

Bildung in Engineering

A dream in the heads of humanists or a simple necessity?

What new skills are required from the so-called
“New Renaissance Engineer” of the 21st century
and are they relevant to
the concept of occupational Bildung?

*Tuesday 15 May 2007 at
University of Aarhus, Institute of Business and Technology,
Birk Centerpark 15, 7400 Herning, Denmark
The Unimerco Lecture Theatre (room 2002)*

International Research Conference on Occupational Bildung and Philosophy in Engineering

The conference is related to two recent publications within the field of
philosophy of science and technology.

In particular, the conference relates to the second publication
which is the outcome of an international research project.

1. Jens Christensen, Lars Bo Henriksen, Anette Kolmos (eds.) (2006)
Engineering Science, Skills and Bildung.
Aalborg Universitetsforlag, Aalborg.

2. Steen Hyldgaard Christensen,
Martin Meganck, Bernard Delahousse (eds.) (2007)
Philosophy in Engineering. Academica, Aarhus.



AARHUS UNIVERSITET
INSTITUTE OF BUSINESS AND TECHNOLOGY



Engineering

has traditionally been linked to the advent of the industrial society. To display an image of engineers as applied scientists has historically been an important means to gain social respectability and influence for the engineering profession. However, the consequence of this strategy has been that engineering has become too narrowly defined with an almost exclusive focus on engineering science, resulting in the present crisis in engineering education and a tendency towards a “de-engineered” society. The two books therefore raise the question “What is the proper role of the engineer in the global knowledge society”? To answer this question necessitates the construction of a new concept of occupational Bildung in engineering education and a recontextualisation of engineering as a profession.

Philosophy in Engineering offers a broad perspective on the role of engineering in the 21st century and contributes to a critical reappraisal of engineering as a profession. The book thus approaches engineering from an inter- and meta-disciplinary perspective encompassing historical, epistemological, ethical and global aspects of engineering.

The American philosopher of science and technology and editor-in-chief of Encyclopedia of Science, Technology and Ethics, Carl Mitcham, wrote about *Philosophy in Engineering*:

“Having developed initially in the contrasting forms of cultural criticism by non-engineers and philosophical apologetics by engineers themselves, the philosophy of technology is becoming increasingly a theme of genuinely interdisciplinary reflection. European philosophers especially have been leaders in this synthesis. The present book, with contributions by scholars from half of the EU countries, takes interdisciplinary analysis by and about engineers and engineering to new levels of achievement and in the process has created a volume that will undoubtedly have a significant influence on further teaching and research.”

Target groups of the conference

- Practicing engineers in general
- Teachers of and researchers within any engineering specialist domain of knowledge
- Teachers or prospective teachers of philosophy of science for engineering students
- Researchers within the field of philosophy of science, technology and ethics
- Educational policy makers related to engineering
- People interested in the philosophy of technology

Programme

- 09.00 – 09.30 Welcome of participants and coffee.
- 09.30 – 09.45 Opening of the conference by Director at Aarhus University - Institute of Business and Technology, Denmark, *Erik Ernø-Kjølhede* and chairs of the conference, *Steen Hyldgaard Christensen* - AU-IBT, Denmark & *Bernard Delahousse* - IUT "A" Lille, France.
- 09.45 – 10.30 Can Engineering Be Philosophical? Prof. *Carl Mitcham*, Liberal Arts & International Studies, Director, Hennebach Program in the Humanities, Colorado School of Mines, Golden, USA, Editor-in-chief of *Encyclopedia of Science, Technology and Ethics*.
- 10.30 – 11.15 Engineering - An Inherently Philosophical Enterprise. Assistant Prof. *William Grimson*, Dublin Institute of Technology (DIT), Ireland.
- 11.15 – 12.00 Future Engineering Skills, Knowledge and Identity. Prof. *Anette Kolmos*, University of Aalborg, Denmark.
- 12.00 – 12.45 Lunch.

Programme

continued

- 12.45 – 13.30 Teaching Ethics to Engineering Students: an Introduction to Multidimensional Thinking. Dr. Ir. *Martin Meganck*, KaHo Sint-Lieven, Belgium.
- 13.30 – 14.15 Ethics in Engineering Practice. Assistant Prof. *Ibo van de Poel*, Delft University of Technology, The Netherlands.
- 14.15 – 15.00 Scientific Bildung for the Post-Normal Epoch. External lecturer, Ph.D, *Tom Børsen Hansen*, University of Copenhagen, Denmark.
- 15.00 – 15.45 Boundaries and Bridges Between Science and Technology: Some Historical and Philosophical Reflections. Prof. *Helge Kragh*, University of Aarhus, Denmark.
- 15.45 – 16.00 Coffee break.
- 16.00 – 16.45 Engineering Science as Opposed to Applied Science and Natural Science. Assistant Prof. *Eugene Coyle*, DIT, Ireland, Director of Dublin Institute of Technology and Dean of the Faculty of Engineering, Dr. *Mike Murphy* and Assistant Prof. *William Grimson*, Dublin Institute of Technology (DIT), Ireland.
- 16.45 – 17.30 Panel session (with authors from each of the 2 projects): “What Place for “Philosophy in Engineering” in Engineering Studies?” and “What Place for the “New Renaissance Engineer” in the 21st Century?”.
- 17.30 – 18.00 Conclusions and closing of the conference.

Aim

of the conference

The conference is aiming at a continuation of meta-disciplinary research on engineering. Thus a new international and interdisciplinary research project entitled *Engineering Design in Context* will be organized and later on launched as an outcome of the conference.

Conference fee

The full fee for the conference is DKK 1.500 (EURO 198), which includes:

- 1) a copy of the book *Philosophy in Engineering*
- 2) a CD-ROM with PowerPoint presentations of the main topics of the book
- 3) a course description and a course plan for courses in philosophy of science for engineers targeting engineering students in their third year of studies
- 4) lunch and coffee during the conference

Registration

and payment

Deadlines

The conference fee - DKK 1.500 (Euro 198) - is to be paid no later than **15 April 2007**.

A reduced fee of DKK 1.300 (Euro 171) applies for registration and payment before **1 March 2007**.

Please notice

Registration for the conference will be closed when a maximum of 200 participants is reached.

Registration to

Steen Hyldgaard Christensen by phone: +45 96 29 62 93 or by email: steenhc@hih.au.dk

Payment to be transferred to

Jyske Bank

Bank account of AU-IBT: 5096 - 123761 - 2

Marked: "Research Conference"

AU-IBT VAT-number: 16330507

Accommodation

Accommodation is at your own expense.
We can recommend the following hotels in Herning:

Scandic Regina (in the centre of Herning, 3.0 km. from AU-IBT, next to the train station)

Fonnesbechsgade 20

DK-7400 Herning

Phone: +45 97 21 15 00

E-mail: herning@scandic-hotels.com

Webpage: www.scandic-hotels.dk

Single room rate: State "IBT Conference" for institutional discount – approx. DKK 803 (Euro 107)

Best Western Hotel Eyde (in the centre of Herning, 3.5 km. from AU-IBT)

Torvet 1

DK-7400 Herning

Phone: +45 97 22 18 00

E-mail: info@eyde.dk

Webpage: www.eyde.dk

Single room rate: State "IBT Conference" for institutional discount - DKK 795 (Euro 106)

Lynggården (on the outskirts of Herning, 7 km. from AU-IBT)

Nr. Lindvej 2, Lind

DK-7400 Herning

Phone: +45 97 22 30 00

E-mail: info@hotel-lynggaarden.dk

Webpage: www.hotel-lynggaarden.dk

Single room rate: approx. DKK 735 (Euro 98)

Østergaards Hotel (2 km. from AU-IBT)

Silkeborgvej 94

DK-7400 Herning

Phone: +45 97 12 45 55

E-mail: info@oestergaardshotel.dk

Webpage: www.oestergaardshotel.dk

Single room rate: approx. DKK 895 (Euro 119)

Flight connections

1. From country of origin via the international airport of Copenhagen to Karup domestic airport. The distance between Karup and Herning is 25 km. (20 min. drive). There is no shuttle bus connection but airport taxi can be included in your airline ticket and you will then pay the driver with a special ticket. You can also make the reservation yourself (minimum 3 hours in advance) at Frederiks Taxa, phone +45 86661045. The price is approx. DKK 190 (Euro 25) one way.
2. From country of origin to the international airport of Billund. The distance between Billund to Herning is 80 km. (50-70 min. drive). There is no shuttle bus connection but you can make a reservation for an airport taxi at www.herning-taxa.dk or by phone +45 97120777 (minimum 3 hours in advance). The price is approximately DKK 550 (Euro 73) one way.

Geographical info



For detailed information
about Herning visit
www.visitherning.dk

REGISTRATION FORM
(PLEASE REQUEST AN ELECTRONIC VERSION)

**INTERNATIONAL RESEARCH CONFERENCE
ON OCCUPATIONAL BILDUNG AND PHILOSOPHY IN ENGINEERING
Bildung in Engineering 15 May 2007
University of Aarhus, Institute of Business and Technology**

To be returned with payment no later than 15 April 2007
to : Organizer of the Conference, Lecturer Steen Hyldgaard Christensen, steenhc@ihh.au.dk
Aarhus University - Institute of Business and Technology
Birk Centerpark 15, 7400 Herning – Denmark

Surname: _____ First name: _____

Address: _____

Post Code: _____ City: _____ Country: _____

Telephone number: 00/country code/personal number: _____

Mobile phone: 00/country code/personal number: _____

E-mail Address: _____ @ _____ . _____

Nationality: _____

Institution/Company: _____ Profession: _____ Title: _____

Field of research: _____ or Domain of expertise: _____ or interest: _____

Arrival date: _____ Departure date: _____

Payment : full fee: DKK 1,500 (Euro 198)
 reduced fee: DKK 1,300 (Euro 171), only for registrations before 1 March 2007 by:

- Cheque n° to : AU-IBT :see above
- International money transfer to IBAN n°: DK 98 5096 0001 23 7612 **or**
SWIFT (BIC) n°: JYBADKKK
- National money transfer to: Jyske Bank.
Account n° of AU-IBT: 5096 - 123761 - 2
VAT-number of AU-IBT: 16330507

All payments are to be marked "Research Conference".

Please note that registration for the conference will be closed when a maximum of 200 participants is reached.

Cancellations and requests for reimbursement of the fee must be notified in writing to the organiser by 30 April 2007 at the latest. A cancellation charge of 25% will be deducted from your refund. Transfer of a registration to a colleague is possible if the organiser is notified in writing by 30 April 2007.