

University of St Andrews
School of Mathematical and Computational Sciences

Computer Science Division

**Distinguished Lecture Series
1998/99**

Social Analysis and Software Systems Design

Professor Ian Sommerville
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University of Lancaster

*Thursday 18th February 1999
Lecture Theatre B, Mathematics Institute,
University of St Andrews.*

The Lectures

Most existing approaches to software systems design are techno-centric and focus on technical aspects of the problem to be solved and the solution to be developed. However, we know that many software systems that are delivered are either never used at all or require extensive modifications after delivery to make them usable. We argue that one reason for this is that the designers of these systems have not taken account of the organisational environment in which these systems are used nor of the work practices that they must support.

These lectures will discuss work that has been going on at Lancaster since 1990 to address these issues. Its goal is to develop and integrate organisational and social analysis with approaches such as object-oriented analysis so that we have an improved understanding of the real requirements for organisational software systems. The work has been interdisciplinary and has involved cooperation between social scientists and computer scientists.

I will discuss the evolution of our work from initial ethnographic studies that were used to inform the design of an air traffic control system through to our most recent work on an integrated method of social and object-oriented analysis. I will illustrate how methods from the social sciences have been adapted to be practically useful for software systems design and reflect on the advantages and disadvantages of inter-disciplinary working.

Venue

All lectures will be held in Lecture Theatre B in the Mathematics Institute, University of St Andrews. Tea and coffee will be served in our Honours Laboratory.

Programme

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| 10.00 .11.00 | Learning from ethnography: surprises from a study of air traffic control |
| 11.00-11.30 | <i>Coffee</i> |
| 11.30 .12.30 | Viewpoints and concerns: structuring the analysis of complex systems |
| 14.00 .15.00 | Coherence: integrating social and object oriented analysis |