Department to Dr Jeffrey Walker who was recently promoted to Associate Professor and Reader and Dr Andrew Western who was promoted to Principal Research Fellow.

Fare well to Shane, we wish you well in your new position as a real Engineer



Have you got some news or pictures to share —here is your opportunity, the CEE Bulletin. Forward your stories to Kerry Beachen via email on kbeachen@unimelb.edu.au or just drop by D406 and tell me