LECTURES – PART I

22 January

09-12 Introduction to Philosophy of Information – Luciano Floridi
13-14 Discussion on Introduction to PI
14-15 Physics as an “Ideal Science” - Philosophical Foundations and Consequences
   Lars-Göran Johansson
15-17 The Function of Natural Laws in Physics
   Lars-Göran Johansson

23 January

09-12 Philosophical Foundations of Computability
   Gordana Dodig-Crnkovic
13-14 Discussion on Phil. Found. of Computability
14-15 Planning for the Course and Mini-Conference
   Closing Remarks (GDC)

LECTURES – PART II

04 March

09-12 Methodological Foundations of CS
   Erik Sandewall
13-14 Discussion on Meth. Found. of CS
14-15 Critical Analysis of CS Methodology
   Björn Lisper, Jan Gustafsson
15-16 Discussion on Critical Analysis of CS
   Methodology, Björn Lisper, Jan Gustafsson

05 March

09-12 Modelling and Simulation
   Kimmo Eriksson, Lars-Göran Johansson
13-14 Discussion on Modelling and Simulation
14-15 DISCUSSION OF PAPER DRAFTS (GDC)
15-16 Closing Remarks
LECTURES – PART III

13 May
09-12 Ethics and Professional Issues in Computing
   Gordana Dodig-Crnkovic
13-14 Discussion on Ethics and Professional Issues in Computing
14-15 Ethics and AI (Peter Funk)
15-16 Discussion on Ethics and AI

14 May
09-16 MINI-CONFERENCE
16-17 Closing Remarks

The Course Examination Form

The course is research-oriented and will prepare the participants for collaborative research in this interdisciplinary area.

- 3 points: class attendance + class notes (at minimum 15 pages, at minimum 5 pages per course block)
- 2 points: research paper 6-10 pages (6000-8000 words), presented at mini conference

Why is Philosophy Important for Computing?

- "Thinking tool-box" - access to:
  - Paradigms
  - Metaphors
  - Historical examples (knowledge capital)
- Communication – both within computing community and wider
- Context – conceptual and cultural framework
- Humanist dimensions of higher education are important!
- Knowledge society – leads to automated production, organization and even automated discovery. Genuine human thinking abilities including creativity will make the difference!

PI NETWORK

Ahonen-Jonnarth Ulla  Senior Lecturer, CS/Biology, Gävle University
Gordig-Crnkovic Gordana  Senior Lecturer, CS/Physics, Mälardalen University
Gustafsson Jan  Senior Lecturer Computer Science, Mälardalen University
Funk Peter  Senior Lecturer (docent) Artificial Intelligence Mälardalen University
Lager Torbjörn  Professor of General and Computational Linguistics, Göteborg University
Lisper Björn  Professor of Computer Engineering, Mälardalen University
Nivre Joakim  Professor of Computational Linguistics, Växjö University
Odelstad Jan  Senior Lecturer (docent) CS/Theoretic Philosophy Gävle University

Correspondent: Gang Liu  Deputy Director of Philosophy of Science and Technology DivisionInstitute of Philosophy, Chinese Academy of Social SciencesPhD in Philosophy, Beijing
Why is Computing Important for Philosophy?

- *Simulated or experimental philosophy. Experiments “in silico” (or alternative constructed cognitive/computational systems):* As an innovative extension of an ancient tradition of thought experiment, application of computational modeling schemes to questions in logic, epistemology, philosophy of science, philosophy of biology, philosophy of mind, and so on.
- *Computing paradigms and metaphors*

Results from the PI Course

- Participants from different universities (Blekinge, Dalarna, Mälardalen, Skövde, Uppsala, SICS Stockholm) have taken part in the course and have presented their research papers at the Mini-conference. These have been documented in the Course Proceedings, [http://www.idt.mdh.se/personal/gdc/PI_04/proceedings.pdf](http://www.idt.mdh.se/personal/gdc/PI_04/proceedings.pdf)

- As a result of the course ten papers have been published in journals and conference proceedings or included as chapters in PhD theses.

Future Work

Extended network activity and future, possibly distance, courses in collaboration with colleagues in other countries (Peter Boltuc, University of Illinois at Springfield; Vincent Müller, American College of Thessaloniki & Princeton University; Jordi Vallverdú. Universitat Autònoma de Barcelona; Teresa Numerico, University of Bologna and the University of Salerno; and a number of colleagues from Swedish Universities). This will certainly broaden our experience and allow us to identify further relevant topics to be included.

Forthcoming:

*Computation, Information, Cognition – The Nexus and The Liminal*  
Gordana Dodig-Crnkovic and Susan Stuart Editors  
CSP, Cambridge

[tripleC](http://triplec.uti.at/) journal issue dedicated to E-CAP 2005  
Gordana Dodig-Crnkovic and Susan Stuart Editors