



## From the Head of Department

***The Department of Civil Engineering, BYG•DTU was established in 2001 in order to unite the technical disciplines, which are applied in a building design process.***

### **BYG•DTU**

The new department included staff from the former departments: Structural Engineering and Materials, Applied Building and Environmental Technology, Buildings and Energy, Geology and Geotechnical Engineering, and Planning. In addition BYG•DTU integrated the B.Eng. programme in Civil Engineering ("diplomingeniøruddannelsen"), which was previously independent from the university.

In March 2003 BYG•DTU adopted a new strategy for the planning period 2003-08. The Strategy was developed by the Advisory Board for BYG•DTU, the Deans of Research and Education of DTU, and members of the staff of the Department. The strategic goals are to establish BYG•DTU as an internationally recognized university department, which, through its activities in education, research, and innovation, contributes to the technical development of the building and construction industry and the infrastructure development of society.

In 2003 and 2004 the Strategy has acted as the basis for a reorganization and refocusing of the departments activities. Fol-

lowing the strategy and as part of a generation alternation the Department has recruited the department head, three professors, three associate professors and one assistant professor since 2003. The renewal of staff will continue during the planning period. On this new foundation BYG•DTU is well under way in fulfilling the strategic goals.

### **Education**

Education at BYG•DTU comprises

- the B.Sc. and M.Sc. programmes: Civil Engineering (Students graduate as "civilingeniør")
- the B.Eng. programmes: Civil Engineering, Architectural Engineering, and Arctic Technology. (students graduate as "diplomingeniør"):

In 2004 DTU adopted the Bologna Declaration on the European Space for Higher Education. Thus BYG•DTU initiated a revision of the B.Sc. and M.Sc. programmes in Civil Engineering. The B.Sc. programme has now been organized according to four well defined recommended study plans and a thorough revision of the M.Sc. programme is under way. The Department has established a dialogue with the employers of civil engineers as part of the work with the revision.

The B.Eng. programme in Civil Engineering went through an



## BYG•DTU Strategy 2003-2008

BYG-DTU is a university department within the Civil Engineering area.

The mission of the department is education, research, and innovation. The department contributes through knowledge creation to the generation of social and commercial value.

The vision is to become one of Europe's leading Civil Engineering institutions and through this to become a preferred partner for companies and institutions in the building sector.

external evaluation and was accredited by the Ministry of Education in 2004.

The B.Eng. programme in Architectural Engineering started in 2002. This new programme has attracted a new group of students to DTU. The programme has attained a stable admission of around 40 each summer.

The B.Eng. programme in Arctic Technology started in 2001. Between eight and fourteen students have started their Arctic Technology education in Sisimiut, Greenland each summer since 2001. After one and a half year in Greenland the students enter the B.Eng. in Civil Engineering programme at DTU in Denmark.

### Research

Research at BYG•DTU is orga-

nized in five focus areas:

- Structural engineering
- Geotechnology
- Building materials
- Construction processes, planning and management
- Building physics and installations

The publication rate increased from 44 refereed papers in 2003 to 63 in 2004, even though the research productivity was severely hampered by a very large teaching load.

Building research is unfortunately not a very jazzy theme at the present time. Thus BYG•DTU has entered the international research network European Construction Technology Platform, ECTP, which seeks to influence the priorities of EU's 7th Framework for Research in order to bring building research higher on the research agenda. In Denmark BYG•DTU, together with the Danish Technological Institute and the Danish Building Research Institute, constitute the secretariat for ECTP-Denmark, which during 2004 has strived to bring building research back into the national research agenda. 2005 will show if these activities have been fruitful in terms of generating funds for a renewal of Danish building research.

In autumn 2004 the Department established the International Research School for Civil Engineering at BYG•DTU. The Research School organizes the

Department's research education and we plan to use the Research School as recruitment and fund raising platform. Two Ph.D. summer school courses were conducted in 2004 and a number of new courses are under way.

### Innovation

Innovation at BYG•DTU comprises activities directed towards direct economic value generation together with external partners. This is done through patenting for future licensing, collaborative research, commercial testing and consultancy, and continued education programmes.

In 2004 BYG•DTU registered three proposals for patenting with DTU's patent office. In 2005 a preliminary business plan will establish the basis for possible further investment in the patents.

In 2003 the department organized commercial testing and consultancy in a separate organization, BYG-test. BYG-test offers access to research facilities at commercial terms. In 2004 BYG-test experienced a decrease in commissioned work; however, an increase is forecasted for the coming years as more effort is put into marketing the unique facilities and competencies of the Department.

BYG•DTU has developed the continued education programmes Master in Fire Safety

and Master in Management of Construction, and offers a number of courses as part of the Vacant Places Scheme.

The department is actively involved in development of the Danish building codes for energy consumption and for fire. The collapse of the roof of the Siemens sports arena near Copenhagen initiated a revision of the rules for certification of constructions with BYG•DTU participation.

### **Staff development**

Staff development at BYG•DTU has high priority and continued education of the staff was enhanced in 2004.

A comprehensive English course for technical and administrative staff was developed in collaboration with London City University. The English course concluded with a successful study tour to London.

The department initiated a plan for management and leadership development for section heads. The plan is based on DTU's common course programme.

In addition to these coordinated efforts a number of individual staff has attended administrative, language and other courses.

### **Technical resources**

In general it is difficult to maintain a level of investment that is sufficiently high to

maintain and develop the technical equipment needed for advanced research and research based education.

Thus it was positive that the Department in 2004 could start a much needed building renovation programme. The building renovation programme comprises a number of improvements in our main civil engineering laboratory, a renovation of the buildings' materials laboratory, and improved ventilation and other safety measures. The building programme is expected to be completed in 2005.

### **Outlook**

The steadily increasing international competition within civil engineering is the most important challenge for BYG•DTU. A recent seminar for employers held by BYG•DTU pinpointed international collaboration and proper reaction to globalisation as the most important activities for the department in the coming years.

In spite of the challenges the basics remain: The Department will maintain focus on selected topics and expand the research activities in order to sustain the research based education. Increased external funding is required to fulfil this goal. A recent report "The Building Sector in the Knowledge Society" submitted by the Danish Ministry of Economic and Business Affairs calls for an increased effort in building

research, unfortunately very little action has hitherto been taken to ensure the associated funding.

"We build the quality of life" is a slogan used by the American Society of Civil Engineers. The true meaning of "quality of life" is debatable, but in spite of this I believe the slogan captures an essence of the work of the civil engineer: To create and make a difference in the physical world that surrounds us, impresses us, and sustains our life.



Jacob Steen Møller  
Ph.D. M.Sc. (Civ.Eng.)  
Head of Department



## Highlights 2004

### **3 March: New database and program for calculating window performance**

Professor Svend Svendsen participates as work package leader in the final meeting in the EU project WinDat (see [www.WinDat.org](http://www.WinDat.org)) on the development of a common European database and program for calculating the energy performance of windows. The project is attended by about 40 research institutes and companies with expertise in glass, glazing units and windows.

### **4 March: Open House at DTU**

The department presented its education programmes to potential students at the annual open house at DTU.

### **10 March: Education Seminar**

The future education at BYG•DTU was the theme of a seminar with employers of our candidates. The meeting facilitated a positive dialogue and the many engaged participants gave very useful viewpoints on how to balance different strategic goals.

### **12 March: Head of Department meets Iraqi minister**

Head of Department Jacob Steen Møller meets Iraqi Minister for Municipalities and Public works Mrs. Nesreen M. Siddeek Berwari to discuss capacity building within civil and architectural engineering.

### **17 March: Presentation in the international standardization organisation**

Professor Svend Svendsen presents results from a large research project on energy efficient buildings at a meeting in international standardization organisation, ISO/TC 163 Thermal performance and energy use in the built environment. The research project has been carried out in cooperation with the Danish building sector. The results of the project are used in the revision of the building code that enforces energy savings of about 30%.

### **30 March: Grants for construction research**

Professor Ole Mejlhede receives 250.000 DKK from Ingeborg and Leo Dannins Foundation to research cracking of high-performance concrete.





### **31 March: Scientific Seminar**

The DANVAK-seminar "Solar Energy Potential of the EU Directive on Building Energy Efficiency" is held at BYG•DTU. Members from the Industry, from The Danish Energy Authorities and from other research institutions participate.

### **22 April: Section leader seminar**

Section leaders meet to discuss university management. Rector Lars Pallesen participates.

### **30 April: DTU 175 years**

Professor Victor Li, visiting professor at BYG•DTU was appointed Dr.Tech. Honoris Causa at the DTU 175 years anniversary festival. At the same event Professor Niels Jørgen Gimsing and Managing Director at COWI Klaus Ostenfelt (member of our Advisory Board) received a gold medal for their extraordinary contribution to bridge construction.

### **13 May: Scientific Seminar**

Mr David Brohn was key speaker on a scientific Seminar on "Intuitive Understanding of Structural Behavior" organized by the Danish Construction and Concrete Institute.

### **17 May: Meeting with Danish Concrete Council**

Professor Ole Mejlhede Jensen, Associate Professors Mette Geiker, Henrik Stang, John Forbes and Head of Department Jacob Steen Møller meet with Danish Concrete Council.

### **1 June: Velux A/S joins BYG•DTU Research project**

Velux takes an active part in supporting the research and development of solar heating for the future as they join the research project "Competitive Solar Heating Systems for Residential Buildings". The research project is co-funded by the Nordic Energy Research.

### **June: Ph.D. summer school on cement and concrete**

The summer school: Phase equilibria and reactions of cement and concrete had 27 participants from nine countries. The summer school was organized by Associate Professor Mette Geiker and sponsored by Knud Højgaard Foundation.





**1-30 June: BYG•DTU organizes international Master course**  
BYG•DTU organizes the international Master course "Solar Energy", which takes place in relation to the international congress Euro-Sun 2004. Students from Norway, Denmark, Austria, Turkey and Germany participate.

**2 June: BYG•DTU field trip**

The annual summer field trip went to Frederiksdal where we enjoyed the glass exhibition at Sophienholm. After a delicious lunch we lost ourselves in kite building.

**20-23 June: BYG•DTU Researchers invited as Keynote Speakers**

Associate Professors Simon Furbo and Louise Jivan Shah are invited as keynote speakers for the international congress EuroSun 2004, which takes place in Freiburg, Germany.

**July-August: ARTEK course in Greenland**

26 students completed their courses in Arctic Technology with a 2½ week programme in Sisimiut.

**2-6 August: Lean Construction Conference**

The conference on Lean Construction received great international attention. The Section for Planning and Management of Building processes was co-organizers of the conference as well as the related summer school.

**August-December: Architectural Engineering students in practical training**

The first group of 25 students started their practice period.

**6 September: DHL-Stafetten**

BYG•DTU participates in DHL-Stafetten in Fælledparken.

**7 September: Grants for research in protection of painted church vaults**

Associate Professor Lisbet Ottosen received 1.4 mill. DKK from Velux Foundation to research in electrochemical removal of damaging salts from painted church vaults





### **26 September: Ph.D. day**

Ph.D. day is the annual event where Ph.D. students present their projects to each other and to the department in general.

### **17 September: Alumnen day**

The Alumnen day was a big event at DTU and at BYG•DTU, thanks to all the former students and colleagues who made this a fun and interesting reunion.

### **12 October**

The Danish Construction Association presents a report on the energy efficiency improvements of the building stock. BYG•DTU is involved in the background work on the report. The BYG•DTU report R-080 Energy Savings in existing and new domestic buildings, documented energy saving potential of 80%.

### **25 October: First working meeting in BYG•DTU's Advisory Board**

The department started a very constructive dialogue with our Advisory Board.

### **21 October: Approval of International Research School**

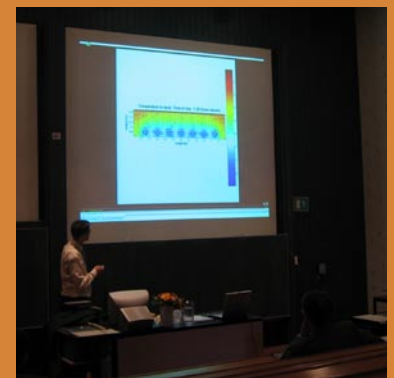
DTU approved the International Research School in Civil Engineering at BYG•DTU (IRS@BYG). Leader of the research school is Professor Stephen Emmitt.

### **4 November Open house at DTU**

BYG•DTU promoted the B. Eng. (Civil Engineering) programme for potential students starting spring 2005.

### **13 December: Visit at Indian Institute of Technology**

Head of Department visits Indian Institute of Technology, New Delhi, to explore potential research and education collaboration.





## Education

***BYG•DTU is the anchor for the following bachelor-programmes: B.Eng in Civil Engineering, B.Eng in Architectural Engineering, B.Eng in Arctic Technology, B.Sc. in Building Technology, and the master programme M.Sc. in Civil Engineering. We contribute to the master programmes of Material Technology, Transport and Logistics, Production and Management, and Energy.***

Planning for the new Bachelor of Science (B.Sc.) programme has initiated a comprehensive revision of our current courses and resulted in the following recommended study plans.

- Construction
- Building energy and services
- Building constructions and materials
- Physical planning and traffic

The process of developing our teaching activities will continue in 2005 in order to start the new Master of Science (M.Sc.) programme in summer 2006.

New courses have been introduced in the Bachelor of Engineering (B.Eng) programme in order to achieve more integrated knowledge of materials and constructions. Other courses have been developed in coordination with the Bachelor of Science (B.Sc.) programme.

The first students at Architectural Engineering (B.Eng.) finished their second year in the summer of 2004. The students had their internship in the fall; however there was a lack of internships with a profile matching Architectural Engineering. For the coming practical training periods about 40 new internships per year need to be organized in collaboration with especially consulting companies.

### Strategic goals - education

- BYG•DTU is recognised for providing relevant, future-oriented M.Sc (engineering) programmes, with a solid academic foundation which can provide a basis for life-long learning.
- The Department contributes to all categories of education: B.Sc, B.Eng, M.Sc, and continuing Master programmes.
- The Department has a simple academic structure geared towards imparting a comprehensive understanding of construction processes, buildings and structures as well as towards training specialists with a view to research and development.
- The Department's course selection is closely coordinated with courses at DTU's other departments, which provide teaching of high relevance to the field of Civil Engineering.
- The Department's courses use state-of-the-art IT tools and attach great importance to project work and synthesis.
- The Department's courses and course structure provide for international student exchange.
- The Department ensures topicality and contact with the business and industry community in the teaching of practice-oriented subjects.

The Arctic Technology (B.Eng.) programme started in 2001 and the second year group came to Denmark in September 2004.

The programme includes 1½ year in Sisimiut, 2 years in Lyngby and ½ year in practice.



## Research

***BYG•DTU conducts research within a well-defined selection of focus areas with key importance to construction processes, buildings structures and services, and urban development. The institute has a strong research environment attracting Danish and foreign Ph.D.-students and visiting researchers.***

### **The Section for Building Materials and Geotechnics**

A new formula was developed for assessment of reduction of strength and stiffness of concrete and reinforcing steel exposed to fire, and data was derived for most concrete and reinforcement applied in practice. A new test series has completed the design data for quenched and self-tempered bars. These new materials data improves design for the load case of fire, which is decisive for the proportions of 20-30 pct of all concrete structures in buildings. The new set of data is a part of a major project providing design methods for concrete structures exposed to fire load

Associate Professor Ole Hede-dal was employed as part of the ongoing efforts to strengthen research in geotechnical engineering. The field is further strengthened through a 1.8 mill. DKK research grant from STVF on "Numerical and

physical modelling of laterally loaded pile in sand subject to cyclic loading"

Visiting Professor Victor Li was appointed Dr.Tech. Honoris Causa for his development of a new family of engineered fibre reinforced cement based materials (ECC) with extreme ductility. These materials are presently being introduced in full scale construction projects around the world, including USA, Korea, Japan and Australia. The section is participating in a global network on ECC technology

The Ph.D. project by Kristian Krappenhøft "Moisture Transport in Wood" was completed. The study focus was on physical-mathematical models and their numerical implementation. The project resulted in valuable contributions to the fundamental understanding of the influence of moisture and load variations on the mechanical properties of wood.

The Ph.D. project by Erik Pram Nielsen "The durability for white Portland cement to chemical attack" was completed. The project was founded entirely by Aalborg Portland A/S.

### **The Section for Building Physics and Services**

The Ph.D. project by Peter Weitzmann "Modelling Building Integrated Heating and Cooling System" was completed. The

project demonstrated the potential for energy savings by use of thermo active cooling systems. The research continues in the test facility, which was built as part of the project - among others in collaboration with COWI A/S.



An analysis of the potential for energy saving in the Danish domestic buildings was carried out, and showed it is possible to reduce the energy consumption of all domestic buildings by 80% in 40 years.

The section continued the research on and development of solar heating systems. Current projects focus on advanced storage technologies, flat plate collectors for solar heating centrals, and evacuated tubular collectors suitable to arctic climate.

The Ph.D. project by Søren Knudsen "Investigation and

Optimization of Heat Storage Tanks for Low-Flow SDHW Systems" was completed. The study was based on a combination of computational and experimental fluid dynamics.

Research in arctic building technology materialized in the construction of a low energy house in Sisimiut, Greenland. A new method for ventilation with heat recovery was tested with promising results.

"Hygrothermal Performance of Whole Buildings" is an STVF project running 2003-2006. The aim is to achieve better knowledge about hygrothermal behaviour of buildings to ensure good indoor climates and to avoid damages caused by moisture.

The Ph.D. project by Eva Møller "Hygrothermal Performance and Soiling of Exterior Building Surfaces" was completed. The project was carried out in collaboration with Birch & Krogh A/S.

### **The Section for Planning and Management of Building Processes**

The section coordinated the activity "Best in Building" under the development programme "Digital Building".

The Ph.D. project by Mikkel Andreas Thomassen "The Economic Organisation of Building Processes - Specialisation and

Coordination in Interfirm Relations" was completed.

The Section strengthened its research base with the announcement of two new positions. The area of facilities management was established through new courses and research activities. Members of the Section have continued to produce books, journal papers and research reports and many are involved in national and international research networks.

A large number of research projects, many of which include collaboration with industry, are ongoing. These include research into safety on building sites, areas of working environment, quality of building site operations, implementation of autonomous workgroups on construction sites, communication in construction teams, value-based management and the implementation of lean construction. A project on partnering has been followed with the development of a management tool "Partnering Performance Indicators".

Work continued on the EU FP 5 projects PETUS (2003-2005) - "Practical Evaluation Tools for Urban Sustainability". The project is concerned with planning methods and decision support systems for cost-, resource- and energy-efficient building.

Work continued on the EU FP5 project INTERMEDIARIES



(2002-2005) - "New Intermediary Services and the Transformation of Urban Water Supply and Wastewater Disposal in Europe". The project is concerned with facility management and interaction with urban infrastructure.

Members of the Section were involved in the organisation of the IGLC 12th Annual Conference on Lean Construction at Helsingør and organised the first international Ph.D. Summer School on lean construction, which followed the main conference.

### The Section for Structural Engineering

The section is in a process of generational alternation and one full professor and two associated professors were employed according to the new section research plan. Another two full and three associate professor positions are to be filled in 2005.

A new research plan identified three research areas:



- Design of civil engineering structures
- Structural performance
- Integrated structural and materials modelling

Collaboration with the industry generated interesting projects: Testing the strengthening of wind turbine towers, testing the robustness of 6 m high glass columns, testing the load carrying capacity of very slender columns made from CRC (Compact Reinforced Composite) a very high strength fibre reinforced concrete material,

and testing the improvement of fatigue life of grinded weldings.

C•PROSAM a new Centre for Protective Structures and Materials was established. The Centre is an open framework established in order to promote and facilitate the cooperation of Danish research activities in this field. Partners: Defence Research Dept., Densit A/S, Risø, NIRAS/DEMEX A/S, Maticon. An industrial PhD-project was initiated at the Centre.

### Strategic goals – research

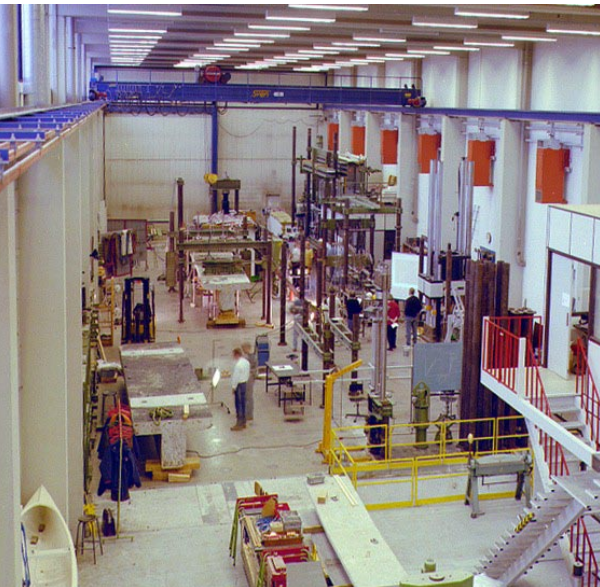
- BYG•DTU conducts research within a well-defined selection of focus areas of key importance for construction processes, buildings and structures.
- All focus areas achieve international research excellence, and the Department is among the best in Europe in its fields.
- Holistically-oriented, interdisciplinary research is conducted through activities and projects as collaborative efforts between several of the Department's focus areas.
- The Department has a strong research environment, which attracts Danish and foreign Ph.D. students and guest researchers, and takes part in the international guest exchange of researchers, Ph.D. students and post-doctorates with leading foreign research environments.
- The Department educates 10-15 Ph.D.s and industry-sponsored researchers annually, distributed among all its focus areas. At least half of these enter into external collaborative relationships.



# Innovation

***BYG•DTU conducts research, development, Ph.d.-projects and student projects in collaboration with companies. We offer in-service training like e.g. Master in Fire Safety and Master in Management of Construction. The Industry contributes to BYG•DTU activities through co-operation agreements, research collaboration, and external lectureships.***

The department has a large Civil Engineering. Laboratory with unique testing facilities.



During 2004 we among others conducted projects on solar heating, tested the capacity of glass constructions, tested carbon fibres for use in satellites equipment and conducted FEM simulation of window profiles for industrial clients.

## Master Education in Fire Safety

The Danish architect Arne Jacobsen was a pioneer introducing function based requirements for building design for his Royal Hotel in Copenhagen, and function based requirements have since become a precondition for the development of the Danish prefabricated industry. But the fire requirements were never formulated as function based, because it was too difficult.

Meanwhile fire technology and structural fire safety design has developed, and Denmark is now introducing function based fire safety design in the building regulations, and a similar development is taking place internationally.

It is foreseen that this development means the greatest innovation of building design for 50 years, because it is now possible to create open plans and structures, which were previously not allowed. The precondition is that the engineers are capable of formulating reasonable function based requirements and making the analyses necessary to document the fulfilment of them. Furthermore a research should be made in order to enhance the available knowledge, and maintain it when building design changes.

BYG•DTU supports this development, offering a Master Education in Fire Safety as a



modular Internet based supplementary education, and is leading in research on structures exposed to fully developed fires.

The master education has become a success, and it is now offered the third time for 25-30 students, and the graduated masters have already used their knowledge creating a number of buildings by means of function based requirements, among which are Nykredit, Fisketorvet and Fields in Copenhagen. A special updating course is made each year for the graduated masters to keep them informed of the recent research and as a forum for them to share their

experiences from practice with colleagues and with DTU. More information: [www.brand.dtu.dk](http://www.brand.dtu.dk).

### **The Master Programme in Management of Construction**

The construction industry has in the last 10 years – in Denmark as well as in many other countries – been criticized for low productivity and poor quality. The construction industry has been described as locked in and insensitive to the needs in the market. However, a report in 2001 from the Danish Building Council showed that the construction industry was undergoing change that pointed towards increased use of prefabrication, integration of the project term, partnering and strategic partnerships, use

of ICT etc. This development calls for new competences.

The target group for the programme is BAs and engineers, architects and others working in all parts of the building industry: construction firms, consulting engineers, architectural firms, clients, organizations, authorities, technical schools etc. The master programme started in January 2003 with 15 participants coming from all areas of the building industry. The second group started in January 2005. More information: [http://www.byg.dtu.dk/subwebs/construction\\_management/index.htm](http://www.byg.dtu.dk/subwebs/construction_management/index.htm)



### **Strategic goals - innovation**

- Within its focus areas, BYG•DTU is the preferred collaborative partner in Denmark for the undertaking of commissioned research in collaborative projects, industrial research projects and research and innovation consortiums.
- The Department has state-of-the-art experimental facilities and expertise at its disposal. These facilities and expertise make up a substantial portion of the Department's activities in the area of innovation.
- The Department permanently houses a number of innovative companies, the activities of which form part of the Department's life in the areas of both research and teaching.



# Organization

**BYG•DTU is organized in sections with a professional identity corresponding to the research focus areas. Joint institute resources are organized in departments.**

## Sections and Departments

- Section for Planning and Management of Building Processes: Associate Professor Sten Bonke.
- Section for Structural Engineering: Associate Professor John Forbes Olesen.
- Section for Building Physics and Services: Associate Professor H. Thorkild Jensen.
- Section for Building Materials and Geotechnics: Associate Professor Henrik Stang.
- Department for Administration and IT: Administration Manager Michael Berthelsen.
- Department for Laboratories and Workshops: Laboratory Manager Jørgen Bjørnbak Hansen.

## Study Programmes and Programme Managers:

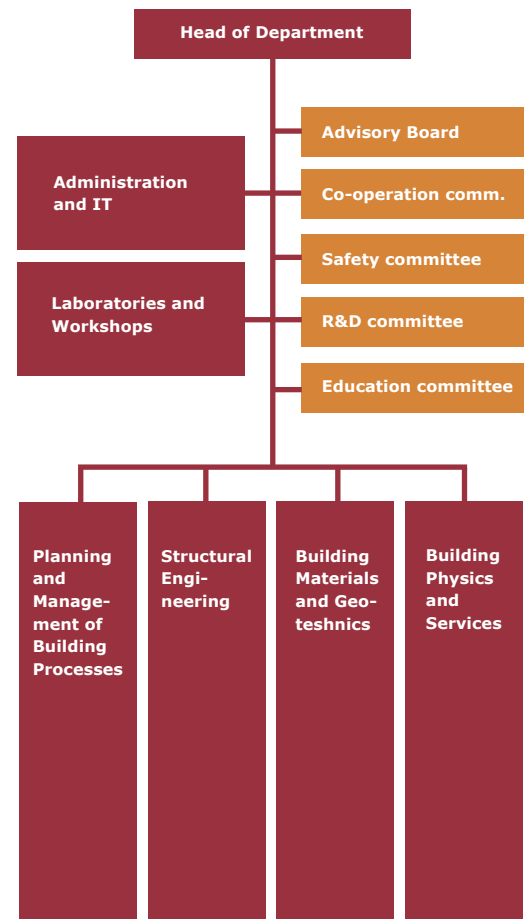
- Civil Engineering (B.Eng.): Associate Professor Ole Mærsk-Møller.
- Architectural Engineering (B.Eng.): Associate Professor Kirsten Christensen.
- Arctic Technology (B.Eng): Associate Professor Egil Borchersen in Greenland. Associate Professor Ole Mærsk-Møller in Denmark.
- Building Technology (B.Sc.): Associate Professor Henning Larsen
- Civil Engineering (M.Sc.): Associate Professor Kristian Hertz.

## BYG•DTU hosts the following centres:

- IRS@BYG, The International Research School in Civil Engineering at BYG•DTU. Research School Leader, Professor Stephen Emmitt.
- ARTEK, Centre for Arctic Technology. Centre Leader, Professor Arne Villumsen.
- C•PROSAM, Centre for Protective Structures and Materials, Centre Leader, M.Sc. Civil Engineer Benjamin Riisgaard.

## The Advisory Board at BYG•DTU:

- Director John Cederberg, Danish Association of Consulting Engineers.
- Director Peter Lundhus, Sund and Belt Partners.
- Managing Director Klaus Ostenfeld, COWI A/S
- Senior Consultant Jørgen Vorsholt, E. Pihl & Søn A.S



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- Associate professor Jeppe Jönsson (structural engineering)
- Associate professor Christos Georgakis (structural engineering)
- Assistant professor Toke R. Nielsen (installations)

**Guests:**

- Dr. Tech. Honoris Causa (DTU), professor Victor Li (Univ. Michigan) 01.03.04-31.08.04
- Professor Bushan Karihaloo (Univ. Cardiff). 06.09.04-05.04.05
- Professor Jason Weiss (Purdue University). 17.05.04-31.10.05
- Professor Hamlin Jennings (North Western Univ.) 01.06.04 - 30.06.04





**Andersen, Elsa ; Shah, Louise Jivan ; Furbo, Simon**

Thermal performance of Danish solar combi systems in practice and in theory. In: Journal of solar energy engineering, vol:126 (2), pp. 744-749 (2004). ASME ISSN: 0199-6231

**Bandler, John W. ; Hailu, Daniel M. ; Madsen, Kaj ; Pedersen, Frank**

A Space-Mapping Interpolating Surrogate Algorithm for Highly Optimized EM-Based Design of Microwave Devices. In: IEEE Transactions on Microwave Theory and Techniques, vol:52 (11), pp. 2593-2600 (2004). IEEE - Institute of Electrical and Electronics Engineers, Inc., 445 Hoes Lane, P.O. Box 1331, Piscataway, NJ, 08855-1331, USA ISSN: 0018-9480

**Bentz, Dale P. ; Jensen, Ole Mejlhede**

Mitigation strategies for autogenous shrinkage cracking. In: Cement & Concrete Composites, vol:26 (6), pp. 677-685 (2004). Elsevier ISSN: 0958-9465

**van Breugel, Klaas ; Koenders, Eddie ; Ye, Guang ; Pietro, Lura**

Modelling of Transport Phenomena at Cement Matrix—Aggregate Interfaces. In: Interface Science, vol:12 (4), pp. 423-431 (2004). Kluwer Academic Publishers ISSN: 0927-7056

**Felby, Claus ; Thygesen, Lisbeth Garbrecht ; Sanadi, Anand ; Barsberg, Søren**

Native lignin for bonding fiber boards - evaluation of bonding mechanisms in boards made from laccase-treated fibers of beech (*Fagus sylvatica*). In: Industrial Crops and Products, vol:20, pp. 181-189 (2004).

**Hansen, Henrik K. ; Ottosen, Lisbeth M. ; Villumsen, Arne**

Electrodialytic removal of cadmium from straw combustion fly ash. In: Journal of Chemical Technology and Biotechnology, vol:79 (7), pp. 789-794 (2004). Compendex ISSN: 02682575

**Hertz, Kristian Dahl**

Reinforcement Data for Fire Safety Design. In: Magazine of Concrete Research, vol:56 (8), pp. 453-459 (2004). Thomas Telford Ltd. ISSN: 0024-9831

**Illum, Klaus ; Meyer, Niels I**

Joint Implementation: Methodology and Policy Considerations. In: Energy Policy, vol:32, pp. 1013-1023 (2004).

**Jakobsen, M. R. ; Fritt-Rasmussen, J. ; Nielsen, S. ; Ottosen, Lisbeth M.**

Electrodialytic removal of cadmium from wastewater sludge. In: Journal of Hazardous Materials, vol:106 (2-3), pp. 127-132 (2004). Elsevier ISSN: 0304-3894

**Kamp, Annette ; Hagedorn-Rasmussen, Peter**

Diversity management in a Danish context : towards a multicultural or segregated working life In: Economic and industrial democracy, vol:25 (4), pp. 525-554 (2004). Sage

**Koch, Christian**

Innovation networking between stability and political dynamics. In: Technovation, vol:24 (9), pp. 729-739 (2004).

**Koch, Christian**

Innovation networking between stability and political dynamics. In: Technovation, vol:24 (9), pp. 729-739 (2004). Elsevier ISSN: 0166-4972

**Krabbenhøft, Kristian ; Bechgaard, C. ; Damkilde, Lars ; Hoffmeyer, Preben**

Finite element simulation of boron diffusion in wooden poles. In: Wood and Fiber Science, pp. 15 (2004).

**Krabbenhøft, Kristian ; Damkilde, Lars**

A model for non-Fickian moisture transfer in wood. In: Materials and Structures, pp. 17 (2004).

**Krabbenhøft, Kristian ; Damkilde, Lars ; Krabbenhøft, S.**

A model for non-Fickian moisture transfer in wood. In: Materials and Structures, vol:37 (273), pp. 615-622 (2004).

**Krabbenhøft, Kristian ; Damkilde, Lars**

Double porosity models for the description of water infiltration in wood. In: Wood Science and Technology, pp. 21 (2004).

**Krabbenhøft, Kristian ; Hoffmeyer, Preben ; Bechgaard, Carl ; Damkilde, Lars**

Finite element analysis of boron diffusion in wooden Poles. In: Wood and Fiber Science, vol:36 (4), pp. 573-584 (2004). SWST

## Journal articles

**Peer reviewed and  
ISI-indexed**

For list of all BYG•DTU  
publications see  
<http://orbit.dtu.dk/app>



Lange, L. ; **Stang, Henrik**

Early-age Stress-crack Opening Relationships for High Performance Concrete. In: Cement and Concrete Composites, vol:26 (5), pp. 563-572 (2004).

**Meyer, Niels I**

Development of Danish Wind Power Market

In: Energy and Environment, vol:15 (4), pp. 657-673 (2004). Multi-Science Publishing Co. ,UK

**Meyer, Niels I**

Distributed Generation and the Problematic Deregulation of Energy Markets in Europe. In: International Journal of Sustainable Energy, vol:23, pp. 217-221 (2004).

**Meyer, Niels I**

Renewable Energy Policy in Denmark. In: Energy for Sustainable Development, vol:8 (1), pp. 25-36 (2004).

**Nielsen, Morten Holtegaard** ; Pratt, Larry ; Helfrich, Karl

Mixing and entrainment in hydraulically driven stratified sill flows. In: Journal of Fluid Mechanics, vol:515, pp. 415-443 (2004). Cambridge University Press ISSN: 0022-1120

**Pedersen, Anne Juul ; Christensen, Iben Vernegren ; Ottosen, Lisbeth M. ; Ribeiro, Alexandra B. ; Villumsen, Arne**

Electrodialytic remediation of CCA treated waste wood in pilot scale. In: Engineering Geology, vol:77, pp. 331-338 (2005). Elsevier

**Shah, Louise Jivan ; Furbo, Simon**

Vertical evacuated tubular collectors utilizing solar radiation from all directions. In: Applied energy, vol:78 (4), pp. 25 (2004). Elsevier

Thomsen, Kirsten Englund ; **Schultz, Jørgen Munthe** ; Poel, Bart

Measured performance of 12 demonstration projects - IEA Task 13 "advanced solar low energy buildings". In: Energy and Buildings, vol:37, pp. 111-119 (2005). Elsevier

**Thygesen, Lisbeth Garbrecht** ; Jørgensen, Kirsten ; Møller, Birger Lindberg ; Engelsen, Søren Balling. Raman spectroscopic analysis of cyanogenic glucosides in plants: development of a Flow Injection Surface-Enhanced Raman Scatter (FI-SERS) method for determination of cyanide. In: Applied Spectroscopy, vol:58 (2), pp. 212-217 (2004).

**Thygesen, Lisbeth Garbrecht** ; Rinnan, Åsmund ; Barsberg, Søren ; Møller, Jens K.S.

Stabilizing the PARAFAC decomposition of fluorescence spectra by insertion of zeros outside the data area. In: Chemometrics and intelligent laboratory systems, vol:71, pp. 97-106 (2004).

**Vejen, Niels Kristian ; Furbo, Simon ; Shah, Louise Jivan**

Development of 12.5 m<sup>2</sup> Solar Collector Panel for Solar Heating Plants. In: Solar Energy Materials and Solar Cells, vol:84/1-4, pp. pp. 205-223 (2004).

Velizarova, E. ; Ribeiro, A. B. ; Mateus, E. ; **Ottosen, Lisbeth M.**

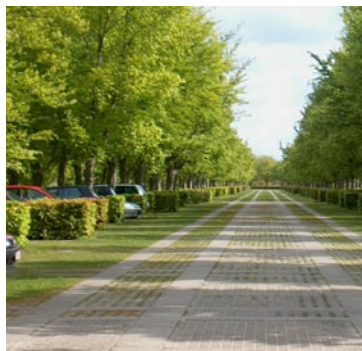
Effect of different extracting solutions on the electrodialytic remediation of CCA-treated wood waste Part I. - Behaviour of Cu and Cr. In: Journal of Hazardous Materials, vol:107 (3), pp. 103-113 (2004). elsevier ISSN: 0304-3894

West, Beverley ; **Emmitt, Stephen**

Functional design? An analysis of new speculative housing in the UK. In: Design Studies, vol:25 (3), pp. 275-299 (2004). Elsevier ISSN: 0142-694X

**Østergaard, Lennart** ; Lange, David A. ; **Stang, Henrik**

Early age stress-crack opening relationships for high performance concrete. In: Cement and Concrete Composites, vol:26 (5), pp. 563-572 (2004). Elsevier ISSN: 0958-9465



## Journal articles

### *Peer reviewed*

**Agerskov, Henning** ; Hansen, Anders V. ; **Bjørnbak-Hansen, Jørgen** ; **Olesen, John Forbes**

Improvement of Fatigue Life of Welded Structural Components of a Large Two-Stroke Diesel Engine by Grinding

In: *Welding in the World, Journal of the International Institute of Welding*, vol:48 (5/6), pp. 56-60 (2004). International Institute of Welding ISSN: 0043-2288

**Elle, Morten** ; **Engelmark, Jesper** ; **Jørgensen, Bo** ; **Kock, Christian** ; **Nielsen, Susanne Balslev** ; **Vestergaard, Flemming**

Managing facilities in a Scandinavian manner: : creating a research agenda. In: *Facilities*, vol:22 (11/12), pp. 311-316 (2004). Emerald Group ISSN: 0236-2772

Hansen, Anders V. ; **Olesen, John Forbes** ; **Agerskov, Henning**

An Investigation on the Influence of Root Defects on the Fatigue Life of the Welded Structure of a Large Two-Stroke Diesel Engine. In: *Welding in the World, Journal of the International Institute of Welding*, vol:48 (5/6), pp. 46-55 (2004). International Institute of Welding ISSN: 0043-2288

**Jensen, Karsten Ingerslev** ; **Schultz, Jørgen Munthe** ; **Kristiansen, Finn Harken**

Development of windows based on highly insulating aerogel glazings. Presented at: 7th International Symposium on Aerogels. Alexandria, Virginia, USA, 2003. In: *Journal of Non-Crystalline Solids : Aerogels 7. Proceedings of the 7th International Symposium on Aerogels*, vol:350, pp. 351-357 (2004). Elsevier

**Kamp, Annette** ; Hagedorn-Rasmussen, Peter

Mangfoldighed på danske arbejdspladser – byrde eller styrke. In: *Tidsskrift for arbejdsliv*, vol:2, pp. 8-23 (2004). Odense Universitetsforlag

**Koch, Christian**

Can Knowledge Management Become Global? - Consulting Engineering Companies in the Knowledge Economy. In: *Journal of Construction Research*, vol:5 (1), pp. 107-124 (2004). World Scientific ISSN: 1609-9451

Leimer, Hans-Peter ; Bednar, Thomas ; Dreyer, Jürgen ; Künzel, Hartwig M. ; Palier, Pierre ; **Rode, Carsten** ; Teichmann-Konarzewski, Jacek.

Anforderungen an Umkehrdächer mit Trennlage : Erläuterungen zur Anwendung von EN ISO 6946. In: *Bauphysik*, pp. 233-239 (2004).

**Noyé, Peter Anders** ; **Laustsen, Jacob Birck** ; **Svendsen, Svend**

Calculating the heat transfer coefficient of frame profiles with internal cavities. In: *The Nordic Journal of Building Physics*, vol:3, pp. 1-7 (2004). Royal Institute of Technology, Brinellvägen 34, SE-100 44 Stockholm, Sweden ISSN: 1402-5728

**Rode, Carsten** ; Mendes, Nathan ; K., Grau

Evaluation of Moisture Buffer Effects by Performing Whole-Building Simulations. In: *ASHRAE Transactions*, vol:110 (2), pp. 783-794 (2004). American Society of Heating Refrigerating Air-Conditioning Engineers ISSN: 0001-2505

**Rode, Carsten** ; Holm, Andreas ; Padfield, Tim

A Review of Humidity Buffering in the Interior Spaces. In: *Journal of Thermal Envelope and Building Science*, vol:27 (3), pp. 221-226 (2004). Sage ISSN: 1097-1963

**Rose, Jørgen** ; **Svendsen, Svend**

Validating Numerical Calculations against Guarded Hot Box Measurements. In: *Nordic Journal of Building Physics*, vol:4, pp. 9 (2004).

Wilhite, Harold ; **Norgard, Jorgen Stig**

Equating Efficiency with Reduction: A Self-Deception in Energy Policy. In: *Energy & Environment*, vol:15 (6), pp. 991-1010 (2004). Multi-Science

## Ph.D. projects

### **Dammann, Sven**

Environmental indicators for buildings: A search for a common language, 2004 (pp. 309)  
ISBN : 87-563-1209-1

### **Eir, Asger**

Construction informatics - Issues in engineering, computer science and ontology, 2004

### **Knudsen, Søren**

Investigation and optimisation of heat storage tanks for low-flow SDHW systems, 200403  
(pp. 271) ISBN : 87-7877-138-2

### **Krabbenhøft, Kristian**

Moisture Transport in Wood : A Study of Physical-Mathematical Models and their Numerical Implementation, 2004. (pp. 172)

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Properties of Plant Fiber Yarn Polymer Composites : An Experimental Study, 2004, (pp. 197)  
ISBN : 87-7877-145-5

### **Nielsen, Erik Pram**

The durability of white Portland cement to chemical attack, 2004

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The economic organisation of building processes. On specialisation and coordination in interfirm relations, 2004 (pp. 371) ISBN 87-7877-158-7

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Modelling building integrated heating and cooling systems, 200410 ISBN : 87-7877-152-2

## Conference papers

### ***Peer reviewed and published in book or proceeding***

### **Andersen, Elsa ; Jordan, Ulrike ; Shah, Louise Jivan ; Furbo, Simon**

Investigation of the Solvis stratification inlet pipe for solar tanks. Presented at: Eurosun. Germany, Freiburg, 2004. In: Proceedings Eurosun ; 1, pp. 076-085 - Germany : PSE GmbH, 2004 ISBN: 3-9809656-1-9

### **Andersen, Elsa ; Lund, Hans ; Furbo, Simon**

The influence of the solar radiation model on the calculated solar radiation from a horizontal surface to a tilted surface. Presented at: Eurosun. Germany, Freiburg, 2004. In: Proceedings Eurosun ; 3, pp. 747-756 - Germany : PSE GmbH ISBN: 3-9809656-3-5

### **Asferg, Jesper L. ; Poulsen, Peter Noe ; Nielsen, Leif Otto**

A simplified XFEM formulation for cohesive crack modeling. Presented at: 17th Nordic Seminar on Computational Mechanics.. Stockholm, Sweden, 2004. In: NSCM-17: Proceedings of the 17th Nordic Seminar on Computational Mechanics, pp. 35-38 - Stockholm, Sweden, 2004

### **Asferg, Jesper L. ; Poulsen, Peter Noe ; Nielsen, Leif Otto**

Modeling of Cohesive Crack Applying XFEM. Presented at: 5th International PhD Symposium in Civil Engineering. Delft, The Netherlands, 2004. In: 5th International PhD Symposium in Civil Engineering ; Vol. 2, pp. 1261-1269 - London, UK : A.A. Balkema Publishers, 2004 ISBN: 9058096785

### **Astrup, Thomas G. ; Clorius, Christian Odin ; Damkilde, Lars ; Hoffmeyer, Preben**

Size Effect in Tension Perpendicular to Grain. Presented at: Third International Conference on the European Society for Wood Mechanics. Vila Real, Portugal, 2004. In: Third International Conference on the European Society for Wood Mechanics, pp. 159-166 - Portugal : UTAD, Portugal, 2004

### **Astrup, Thomas ; Clorius, Christian Odin ; Hoffmeyer, Preben ; Damkilde, Lars**

Size effect in tension perpendicular to grain. Presented at: Third International Conference of the European Society for Wood Mechanics. Vila Real, Portugal, 2004. In: Proceedings of Third International Conference of the European Society for Wood Mechanics, pp. 159 - 166

Bandler, John ; Cheng, Qingsha ; Dakrouy, Sameh ; Hailu, Daniel ; Madsen, Kaj ; Mohamed, Ahmed ; **Pedersen, Frank.**

Space mapping interpolating surrogates for highly optimized EM-based design of microwave devices. Presented at: 2004 International Microwave Symposium. Fort Worth, Texas, USA, 2004. In: 2004 IEEE MTT-S International Microwave Symposium Digest, pp. 1565-1568 ISBN: 0-7803-8331-1

**Bonke, Sten** ; Misfeldt, Esben

Quality Control in Lean Construction. In: 12th Annual Conference on Lean Construction, pp. 803-817 - Copenhagen : Lean construction - DK, 2004 ISBN: 87-7756-732-3

Brookfield, Elizabeth ; **Emmitt, Stephen** ; Hill, Robert ; Scaysbrook, Steve

The architectural technologist's role in linking lean design with lean construction. Presented at: IGLC 12th Annual Conference on Lean Construction. Helsingør, Denmark, 2004. In: Proceedings of 12th Annual Conference on Lean Construction, pp. 375-387 - Denmark : IGLC, 2004

**Clorius, Christian Odin** ; Pedersen, Martin Uhre ; **Hoffmeyer, Preben** ; Damkilde, Lars

Fatigue in tension perpendicular to grain. Presented at: Third International Conference on the European Society for Wood Mechanics. Vila Real, Portugal, 2004. In: Third International Conference on the European Society for Wood Mechanics, pp. 85-94 - Portugal : UTAD, Portugal, 2004

**Elle, Morten** ; **Jørgensen, Bo** ; **Koch, Christian** ; **Nielsen, Susanne Balslev**

Managing facilities in an Scandinavian manner : creating a research agenda. Presented at: European Facilities Management Conference. Copenhagen, 2004. In: Proceedings of the third European research symposium in Facilities Management, pp. 60-68 - Trondheim, Norway : Norwegian University of Science and Technology, 2004 ISBN: 82-7551-028-7

**Elle, Morten** ; **Nielsen, Susanne Balslev** ; **Hoffmann, Birgitte** ; **Jensen, Jesper Ole**

The Seven Challenges of Sustainable Cities. Presented at: Sustainable Urban Infrastructure. Trento, Italy, 2003. In: Sustainable Urban Infrastructure : approaches - solutions - methods, pp. 379-387 - Trento, Italy : TEMI Editrice, 2004 ISBN: 88-85114-80-6

**Emmitt, Stephen** ; Christoffersen, Anders Kirk ; **Sander, Dag**

Design Management : a value based approach. Presented at: ARCOM 20th Annual Conference. Edinburgh, Scotland, 2004. In: Proceedings of ARCOM 20th Annual Conference, pp. 175-184 - Edinburgh : ARCOM, 2004

**Emmitt, Stephen** ; Gorse, Christopher

Management and design team communication. Presented at: Responding to Change. Leeds, UK, 2004. In: Responding to Change : Proceedings of COBRA Annual Conference - Leeds : RICS, 2004

**Emmitt, Stephen** ; Johnson, Martin

Observing designers : disparate values and the realisation of design intent. Presented at: Building for the Future. Toronto, Canada, 2004. In: Building for the Future : Proceedings of CIB World Building Congress, Toronto, pp. Paper 823 - Toronto : CIB, 2004

**Emmitt, Stephen** ; Sander, Dag ; Christoffersen, Anders Kirk

Implementing value through lean design. Presented at: IGLC Annual Conference on Lean Construction. Helsingør, Denmark, 2004. In: Proceedings of 12th Annual Conference on Lean Construction, pp. 361-374 - Denmark : IGLC, 2004

**Ferreira, Celia** ; Ribeiro, Alexandra B. ; **Ottosen, Lisbeth M.**

Treatment of MSW fly ashes using the electrodialytic remediation technique. Presented at: WASTE MANAGEMENT 2004. Rhodes, Greece, 2004. In: Waste Management and the Environment II : Second International Conference on Waste Management and the Environment, pp. 65-75 ISBN: 18-53-12738-8

**Furbo, Simon** ; **Andersen, Elsa** ; **Thür, Alexander** ; **Shah, Louise Jivan** ; Andersen, Karin Dyhr

Advantages by discharge from different levels in solar storage tanks. In: EuroSun 2004 14. Intern. Sonnenforum Proceedings ; 1, pp. 282-291 , 2004

**Furbo, Simon** ; **Knudsen, Søren**

Low flow SDHW systems based on mantle tanks - recent findings. In: EuroSun 2004 14. Intern. Sonnenforum ; 1, pp. 272-281

**Furbo, Simon** ; **Shah, Louise Jivan** ; Overvad Jensen, Louise ; **Larsen, Esben** ; Olsson, Göran

Advantages by utilizing antireflection treated glass covers for PV modules. In: EuroSun 2004. 14. Intern. Sonnenforum Proceedings ; 3, pp. 112-121 , 2004

**Geiker, Metter Rica** ; Bentz, Dale P. ; **Jensen, Ole Mejlhede**

Mitigating Autogenous Shrinkage by Internal Curing. Presented at: High-Performance Structural Lightweight Concrete. Phoenix, Arizona, 2002. In: High-Performance Structural Lightweight Concrete, pp. i-vi, 1-202 ; Holm, Thomas A. - 1 ed. - Farmington Hills, Michigan, USA : American Concrete Institute, 2004 ISBN: 0-87031-138-7



Gudum, Charlotte ; **Rode, Carsten**

Moisture Transport by Convection in Lightweight Exterior Facades. Presented at: Performance of Exterior Envelopes of Whole Buildings IX. Clearwater Beach, FL, USA, 2004. In: Performance of Exterior Envelopes of Whole Buildings IX : International Conference - Oak Ridge, TN, USA : Oak Ridge National Laboratory

Jackson, Peter Graham ; Steenfelt, Jørgen S. ; **Foged, Niels Nielsen** ; Hartlén, Jan

Evaluation of Bryozoan limestone properties based on in-situ and laboratory element tests Presented at: 2nd International Conference on Site Characterization. Porto, Portugal, 2004 In: Geotechnical and Geophysical Site Characterization ; 2, pp. 1813-1820 , 2004 ISBN: 90 5966 011 0

**Jordan, Ulrike ; Furbo, Simon**

Impact of inlet devices on the thermal stratification of a storage tank. In: EuroSun 2004. 14. Intern. Sonnenforum ; 1, pp. 365-374

**Jørgensen, Bo ; Emmitt, Stephen ; Bonke, Sten**

Integrating (lean) design and construction : upstream and downstream values. Presented at: Building for the Future. Toronto, Canada, 2004. In: Building for the Future : Proceedings of CIB World Building Congress, Toronto, pp. Paper 824 - Toronto : CIB, 2004

**Jørgensen, Bo ; Emmitt, Stephen ; Bonke, Sten**

Revealing Cultures and Sub-cultures During the Implementation of Lean Construction. In: 12th Annual Conference on Lean Construction, pp. 141-154 - Copenhagen : Lean Construction - DK, 2004 ISBN: 87-7756-732-3

**Jørgensen, Bo ; Emmitt, Stephen ; Bonke, Sten**

Revealing cultures and sub-cultures during the implementation of lean construction. Presented at: IGLC - Annual Conference on Lean Construction. Helsingør, Denmark, 2004. In: Proceedings of 12th Annual Conference on Lean Construction, pp. 141-153 - Denmark : IGLC, 2004

**Jørgensen, Bo ; Emmitt, Stephen ; Bonke, Sten**

Studying Culturing Issues : The Implementation of Facilitated Process-oriented Cooperation In: ARCOM 20th Annual Conference, pp. 957-965 - Reading : ARCOM, 2004 ISBN: 0-9534161-94

Jørgensen, Bo ; **Emmitt, Stephen ; Bonke, Sten**

Studying cultural issues : the implementation of facilitated process-orientated cooperation Presented at: ARCOM 20th Annual Conference. Edinburgh, Scotland, 2004. In: Proceedings of ARCOM 20th Annual Conference, pp. 957-964 - Edinburgh : ARCOM, 2004

**Jørgensen, Ulrik ; Hoffmann, Birgitte**

What is to be feared? Vulnerabilities, Precautions and Preparedness in Extreme Spaces – Making a Living and Building Society in Arctic Greenland. Presented at: Urban Vulnerability and Network Failure. University of Salford, Manchester. In: Urban Vulnerability and Network Failure, pp. [16 pp.] (2004), 2004 , 2004

**Kjeldsen, Ane Mette ; Bergström, Lennart ; Geiker, Mette Rica**

Centrifugal consolidation of MgO-suspensions : The influence of superplasticizers on particle packing. In: Proceedings 13th Nordic Rheology Conference

**Kjeldsen, Ane Mette ; Geiker, Mette Rica ; Stang, Henrik ; Hansen, Kurt Kielsgaard**

Modeling the packing of cement-based materials. In: Proceedings 5th International PhD Symposium

**Koch, Christian**

Aligning ERP and Business Strategy after going live. Presented at: Information Research Management Association, International Conference. New Orleans, 2004. In: Proceedings : Information Research Management Association, International Conference, pp. 1084-1086 - 1 ed. - New Orleans : IRMA, 2004

**Koch, Christian**

Hard Hats, Octopuses and Rubber Boots- Operational Managers in Building Processes. In: Operation Management as a Change Agent : Proceedings the 11th international Conference European Operations Management Association (EurOMA) . ; 2 - 1 ed. - Fontainebleau : INSEAD, 2004

**Koch, Christian**

Managing Projects with the Public, -bringing Partnering, Contracts and Financing together in Building Public Services. Presented at: Operation Management as a Change Agent. Fontainebleau, 2004. In: Operation Management as a Change Agent ; 2 / Author: Buser, Martine - 1 ed. - Fontainebleau : INSEAD, 2004





**Koch, Christian**

Operations Management on The Construction Site : Developing a human resource and knowledge oriented alternative to lean construction. In: Proceedings of the Twentieth Annual Conference of Association of Researchers in Construction Management ; 2, pp. 1017-1027 - 1 ed. - Reading : ARCOM, 2004 ISBN: 0 9534161 9 4 (2 vols)

**Koch, Christian**

Operations Strategy under Chaos –Lessons to be learned from a new Paradigm. Presented at: Operation Management as a Change Agent. Fontainebleu, 2004. In: Operation Management as a Change Agent. Proceedings the 11th international Conference European Operations Management Association ; 2 - 1 ed. - Fontainebleu : INSEAD, 2004

**Koch, Christian**

The Octopus effect of Generic Software – The Case of ERP. Presented at: Learn IT, Know IT, Move IT. In: Learn IT, Know IT, Move IT : Proceedings IRIS 27, pp. 1-22 - 1 ed. - Falkenberg : IRIS the association of Information Systems Research in Scandinavia, 2004

**Koch, Christian ; Haugen, Tore**

An IT R&D-programme without new code?! –State driven IT-development in Denmark  
In: Proceedings of the Twentieth Annual Conference of Association of Researchers in Construction Management. ; 1, pp. 579-586 - 1 ed. - Reading : ARCOM, 2004 ISBN: 0 9534161 9 4

**Li, Victor ; Stang, Henrik**

Elevating FRC Material Ductility to Infrastructure Durability. Presented at: Fibre-Reinforced Concretes, BEFIB 2004. In: Proceedings of the Sixth International RILEM Symposium, pp. 171-186 RILEM Publications S.A.R.L., 2004

**Löfgren, Ingemar ; Stang, Henrik ; Olesen, John Forbes**

Wedge Splitting Test - A Test to Determine Fracture Properties of FRC. Presented at: Fibre-Reinforced Concretes, BEFIB 2004. In: Proceedings of the Sixth International RILEM Symposium, pp. 379-388 RILEM Publications S.A.R.L., 2004

**Meyer, Niels I**

Experiences from Liberalisation of European Energy Markets. Presented at: World Wind Energy Conference 2004. Beijing, China, 2004. In: Proc. of World Wind Energy Conference 2004, Beijing, China

**Mualla, Imad H. ; Nielsen, Leif Otto ; Iwai, Yuuichi**

Seismic isolation with a new friction damping system : Part 2, Testing and applications. In: JSSI 10th Anniversary Symposium - Yokohama : Japan Society of Seismic Isolation, 2004

**Møller, Eva ; Rode, Carsten ; Christoffersen, Lars D.**

Water and Dirt Repellent Treatments for Building Surfaces. Presented at: Performance of Exterior Envelopes of Whole Buildings IX. Clearwater Beach, FL, USA, 2004. In: Performance of Exterior Envelopes of Whole Buildings IX : International Conference - Oak Ridge, TN, USA : Oak Ridge National Laboratory, 2004

**Møller, Jacob Steen**

Strategies for Research, Education, and Innovation, A University's Considerations. Presented at: ECCREDI & E-CORE Conference: Building for a European Future. Maastricht, The Netherlands, 2004. In: Building for a European Future : Strategies and Alliances for Construction Innovation ; Conference Proceedings, Vol.2, pp. 377-389 - Brussels : ECCREDI, 2004

**Nielsen, Leif Otto ; Mualla, Imad H. ; Iwai, Yuuichi**

Seismic isolation with a new friction-viscoelastic damping system. In: 13th World Conference on Earthquake Engineering ; Paper No. 249 - Vancouver : 13 WCEE, 2004

**Nielsen, Leif Otto ; Mualla, Imad H. ; Iwai, Yuuichi**

Seismic isolation with a new friction damping system : Part 1, Theory. In: JSSI 10th Anniversary Symposium - Yokohama : Japan Society of Seismic Isolation, 2004

**Nielsen, Susanne Balslev ; Elle, Morten ; Hoffmann, Birgitte ; Jensen, Jesper Ole**

Sustainable Facilities Management : Lessons to be learned from the Danish public housing  
Presented at: European Facilities Management Conference 2004. Copenhagen, 2004  
In: Proceedings of the third European research symposium in Facilities Management, pp. 7-15 - Trondheim, Norway : Norwegian University of Science and Technology, 2004 ISBN: 82-7551-028-7

**Ottosen, Lisbeth M. ; Pedersen, Anne Juul ; Christensen, Iben Vernegren**

Characterization of residues from thermal treatment of CCA impregnated wood : Chemical and electrochemical extraction. Presented at: Environmental Impacts of Preservative-Treated Wood. Orlando, Florida, USA, 2004. In: Environmental Impacts of Preservative-Treated Wood : February 8-11, 2004, Orlando, USA. ; 13 pages. Cd-rom

**Pedersen, Anne Juul ; Ottosen, Lisbeth M. ; Simonsen, Peter ; Christensen, Terkel**  
Electrodialytic removal of Cd from biomass combustion fly ash : A new approach for sustainable re-cycling of bio ashes. Presented at: 2nd World conference and Exhibition on Biomass for Energy, Industry and Climate Protection. Rome, Italy, 2004. In: Second World Biomass Conference. Biomass for Energy, Industry and Climate Protection : Proceedings of the World Conference held in Rome, Italy, 10-14 May 2004 ; II, pp. 2007 - 2010

**Peuhkuri, Ruut Hannele ; Rode, Carsten ; Hansen, Kurt Kielsgaard**  
Moisture buffer capacity of different insulation materials. Presented at: Performance of Exterior Envelopes of Whole Buildings IX. Clearwater, Florida, 2004. In: Performance of Exterior Envelopes of Whole Buildings IX : International Conference, pp. 14 pages  
**Pietro, Lura ; Bentz, Dale P. ; Lange, David A. ; Kovler, Konstantin ; Bentur, Arnon**  
Pumice aggregates for internal water curing. Presented at: Int. RILEM Symp. on Concrete Science and Engineering. Northwestern University, Evanston, Illinois, USA, 2004. In: PRO 36: Proc. Int. RILEM Symp. on Concrete Science and Engineering : A Tribute to Arnon Bentur, pp. 137-151 - 1 ed. - Haifa : RILEM Publications S.A.R.L., 2004 ISBN: 2-912143-46-2

**Pietro, Lura ; Ye, Guang ; van Breugel, Klaas**  
Effect of Cement Type on Autogenous Deformation of Cement-Based Materials. In: Autogenous Deformation of Concrete, ACI SP-220, pp. 57-68 - 1 ed. - Farmington Hills, Michigan : American Concrete Institute, 2004 ISBN: 0-87031-143-3

**Rode, Carsten ; Clorius, Christian Odin**  
Modeling of Moisture Transport in Wood with Hysteresis and Temperature Dependent Sorption Characteristics. Presented at: Performance of Exterior Envelopes of Whole Buildings IX. Clearwater Beach, FL, USA, 2004. In: Performance of Exterior Envelopes of Whole Buildings IX : International Conference - Oak Ridge, TN, USA : Oak Ridge National Laboratory

**Rode, Carsten ; Mendes, Nathan ; Grau, Karl**  
Evaluation of Moisture Buffer Effects by Performing Whole-Building Simulations. Presented at: ASHRAE Annual Meeting. Nashville, TN, 2004. In: ASHRAE Annual Meeting : American Society of Heating, Refrigerating and Air-Conditioning Engineers

**Schultz, Jørgen Munthe ; Furbo, Simon**  
Heat of fusion storage systems for combined solar systems in low energy buildings. Presented at: EuroSun 2004. Freiburg, Germany, 2004. In: Eurosun 2004 ; 1, pp. 638-646 ISBN: 3-9809656-1-9

**Schultz, Jørgen Munthe ; Jensen, Karsten Ingerslev ; Kristiansen, Finn Harken**  
Super insulating aerogel glazing. Presented at: Eurosun 2004. Freiburg, Germany, 2004  
In: EuroSun 2004 : Proceedings ; 2, pp. 867-874 ISBN: 3-9809656-2-7

**Shah, Louise Jivan ; Furbo, Simon**  
New TRNSYS model of Evacuated Tubular Collector with Cylindrical. Presented at: Eurosun 2004. Freiburg, Germany, 20-23/6 2004. In: Proceedings of the Eurosun 2004 Conference, pp. 1/355-1/364 ISBN: 3-9809656-1-9

**Simonsen, Rolf ; Bonke, Sten ; Walløe, Pernille**  
Management Innovation Brokers. In: 12th Annual Conference on Lean Construction, pp. 859-872 - Copenhagen : Lean Construction - DK, 2004 ISBN: 87-7756-732-3

**Stang, Henrik**  
Toughness in Testing and Design, the FRC Experience. In: Fracture Mechanics of Concrete Structures, pp. 61-70 Ia-FraMCoS, 2004

**Stang, Henrik ; Li, Victor**  
Classification of Fiber Reinforced Cementitious Materials for Structural Applications. Presented at: Fibre-Reinforced Concretes, BEFIB 2004, 2004. In: Proceedings of the Sixth International ROILEM Symposium RILEM Publications S.A.R.L. 2004

Svennberg, Kaisa ; **Hedegaard, Lone Grønbaek ; Rode, Carsten**  
Moisture Buffer Performance of a Fully Furnished Room. Presented at: Moisture Buffer Performance of a Fully Furnished Room. Clearwater, Florida, 2004. In: Performance of the Exterior Envelopes of Whole Buildings IX , 2004

**Sørensen, Lars Schiøtt**  
A new way to estimate the evacuation time for people involved in a building fire  
Presented at: 5th International Conference on Performance-Based Codes and Fire Safety Design Methods. European Commission Facilities, Luxembourg, 2004. In: Proceedings. 5th International Conference on Performance-Based Codes and Fire Safety Design Methods : 6-8 October 2004. European Commission Facilities Luxembourg ; 1. SFPE, pp. 434-443 - 1 ed. - Bethesda, MD 20814, USA : Society of Fire Protection Engineers, 2004

**Thrane, Lars Nyholm ; Geiker, Mette Rica ; Stang, Henrik ; Glavind, M.**  
 Axi-Symmetric Simulation of the Slump Flow Test for Self-Compacting Concrete. Presented at: 5th International PhD Symposium in Civil Engineering. In: 5th International PhD Symposium in Civil Engineering ; 2, pp. 1503-1511 Taylor and Francis Group, London

**Thrane, Lars Nyholm ; Szabo, Peter ; Geiker, Mette Rica ; Glavind, M. ; Stang, Henrik**  
 Simulation of the Test Method "L-Box" for Self-Compacting Concrete. In: Annual Transactions of the Nordic Rheology Society 1503- ; 2, pp. 1503-1511

**Thrane, Lars Nyholm ; Szabo, Peter ; Geiker, Mette Rica ; Glavind, M. ; Stang, Henrik**  
 Simulation of the Test Method "L-Box" for Self-Compacting Concrete  
 In: Annual Transactions of the Nordic Rheology Society ; 12, pp. 47-54 - Nordic Rheology Society, 2004

Thrane, Lars Nyholm ; **Szabo, Peter ; Geiker, Mette Rica ; Stang, Henrik ; Glavind, Mette**  
 Axi-symmetric simulations of the slump flow test for self-compacting concrete. In: Proceedings 5th International PhD Symposium

Thrane, Lars Nyholm ; **Szabo, Peter ; Geiker, Mette Rica ; Stang, Henrik ; Glavind, Mette**  
 Simulation of test method "L-Box" for self-compacting concrete. In: Proceedings, 13th Nordic Rheology Conference

**Walter, Rasmus ; Li, Victor ; Stang, Henrik**  
 Comparison of FRC and ECC in a Composite Bridge Deck. Presented at: 5th International PhD Symposium in Civil Engineering. Delft, The Netherlands, 2004. In: 5th International PhD Symposium in Civil Engineering ; Blaauwendraad, Johan ; Scarpas, Tom ; Snijder, Bert - 1 ed. - The Netherlands : A.A. Balkema Publishers, 2004 ISBN: 90-5809-676-9

**Walter, Rasmus ; Gimsing, Niels Jørgen ; Stang, Henrik**  
 Composite steel-concrete orthotropic bridge deck. Presented at: 10 th Nordic Steel Construction Conference. Copenhagen, Denmark, 2004. In: 10th Nordic Steel Construction Conference - 1 ed. - Denmark : Danish Steel Institute, 2004

**Walter, Rasmus ; Jansen, Bjarke H. ; Østergaard, Morten R. ; Olesen, John Forbes**  
 Experimental investigation of fatigue in a steel-concrete interface. Presented at: 5th International Conference on Fracture Mechanics of Concrete and Concrete Structures. Vail, Colorado, USA, 2005. In: Fracture Mechanics of Concrete Structures - 1 ed. - USA : Ia-FraMCoS, 2004 ISBN: 08-70-31135-2

**Østergaard, Lennart ; Olesen, John Forbes**  
 Comparative study of fracture mechanical test methods for concrete. In: Fracture Mechanics of Concrete Structures ; 1, pp. 455-462 / Editor: Li, Victor - 1 ed. - USA : Ia-FraMCoS, 2004 ISBN: 08-70-31135-2

Carlsson, Monica ; **Hoffmann, Birgitte**  
 Samarbejde om Bæredygtig Udvikling : Nye perspektiver på samarbejde mellem skolen og eksterne aktører 1 ed. - København : Danmarks Pædagogiske Universitets Forlag, 2004 (pp. 189) ISBN : 87-7613-056-8

**Jensen, Ole Mejlhede ; Bentz, Dale P. ; Lura, Pietro**  
 Autogenous Deformation of Concrete 1 ed. - Farmington Hills, Michigan : American Concrete Institute, 2004. (pp. i-vi, 1-202) ISBN : 0-87031-143-3

**Kamp, Annette ; Bottrup, Pernille ; Larsen, Alex**  
 Det multikulturelle arbejdsliv : special issue of Journal of Working Life Copenhagen : Odense universitetsforlag, 2004, (pp. 118)



## Books

# Book Chapters

Carlsson, Monica ; **Hoffmann, Birgitte**

Netværkssamfundet - nye muligheder og vilkår for samarbejde

In: Samarbejde om Bæredygtig Udvikling : Nye perspektiver på samarbejde mellem skole og eksterne aktører, pp. 11-22 - 1 ed. - København : Danmarks Pædagogiske Universitets Forlag, 2004 ISBN: 87-7613-056-8

Carlsson, Monica ; **Hoffmann, Birgitte**

Udfordringer i samarbejdet mellem skolen og eksterne aktører i energi- og miljøundervisningen

In: Samarbejde om Bæredygtig Udvikling : Nye perspektiver på samarbejde mellem skole og eksterne aktører, pp. 145-164 - 1 ed. - København : Danmarks Pædagogiske Universitets Forlag, 2004 ISBN: 87-7613-056-8

**Elle, Morten**

Billeder af en bæredygtig fremtid

In: Samarbejde om bæredygtig udvikling : Nye perspektiver på samarbejde mellem skole og eksterne aktører, pp. 41 - 54 - Copenhagen : Danish University of Education Press, 2004 ISBN: 87-76-13056-8

**Holck, Ole**

Ventilation Rate Testing Procedure

In: Performance and Durability Assessment: : Optical Materials for Solar Thermal Systems ; Part 5: Methods for reducing Environmental Stress in Solar Collectors, pp. 327-335 - Oxford : Elsevier, 2004 ISBN: 0-08-044401-6

**Holck, Ole ;** Heck, M. ; Köhl, Michael

Correlation between Microclimate and Macroclimate

In: Performance and Durability Assessment: : Optical Materials for Solar Thermal Systems ; Part 3: Environmental Stress Conditions, pp. 125-138 - Oxford : Elsevier, 2004 ISBN: 0-08-044401-6

**Holck, Ole ; Svendsen, Svend**

Guidelines for Limiting Environmental Stress Factors in Glazed, Ventilated Solar Collectors

In: Performance and Durability Assessment: : Optical Materials for Solar Thermal Systems ; Part 5: Methods for reducing Environmental Stress in Solar Collectors, pp. 289-297 - Oxford : Elsevier, 2004 ISBN: 0-08-044401-6

**Holck, Ole ; Svendsen, Svend**

Modeling of Microclimates

In: Performance and Durability Assessment: : Optical Materials for Solar Thermal Systems ; Part 5: Methods for reducing Environmental Stress in Solar Collectors, pp. 297-326 - Oxford : Elsevier, 2004 ISBN: 0-08-044401-6

**Holck, Ole ; Svendsen, Svend**

Rain Tightness

In: Performance and Durability Assessment: : Optical Materials for Solar Thermal Systems ; Part 5: Methods for reducing Environmental Stress in Solar Collectors, pp. 271-278 - Oxford : Elsevier, 2004 ISBN: 0-08-044401-6

**Jensen, Jesper Ole ;** Gram-Hanssen, Kirsten

Green Buildings in Denmark - From radical ecology to consumer oriented market approaches?

In: Sustainable Architectures ; Moore, Steven Spon Press, 2004 ISBN: 0415700450

**Jensen, Jesper Ole**

Livsstil, boform og ressourceforbrug : Lifestyle, dwellings and consumption

In: Urban Lifescape, pp. 1-267 - Ålborg : Ålborg Universitetsforlag, 2004 ISBN: 87-7307-687-2

**Jensen, Aage ;** Poulsen, Ervin

On the plastic behaviour of multi directional epoxy-bolted CFRP laminates

In: Nordic Concrete Research, pp. 93-103 ISBN: 82-91341-88-5

**Jensen, Aage**

Strength of gusset plates in welded steel structures

In: Progress in Structural Engineering, Mechanics and Computation, pp. 291

**Koch, Christian**

What's this Tosh? : Innovation Networks and New Product Development as a Political Process

In: The Management of Innovation : The International Library of Critical Writings in Business and Management ; 2, pp. 509-532 - 1 ed. - Cheltenham : Edward Elgar, 2004 ISBN: 1 84376 429 6



**Nørgård, Jørgen Stig**

Energibesparelser, miljø og velfærd

In: Samarbejde om bæredygtig udvikling : Nye perspektiver på samarbejde mellem skole og eksterne aktører, pp. 71-91 / Editor: Hoffmann, Birgitte - 1. ed. - Copenhagen : Danish University of Education Press, 2004 ISBN: 87-7613-056-8

**Pedersen, Elsebet Frydendal**

Painters in Denmark: a woman's trade?

In: Woman in Construction, pp. p. 135 - p. 147 - 1. ed. - Belgium : CLR/Reed Business Information, 2004 ISBN: 90 5901 303 4

**Rode, Carsten**

Whole-Building Hygrothermal Analysis

In: Simulationsmethoden bei der Planung von Neubauten und Instandsetzungen, pp. 63-80 - München : WTA, Wissenschaftlich-Technische Arbeitsgemeinschaft für Bauwerkserhaltung und Denkmalpflege, 2004

**Stang, Henrik**

Mechanics of FRC, Materials and Structures

In: Some Aspects of Design and Application of High Performance Cement Based Materials and Structures, pp. 83-133 - AMAS, Centre of Excellence for Advanced Materials and Structures. Institute of Fundamental Technological Research : Polish Academy of Science, Warsaw, Poland, 2004

**Furbo, Simon**

Hot water tanks for solar heating systems ISBN : 87-7877-166-8. In: BYG Rapport ; R-100

**Gudmand-Høyer, Tim**

Note on the moment capacity in a bubble deck joint ISBN : 87-7877-137-4. In: BYG Rapport ; R-074

**Gudmand-Høyer, Tim**

Yield line theory for concrete slabs subjected to axial force. In: BYG Rapport ; R-073

**Hansen, Lars Zenke ; Findsen, Karsten ; Nielsen, Mogens Peter**

Beregning af indlmede ankre i murede vægge, 2004 ISBN : 87-7877-149-8. In: BYG Rapport ; R-085

**Hertz, Kristian Dahl**

Review of differences of steel related properties between proposals of European structural codes ISBN : 87-7877-164-1. In: BYG Rapport ; r-099

**Holck, Ole ; Olsen, Lars ; Rode, Carsten**

Varmeisoleringsevne for ydervægge målt i Borup Seniorby. In: BYG Rapport ; R-095

**Knudsen, Søren**

Investigation and optimisation of heat storage tanks for low-flow SDHW systems ISBN : 87-7877-138-2. In: BYG Rapport ; r-075

**Kragh, Jesper ; Svendsen, Svend**

Lavenergihus i Sisimiut. : Beregnet varmebehov ISBN : 87-7877-169-2. In: BYG Rapport ; r-103

Löfgren, Ingemar ; **Olesen, John Forbes** ; Flansbjerg, Mathias

Application of WST-method for fracture testing of fibre-reinforced concrete Göteborg, Sweden : Chalmers University of Technology, 2004, (pp. 79). In: Report ; 04:13

**Nielsen, Lauge Fuglsang**

Lifetime as related to materials quality with special reference to wood ISBN : 87-7877-171-4 In: BYG Rapport ; r-105

**Olufsen, Katrine Alling ; Foged, Niels Nielsen**

Boreability and Bit Wear in Siliceous Limestone and Flint in Malmö

**Pedersen, Anne Juul ; Ottosen, Lisbeth M.** ; Simonsen, Peter ; Christensen, Terkel C.

Elektrokemisk fjernelse af cadmium fra bioasker ISBN : 87-7877-167-6. In: BYG Rapport ; r-101

## Reports

**Richter, Anne ; Pedersen, Elsebet Frydendal**

Arbejdsulykker! Alle har en historie : om sikkerhedsstruktur og læring i tømrerbranchen.  
ISBN: 87-7877-154-4. In: BYG Rapport ; R-090

**Tommerup, Henrik M.**

Måling af bruttoenergiforbrug i nybyggeri svarende til BR2005 energikrav : Byggesystem : Fuldmuret ISBN : 87-7877-170-6. In: BYG rapport ; r-104

**Tommerup, Henrik M.**

Måling af bruttoenergiforbrug i nybyggeri svarende til BR2005 energikrav : Byggesystem lette ydervægselementer i stålskelet ISBN : 87-7877-161-7. In: BYG Rapport ; R-096

**Tommerup, Henrik M.**

Måling af bruttoenergiforbrug i nybyggeri svarende til BR2005 energikrav : Byggesystem skalmurede porebetonelementer 1 ISBN : 87-7877-162-5. In: BYG Rapport R-097

**Tommerup, Henrik M.**

Måling af bruttoenergiforbrug i nybyggeri svarende til BR2005 energikrav : Byggesystem skalmurede porebetonelementer 2 ISBN : 87-7877-163-3. In: Byg Rapport ; R-098

**Tommerup, Henrik M. ; Rose, Jørgen**

Forsøgshus med nye typer klimaskærmskonstruktioner, fuldmuret : Del 1: konstruktioner/systemer ISBN : 87-7877-128-5. In: BYG Rapport ; R-070

**Weitzmann, Peter**

Modelling building integrated heating and cooling systems ISBN : 87-7877-155-2. In: BYG Rapport ; R-091

**Østergaard, Lennart**

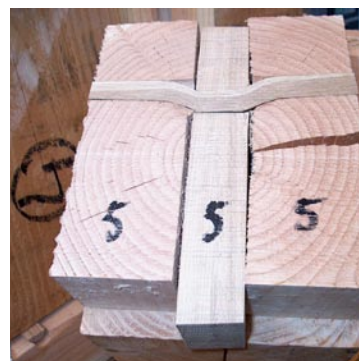
Early-age fracture mechanics and cracking of concrete. experiments and modelling ISBN : 87-7877-133-1. In: BYG Rapport ; R-070

## M.Sc. projects (Civilingeniør)

<b>Student</b>	<b>Project title</b>	<b>Supervisor</b>
Alistarabadi Jamal	High rise building	Johnsen Finn
Andersen Karin Dyhr	Advanced solar heatingssystem	Furbo Simon
Andreasen Michael J.	Experimental and numerical study of pin connections	Gimsing Niels J., Gath Jesper
Arifovic Fedja	Anchors in concrete and masonry	Nielsen, M.P.
Astrup Thomas	Stress concentrations in glulam beams subjected to varying load	Hoffmeyer Preben, Hansen Kurt Kielsgaard, Olesen John Forbes
Beck Patrick, Tvermose Henrik	Fire exposed carbon fibre reinforcement	Hertz Kristian
Bernth Peter H., Jensen Morten T.	Fracturemechanical modelling of reinforced concrete beams during cyclic load in pure bending	Poulsen Peter Noe, Olesen John Forbes
Buhelt Louise Munkholm	Friction between soil and steel	Krogsbøll Anette
Christensen Christian P.	Housing refurbishment	Engelmark Jesper
Christensen Christina	Determination of a convective heat transfer coefficient between a flame and timber construction	Sørensen Lars Schjøtt
Christiansen Anders P., Ellekjær Anders R.	Lateral torsional buckling stabilization	Nielsen Leif Otto, Agerskov Henning
Christophersen Morten	Geotechnical investigation in the Østersø region	Krogsbøll Anette, Foged Niels



Dam Anders Christian	Modernizing the material flow in the Danish construction business	Koch Christian
Dick-Nielsen Lars, Døssing Henrik	The influence of packings in bolted joints	Gath Jesper Olesen John Forbes
Dohn Jacob T.	Comparative analysis of the Danish and Swedish consulting engineering business in the field of construction	Bonke Sten
Elkjær Andreas, Riisgaard Benjamin	Development of blast resistant system for high rise buildings	Olesen John Forbes
Elsmark Morten	Utilization of marginal materials for road building	Geiker Mette
Frandsen Christian M., Jørgensen Stefan	Design of sports centre	Larsen Henning
Gjødvad Johan	Analysis of continues concrete box girder with different erection methods	Gimsing Niels J., Poulsen Peter Noe
Gynde Vibeke, Pedersen Nina	Bridge over Femernbælt	Svensson Eilif, Agerskov Henning
Hansen Anders R., Lund Andreas C.	The competition of housing development among the municipalities in the Øresund region – consequences for the town structure	Elle Morten, Nielsen Peter Hartoft
Hansen Morten Juel	Structural use of glass	Stang Henrik, Olesen John Forbes
Hansen Rikke K., Moesby Sabrina B.	Facilities Management and Public Privat Partnership	Elle Morten
Henriksen Rikke	Housing refurbishment	Engelmark Jesper, Agerskov Henning
Hermansen Jakob	Integrating facilities management information	Christensen Knud
Høgensen Erling, Soldalen Tobias	Combined suspension/beam bridge	Gimsing Nielsen, Poulsen Peter Noe
Isaksdottir Hlif	Rockmechanical studies of volcanic tephra and sand for a hydroelectric power station in Iceland	Foged Niels
Jensen Bruno	Building renovation with focus on mould	Rode Carsten, Thrane Ulf
Jensen Lina, Mortensen Trine	Management and working environment in the building site	Pedersen Elsebet Frydendal
Jacobsen Jan Rune	Complex resistivity logging for permafrost mapping	Baumgartner Francois
Johansen Jakob	Design of building structures	Larsen Henning
Kortegaard Peter C.	Electrodialytic removal of cadmium from wasteren water sludge	Ottosen Lisbeth
Lange Martin Haslund	Composite bridge deck plate with emphasis on the application of CRC and FRC	Olesen John Forbes, Gimsing Niels J
Larsen Anders	Road construction in areas with permafrost	Villumsen Arne
Larsen Signe S., Paulsen Belinda M. E.	Measurements and calculation of indoor climate and energy performance of single family house	Svendsen, Svend





Lauridsen Mona Nygaard	Numerical procedures for perfect plastic modelling of timber connections	Clorius Christian O., Hoffmeyer Preben
Li Hongwei	CFD investigations on inlets for hot water tanks	Furbo Simon, Shah Louise J.
Madsen Tobias Thorup	Windows with improved energy performance	Svendsen Svend
Mahmudovski Sajet	Inside insulation of buildings with capillary active insulation	Rode Carsten, Hansen Kurt Kielsgaard
Meier Allan, Møller Henrik Stenholm	Point resistance of sheet pile walls	Fuglsang Leif
Møgelberg Stine Ørbæk	Public-private partnership	Koch Christian
Møhlholm Christian, Varming Niels	Building integrated heating and cooling systems	Svendsen Svend
Niclasen Petur H.M.K.	Bridge over Haraldssund	Gimsing Niels J., Nielsen Leif O.
Nielsen Jakob Kinimod	Timber connections with screws in end grain	Hoffmeyer Preben, Riberholt Hilmer
Nygaard Sune	Assessment of methods for fire safety design	Thomsen Kim Roger
Pardo Daniel	FE-analysis of wind turbine blade sections	Stang Henrik
Pedersen Henrik Due	Laterally loaded piles and pile groups	Krogsbøll Anette, Foged Niels
Pedersen Ulrik E.	Wind loads on buildings and bridges	Nielsen M.P.
Siffusson Karl, Sigurdarson Fridjon	Partnering in construction	Bonke Sten
Stabell Sidsel	Classification and mechanical properties for construction in the Øresund region	Foged Niels
Sterregaard Morten	Solid wood	Jensen Aage Peter
Sørensen Martin Ulf	Officebuilding	Larsen Henning
Thorsen Peter S., Villumsen Casper	The influence of micro structure on properties of marble	Hansen Kurt Kielsgaard
Vestergaard Randi K.	Strenght of glass structures	Nielsen Leif Otto
Zatyko Judit	Solar radiation from Greenland	Furbo Simon, Andersen Elsa
Østby Tina M.	Urban development of harbour areas	Elle Morten

<b>Student</b>	<b>Project title</b>	<b>Supervisor</b>
Al-Naqqash Yusra Ali	Masonry	Thorsen, Torsten
Alsdorf, Morten, Christiansen Tommy	Double façade constructions	Christensen, Kaj, Svendsen, Svend
Andersen Janne, Jørgensen Rikke	Ventilation of canteens and kitchen in the E2 house	Petersen Børge Howald
Andersen Johnni, Kannevorff Jonas	Communication and coordination of a construction site	Koch Christian
Andersen, Marius, Øskan, Alan	Design and testing of vertical ground anchors	Fuglsang, Leif
Andersen Nikolaj, Christiansen, Johnny D.C.	Solid wood	Jensen, Aage Peter, Traberg, Søren
Astrup Kjartan	Diaphragm in structures	Kjærbye Per
Bach Morten, Jessen Ulrik	Comfort and indoor climate in the Royal Theatre	Pedersen Børge Howald
Bak Christian, Johansen Biran Howitz	Indoor environmental and low energy buildings	Christensen Kaj, Nielsen Toke Rammer
Berg Henrik J., Sørensen Anders Bak	Science of engineering and building materials	Thorsen Torsten
Bertelsen, Troels, Stenderup, Jacob	Building logistic	Christensen, Knud
Bille Rikke, Kinnberg Andreas	Science of materials	Thorsen Torsten
Christiansen Niels H., Tang Benne Korsholm	Structural design with vibration dampers	Nielsen, Leif Otto
Christensen, Laura, Lindberg, Thomas	Brickyard in Greenland	Gaardslev, Axel
Christensen, Peter Lund, Czuba, Dennis J.	Design of office building	Kjærbye, Per
Dalsgaard Simone H.	Energy savings in renovation of facades	Svendsen, Svend
Dietz, Christian	Standard houses in Denmark – a comparison of the building process and constructions	Engelmark, Jesper
Elverdam, Peter, Nielsen Christian T.	Design of pedestrian bridge	Jensen, Aage Peter
Emkjer Morten, Uglebjerg Ulrik	Science of materials	Thorsen Torsten
Fazliz, Nidzara, Samardzis, Maja	Steel connections	Jensen, Aage Peter
Finsen Ditte Møller, Maburi Susi	Flexible buildings	Kjærbye Per
Frankel Krista, Olsen Jannie Kristine	Solid wood – structures	Jensen Aage Peter, Kjærbye Per
Gawron, Sebrina E.	Lavenergihus i Grønland	Kjærbye, Per
Gharib HEnni, Nedelkowsky Saso	Industrial production concepts in construction	Bonke Sten, Engelmark Jesper
Hansen Anders D., Pedersen Jørgen B.	Up-grading of buildings	Kjærbye, Per

## B.Eng. projects (Diplomingeniør)



Hansen, Christian W.	Structural design	Kjærbye, Per
Hansen Lasse, Haraldsen Thomas	Energy performance and indoor climate of the new Royal Theatre	Petersen, Børge Howald
Hoffmann, Simon	Floors in solid wood	Jensen, Aage Peter
Holm Rasmus Wiboe, Jensen Henning Peer	Lateral stability of prestressed beams	Nielsen Mogens P.
Ilsøe Martin	Building f schools – planning, process, and functionality	Kristiansen Kristian
Isaksen Morten, Latif Mohamed A.	Evaluation of performance indicators in construction	Christensen Kaj
Jensen, Hans Færck, Madelung Thomas	Multy-storey buildings of wooden structures	Larsen, Henning
Jensen R. Møller, Johansen Christian R.	Design of industry house/main structure	Kjærbye Per
Josephsen Hjalti, Nielsen Danjal P.	Building structures	Larsen Henning
Kramer Martin, Sørensen Jan	Ventilation of office building in Vilnius	Pedersen Børge Howald
Lefecre, Claus, Nielsen Martin Daniel	Design of penthouse	Kjærbye, Per
Lyngsie Thor	Structure design of one-family house	Kjærbye, Per
Mortensen Brian, Mouritsen Ragnar	Ventilation of a tevision studio	Petersen, Børge Howald
Mortensen Katrine O., Nielsen Mia Fossing	Ventilated double envelope facades	Svendsen, Svend
Olesen Peter K.	Insulation of building services – optimization and design guideline	Svendsen, Svend, Christensen Kaj
Olsen Jesper Kühn	Comparative analyses of fire models	Thomsen Kim Roger
Pedersen, Allan G.	Ydervægskonstruktioner	Kjærbye, Per
Pedersen Dennis, Savic Sasha Aleksandar	Control tower	Kjærbye Per
Pedersen Frank H., Skibby Mik Sperling	Occasional accidents in the construction industry	Koch Christian
Rasmussen Kennet, Wilken Christian	Ruc extension	Kjærbye, Per
Vestergaard Tanja	Working environment an important piece in the day to day work on site	Pedersen Elsebet Frydendahl
Wittchen Nick	Time dependent properties for wood in tension perpendicular to grain	Clorius Christian O.
Wätzold Mette Louise	Urban planning in Vanløse	Elle Morten, Christensen Kirsten



## Key figures

### Staff pr 31. December

		2004	2003
VIP	Professor	11	12
	Associate Professor	44	45
	Assistant Professor	15	13
	Other VIP	4	2
	Ph.D.-students	40	42
	<b>Total</b>	<b>114</b>	<b>114</b>
TAP	Academic	10	10
	Clerical	12	12
	Technician	22	23
	Other TAP	4	4
	<b>Total</b>	<b>48</b>	<b>49</b>
<b>Total department staff</b>		<b>162</b>	<b>163</b>

### Education

		2004	2003
STÅ <sup>1</sup> - total		519	469
Projects	PMP/B.Sc. (midterm)	56	25
	M.Sc. (civil)	74	60
	B.Eng. (diplom)	82	73
Admission	B.Eng. (Civil engineering) - summer	58	88
	B.Eng. (Civil engineering) - winter	32	32
	B.Eng. (Architectural Engineering)	42	49
	B.Eng. (Arctic Technology)	8	12
	B.Sc. (Building Technology)	60	60

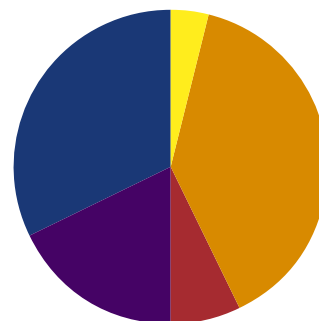
<sup>1</sup> 1 STÅ is one students annual work (1 STÅ=60 points/student)



## Research

		2004	2003
Refereed papers	Total	63	44
	Of these in ISI	37	n.a.
Ph.D.		10	7

## Expenditures distributed by activities



Innovation	4 %
Education	39 %
Ph. D. scholarships	7 %
Faculty Research	18 %
External financed research	32 %

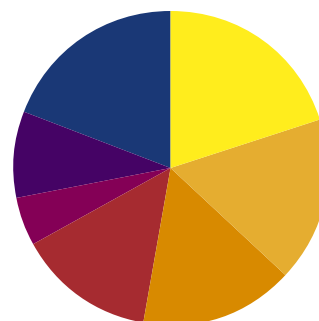
## Finances in 1.000 DKK

		2004	2003
Revenues	DTU-grant	52.531	51.189
	External revenue	28.563	26.191
	<b>Total</b>	<b>81.094</b>	<b>77.380</b>
Expenditures	Wages	62.917	61.927
	Other expenses	16.445	14.688
	<b>Total</b>	<b>79.362</b>	<b>76.615</b>

## Result

		1.732	765
Available amount	January 1	4.532	3.767
carried forward:	December 31	6.264	4.532

## External revenue



Private foundations	20 %
EU research programmes	17 %
Danish Research Agency	16 %
Energy research programmes	14 %
Work environment programmes	5 %
Other ministerial programmes	9 %
Others	19 %

**BYG•DTU**  
**Annual Report 2004**

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