

# The e-Science Institute

## Facilitating the e-Science Community

### Introduction

The e-Science Institute (eSI) has five years of experience in stimulating and organising events for the UK's e-Science community and of hosting visitors who interact with that community.

During this period eSI has

- run an average of seven events a month
- attracted over 12,500 delegates
- clocked up 28,000 delegate days
- collected over 3,500 talks and papers on its website
- hosted 40 visitors and 8 long term researchers



Chris Date lecturing at a recent workshop at eSI

The role of the Institute is to encourage e-Science research and it is guided in this task by its Science Advisory Board. The initial programme at eSI was shaped by the pressing need to form the UK's e-Science community across all disciplines, to help it develop an understanding of the challenges and available solutions, and to develop skills. Now the main thrust of eSI's work is changing to focus on longer-term and research centred topics, to moving beyond the 'early adopters' of Grid technology, and to build bridges between disciplines and advances in computing.



### Contact Information

e-Science Institute,  
15 South College Street,  
Edinburgh,  
EH8 9AA  
Tel: +44 (0)131 650 9833  
Fax: +44 (0)131 650 9819  
<http://www.esi.ac.uk>

### Themes at eSI

#### Information Services for Smart Decision Making

This theme aims to improve the information available about the Grid: from real time data about Grid performance to information about what services are available, what tools are out there to be used, and what tools still need to be developed.

[http://www.nesc.ac.uk/esi/themes/theme\\_01/index.htm](http://www.nesc.ac.uk/esi/themes/theme_01/index.htm)

#### Exploiting Diverse Sources of Scientific Data

With the rapidly growing wealth of data comes a challenge: what strategies and tools will enable researchers to exploit it? And how can we resolve the tension between facilitating interdisciplinary research and meeting each discipline's need to develop tools that suit its own requirements?

[http://www.nesc.ac.uk/esi/themes/theme\\_02/index.htm](http://www.nesc.ac.uk/esi/themes/theme_02/index.htm)

#### Adoption of e-Research Technologies

The vision of this theme is that e-Infrastructure should underpin research in all disciplines, from multinational organisations to distributed computing in schools and homes. What are the obstacles to this 'democratic e-Research', and how can we encourage wider use of e-Research technologies?

[http://www.nesc.ac.uk/esi/themes/theme\\_03/index.htm](http://www.nesc.ac.uk/esi/themes/theme_03/index.htm)

### To Start in 2007

#### e-Science in the Arts and Humanities

The arts and humanities have substantial commonalities with e-Science, from highly dispersed content, to deep data and text mining, to visualisation and simulation. This theme will show how e-Infrastructure can support innovative research in the arts and humanities, expanding its use beyond the early adopters.

#### Distributed Programming Abstractions

Computing infrastructure is changing ever more rapidly, yet scientists still use the same programming methods for distributed computing that they are accustomed to using on isolated machines. How should scientific programming change to fit the new world of distributed computing?

#### Spatial Semantics for Automating Geographic Information Processes

Up to 80% of information is spatially referenced in some way, yet that information is often unusable without expert interpretation. This theme aims to formalise the semantics of geographical data, to improve data integration, support automated reasoning, and enable cross-disciplinary scientific computing.

To enable the e-Science community, eSI runs three mechanisms:

### Sustained Research Themes

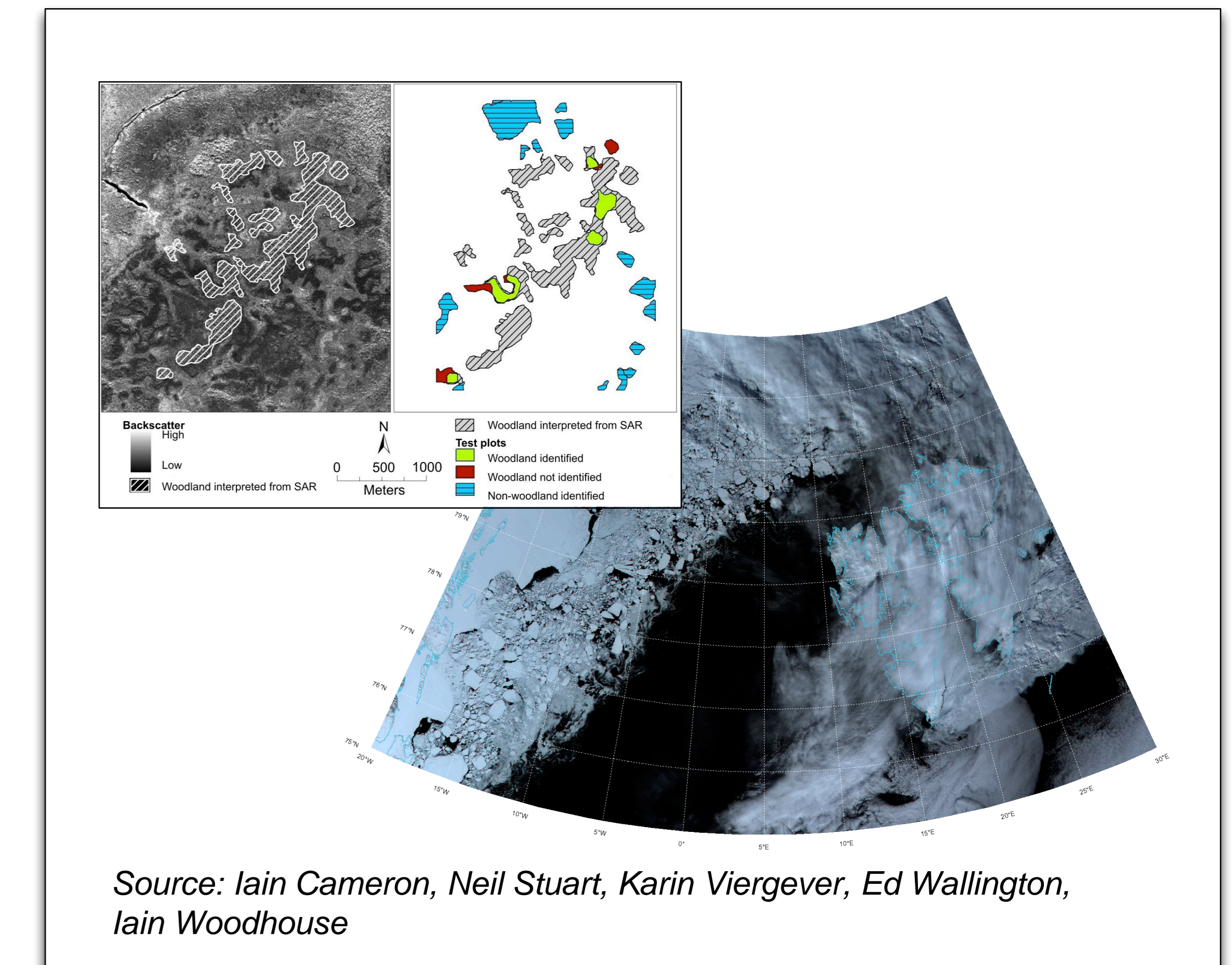
A theme consists of a connected series of meetings, workshops, visitors and seminars. Led by a theme leader, a theme is intended to investigate a topic in a sustained way over a period of 6 to 12 months. Calls for proposals for theme topics are made every 6 months, the next one being due in March 2007. More details can be found at

<http://www.nesc.ac.uk/esi/themes/index.html>

### Responsive Mode Meetings

These include research workshops, international collaboration meetings, schools and training courses. Details of forthcoming events and presentations from those that have already taken place can be found at

<http://www.nesc.ac.uk/esi/esi.html>



Source: Iain Cameron, Neil Stuart, Karin Viergever, Ed Wallington, Iain Woodhouse

### Research Visitors

eSI provides an excellent environment for collaboration and research. We welcome visitors from academia and industry from both the UK and overseas who are engaged in research, development, and the application of Grid technologies to e-Research. Visits are based at eSI and expenses reimbursed depend on the duration of stay which can be anything from one week to a year.

Further information and details of past visits can be found at:

[http://www.nesc.ac.uk/esi/visitors\\_programme.html](http://www.nesc.ac.uk/esi/visitors_programme.html)

[www.esi.ac.uk](http://www.esi.ac.uk)

