

EUROPEAN NETWORK OF R & D AND TRAINING ORGANISATIONS OF METAL BRANCH



METNET

Eighth International Seminar in Luleå 22.-23.10. 2013

(Bilateral meetings 24.10.2013)



Introduction

Scientific sections take place in the Metnet Luleå seminar. Scientific Papers and Technical Reports will be published in the scientific book / e-book of the seminar. In the seminar Metnet partners will be presenting their latest developments and latest proceedings in the R&D work on the metal branch.

There will be a section for presenting projects, development work and organisations as well.

The general purpose of the Metnet network is to match and utilize the know-how and activities of European R&D and training organizations, to develop new products, services and business for the companies on metal branch, to support innovation processes in companies on metal branch and to promote knowledge and best practice know-how transfer between companies, research and training organizations in Europe.

Lauri Tenhunen
Chairman Metnet

Program Tuesday 22 October 2013

Luleå University of Technology
97187 Luleå
Entrance E10
Seminar room E632

- 08:00 **Registration begins**
- 09:00 **Opening**
Prof. Ylva Fältholm, Dean of the Technical Faculty, LTU
- 09:10 **Practical matters**
Professor Milan Veljkovic, LTU
- 09:15 **Seminar Program Outline**
Dr.Sc. Lauri Tenhunen, HAMK
- Plenary Session 1**
 Connections and Materials
 Chair: Markku Heinisuo
- 09:30 **Design of liner tray with distance screw connection in the narrow flange**
Michal Jandera and Lukas Ledecy
Czech Technical University in Prague
- 09:50 **Thin-walled cross-sections and their joints: tests and FEM-modelling**
Nikolay I. Vatin, Jarmo Havula, Lassi Martikainen, Alexey S. Sinelnikov, Anna V. Orlova and Stepan V. Salamakhin
Saint-Petersburg State Polytechnical University
HAMK University of Applied Sciences
- 10:10 **Forming limit curve of high strength steel with the help of digital image correlation**
Jukka Joutsenvaara
Kemi-Tornio University of Applied Sciences,
- 10:30 *Coffee Break*
- Plenary Session 2**
 Experimental techniques
 Chair: Adam Glema
- 11.00 **Monitoring of steel railway bridge and continuous welded rail**
Pavel Ryjáček and Miroslav Vokáč
Czech Technical University in Prague

- 11:20 **Laser synthesis technology of composite materials based on nanostructured powder materials for the creation, restoration and repair of complex parts**
P.A., Kuznetsov, O.V. Vasilyeva, I.V. Kudryavtseva and A.V. Tereschenko
FSUE CRISM "Prometey", Saint-Petersburg
- 12:00 *Lunch*
- Plenary Session 3**
Computational methods
Chair: Milan Veljkovic
- 13:00 **Weight and cost optimization of welded high strength steel beams**
Kristo Mela and Markku Heinisuo
Tampere University of Technology
- 13:20 **High Strength Steel in Tubular Trusses**
Teemu Tiainen, Kristo Mela, Timo Jokinen, and Markku Heinisuo
Tampere University of Technology
- 13:40 **Tubular composite columns in a non-symmetrical fire**
Markku Heinisuo and Timo Jokinen
Tampere University of Technology
- 14:00 **Influence of natural fire scenario by CFD and FEM analysis coupling onto steel construction structural response**
Michal Malendowski and Adam Glema
Poznan University of Technology
- 14:20 **Membrane Structures supported by a frame of thin-walled closed sections**
Alexander Tushin and Olga Tushina
Moscow State University of Civil Engineering
- 14:35 **Numerical studies of Z-purlins supported by sandwich panels**
Olga Tushina
Moscow State University of Civil Engineering
- 14:50 *Coffee*
- Plenary Session 4**
Open topics
Chair: Arto Ranta-Eskola
- 15:20 **Problems of functioning and elaboration of the mass housing development areas of the cities and settlements**
S.I. Matreninskiy, E.M. Chernyshov and V.Y. Mischenko
Voronezh State University of Architecture and Civil Engineering, Russia
- 15:40 **The blue box and the technological trajectories in context of university-business cooperation (UBC)**
Tenhunen, Lauri and Ranta-Eskola, Arto
HAMK University of Applied Sciences
Rautaruukki Oyj

- 16:00 **Sustainability as a business opportunity today and tomorrow: triple helix perspective**
 Tarja Meristö and Jukka Laitinen
Laurea University of Applied Sciences
- 16:20 **Structural Bracing – Forces and Stiffness**
 Olli Ilveskoski
HAMK University of Applied Sciences, Hämeenlinna, Finland
- 16:40 **Optimization of Steel Towers for Large Wind Turbines**
 Anatoly Perelmuter and Vitalina Yurchenko
Kyiv National University of Civil Engineering and Architecture, Kyiv, Ukraine
- 17:00 **Announcements and Closure for the day**
- 19:00 **Dinner**
The dinner will take place at LTU. A Choir.

Wednesday 23 October 2013

- 08:00 **Registration begins**
- Plenary Session 5**
Research at LTU
 Chair: Olli Ilveskoski
- 08:30 **Research at Luleå University of Technology**
 Milan Veljkovic
Luleå University of Technology
- 08:40 **FRAMEUP concept for modular buildings**
 Pedro Andrade
Luleå University of Technology
- 08:50 **Robustness of 3D modules**
 Efthymios Koltsakis
Luleå University of Technology
- 09:00 **Reverse channel exposed to fire**
 Tim Heistermann
Luleå University of Technology
- 09:10 **Fire Temperatures of localised and engulfed fire**
 Alexandra Byström
Luleå University of Technology
- 09:20 **Critical Macroscopic flaws in wind turbines**
 Pourya Noury
Luleå University of Technology

- 09:30 **Flangeless connections in wind towers**
Christine Heistermann
Luleå University of Technology
- 09:40 *Coffee Break*
- Plenary Session 6**
 Open topics
 Chair: Lauri Tenhunen
- 10:00 **Welcome to the Moscow Seminar in October 2014**
Prof. Alexander Tusnin and Olga Tusnina
Moscow State University of Civil Engineering MGSU
- 10:10 **Metnet Workshop in St.Petersburg 19.-20.2.2014**
- 10:20 **Organizational and scientific Aspects of Conference Arrangement at the Universities and Research Centers**
Dir. Alla Smirnova
Saint-Petersburg State Polytechnical University
- 10:35 **A Comprehensive study of the effectiveness of Industry Academia cooperation in Management Institutes in Pune, India**
Dr.(Capt.) C.M. Chitale: Professor and Head ,Department of Management Sciences
University of Pune, India
- 10:50 **Background information for the excursion**
Professor Milan Veljkovic
Luleå University of Technology
- 11:00 **Parallel Group works**
- Group 1: Planning the Metnet meetings in the near future
 Group 2: Preparing initials to RFCS / EU
 Group 3: BOAT / BOAT Seed topics
- 12:00 *Lunch*
- 14:30 **Excursion:**
Part AB, Kalix, visit to the company, project activities and a wind tower nearby
- 17:00 **End of seminar**
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After-Conference Program Thursday 24 October 2013

Luleå University of Technology
97187 Luleå

- BOAT Project meetings
- Bilateral Meetings
- Student international practising arrangements
- Posters etc.

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Meeting places in Luleå 22-23.10.2013

Seminar:

**Luleå University of Technology
97187 Luleå**

**Entrance E10
Seminar room E632**

Dinner:

The dinner will take place at LTU. A Choir.

Excursion:

Part AB, Kalix, visit to the company, project activities and a wind tower nearby.

Accommodation places in Luleå

The Recommended hotel in Luleå is

Elite Stadshotellet Luleå

The hotel has special fee for us (pre-reservation until September 18):

26 single rooms for 730 sek and

4 Superior rooms for 830 sek.

Booking number is 1777171

Due to the occupancy situation in the hotel, the guests must book no later than 18 September 2012, using the booking number 1777171. This will guarantee the above mentioned prices.

Sponsors of the Seminar

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Rautaruukki Oyj
HAMK University of Applied Sciences
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