



The Combustion Institute

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Terese Løvås

Candidate, 2016 CI Board of Directors

Reasons for Nomination

Affiliation: Department of Energy and Process Engineering, Norwegian University of Science and Technology (NTNU), Norway

I have been a member of the Scandinavian-Nordic Section of the Combustion Institute (CINS) since 1998, and has been serving as President of the Scandinavian-Nordic Section of the Combustion Institute since 2011, shortly after returning to Norway after years abroad. I have since my return been devoted to serve the combustion community both in Scandinavia and Internationally.



Terese Løvås

With the tremendous advancement in both experimental and numerical research, the Combustion Institute is in a unique position to both promote fundamental science in combustion, as well as address the importance of clean and efficient energy conversion in applied and large scale problems. The Combustion Institute and its members world wide have a potential to address many concerns in the public regarding climate change and the green shift towards renewable and sustainable energy conversion by increased visibility of own activity.

It would be a privilege to serve on the Board of Directors, contributing to make the Combustion Institute a modern and transparent international organization. This includes working towards increased transparency regarding governance, scientific strategies and importantly the organization of the Combustion Symposium and its Proceedings.

See next page(s) for candidate's curriculum vitae.

Curriculum vitae Tekn. Dr. Terese Løvås

DATE OF BIRTH: 13th of June, 1973, Tønsberg, Norway
NATIONALITY: Norwegian
TELEPHONE: +47 91897007

AFFILIATION: Department of Energy and Process Engineering, NTNU
Kolbjørn Hejes vei 1b, 7491 Trondheim, Norway

EDUCATION

- Master degree, University of Cambridge, UK, 2008.
- Doctor in Philosophy of Engineering (PhD), Lund Institute of Technology, Lund University, Sweden. Thesis topic: *Automatic Reduction Procedures for Chemical Mechanisms in Reactive Systems*, 2002.
- Cand.Scient. (MSc), Niels Bohr Institute for Astronomy, Physics and Geophysics, Copenhagen University, Denmark, 1998.
- Cand.Mag. (BSc), Institute of Mathematical Sciences, University of Tromsø, Norway, 1996.

CURRENT POSITION

2009 – Professor and Head of Thermal Energy Research Group, Department of Energy & Process Engineering, Norwegian University of Science and Technology (NTNU), Trondheim, Norway. Group leader ComKin group

PREVIOUS POSITIONS AND PROFESSIONAL EXPERIENCE

2006 – 2014 Lecturer in Energy Technologies, School of Engineering and Material Science, Queen Mary, University of London, UK. During this time I built up activity related to CFD for energy conversion systems and turbulent reacting flows. The research projects funded in total 3 post docs and researchers and 2 PhDs.

2005 – 2008 College Lecturer in Engineering and Fellow of Churchill College, Cambridge, UK.

2003 – 2006 Research Associate, Department of Engineering, University of Cambridge, UK. Funded by EPSRC. Developing models for chemistry-turbulence interaction in turbulent reacting flows based on DNS. Focus on autoignition events at high altitude relevant for gas turbine relight.

2001 – 2003 Research Associate, Division of Combustion Physics, Lund University, Sweden. Development of models for reduced chemical mechanisms for combustion related processes. Models implemented in commercial CFD software for engine simulations (LOGEsoft).

FELLOWSHIPS AND AWARDS

2015 The Faculty of Engineering Science and Technology Communication Award.

MEMBERSHIPS OF SCIENTIFIC SOCIETIES

1998 – Combustion institute member
2003 – 2008 Member of the Institute of Physics

INSTITUTIONAL RESPONSIBILITIES

2015 – Head of Women in Combustion Planning Committee, Combustion Institute.
2014 – Head of Thermal Energy Research group, Depart. of Energy & Process Engineering, NTNU.
2014 – Member of Leader group, Department of Energy & Process Engineering, NTNU.
2014 – President of the Federation of European Sections of the Combustion Institute
2014 – Member for Board Directors Nominations Committee, Combustion Institute
2013 – Member for Board, Centre of Combustion Science and Technology (CECOST), Sweden
2011 – President of the Scandinavian-Nordic Sections of the Combustion Institute

COMMISSIONS OF TRUST

2009 – 2015 Journal referee: Combustion and Flame, Chemical Engineering Science, Combustion Theory and Modelling, Flow turbulence and combustion, Energy and Fuels, Fuels and more.
2013 Colloquium co-chair: International Symposium on Combustion
2009 – Expert evaluation committees for professor/ass. professor positions (UiT, DTU, NTNU)

RELEVANT PROJECT MANAGEMENT AND ORGANISATIONAL SKILLS

14 years of experience conducting research and teaching at higher education institutions in engineering subjects. Areas of interest include; kinetic modelling including model reduction, theoretical and experimental research of combustion of alternative fuels (biomass, biofuels, hydrogen), modelling of conversion of solid biofuels (reactive multiphase flows) for biofuel production, investigation of particle formation in turbulent reacting flows.

Selected Previous and On-going grants:

- *RangeEx*: Investigation of Homogenous Charge Compression Ignition in an innovative barrel engine. Funded by EEA's Norway-Poland grants. Subproject Leader.
- *CenBio*: Bioenergy Innovation Centre. Co-funded by the Norwegian Research Council and industrial partners. Subproject Leader.
- *BIGCCS*: International CCS Research Centre. Co-funded by the Norwegian Research Council and industrial partners.
BioCarb+: Enabling the biocarbon value chain for energy. Co-funded by the Norwegian Research Council and industrial partners. Subproject Leader
- *C3BO*: develop and demonstrate sustainable, high-efficiency thermal conversion methods for biomass feed stocks to oils. Co-investigator, joint with Aalborg University, Aarhus University and various industry (Scania, MAN BW and others).
- *GAFT*: On gasification for liquid bio-fuel production. Co-funded by the Norwegian Research Council and industrial partners. Subproject Leader.