Curriculum Vitae

Personal data:

Name:	Morten Hovd
Present position:	Professor of process control, Engineering Cybernetics Department, Norwegian University of Science and Technology.

Education:

Institution	Duration	Course/degree
University of Salford, England	1982-1986	Natural Gas Engineering / BSc with Honours
Norwegian Institute of Technology, Department of Chemical Engineering	1989-1992	Process Control / Doktor Ingeniør (PhD)

Work experience:

Institution / Company	Department	Duration	Position
Institue for Continental Shelf Research	Center for Petroleum Related Process Technology	1986-1987	Engineer
Norsk Hydro	Process Technology Department, Technology and Development Division	1987-1989	Engineer
Sintef	Technical Chemistry Department	1992	Scientist
Fantoft Prosess	Process Control Group	1993	Engineer
Sintef	Technical Chemistry Department	1993-1995	Scientist
Fantoft Prosess	Process Control Group	1996-1997	Engineer
Fantoft Prosess	Process Control Group	1997-1998	Head of group
Norwegian University of Science and Technology	Department of Engineering Cybernetics	1998 –	Professor
		2005-2008	Head of Department

Consultancies: (company, date):

Fantoft Prosess	1998 – 2000
Sintef Electronics and Cybernetics	1999 – 2003
Honeywell HiSpec Solutions	2000 – 2003
Cybernetica	2004 – 2016

Other appointments and activities:

- IFAC Technical Committee on Mining, Mineral and Metals Processing, member.
- IEEE Technical Committee on Process Control, member
- Visiting professor, Mechanical and Aerospace Engineering Department, University of California San Diego, July 2002 – June 2003.
- Visitning professor, Department of Engineering, University of Cambridge, UK, August 2008 – August 2009
- Visiting professor, Department of Automatic Control, CentraleSupelec, France, August 2015 – July 2016. Adjunct professor 2017 -
- Editor, Modeling, Identification and Control (2004 - 2008).
- Board member, Norwegian Society for Automatic Control (2004 - 2008)

- Board member, Norwegian Society of Chartered Engineers, Researcher division (2012 - 2017)
- Norwegian delegate to the European Union Control Association (2020 -)

Membership in professional organizations:

- Institute of Electrical and Electronics Engineers
- American Institute of Chemical Engineers
- Norwegian Society of Chartered Engineers (Tekna)
- Norwegian Society for Automatic Control (NFA)
- International Federation of Automatic Control, affiliate

Doctoral students:

Morten Hammer (2004). Thesis title: Dynamic Simulation of a Natural Gas Liquefaction Plant. (Co-supervisor with prof. G. Owren, Dept. of Energy and Process Technology, NTNU).

Kristin Hestetun (2009). Thesis title: Use of Data from Anode Current Distribution for State and Parameter Estimation and Fault Detection in an Aluminium Prebake Electrolysis Cell.

Giancarlo Marafioti (2010). Thesis title: Enhanced Model Predictive Control: Dual Control Approach and State Estimation Issues.

Francesco Scibilia (2010). Thesis title: Explicit Model Predictive Control: Solutions via Computational Geometry.

Mohsen Vatani (2016). Thesis title: Advanced Control Methods for Power Converters: Focusing on Modular Multilevel Converters

Parsa Rahmanpour (2017). Thesis title: Model-based Control of the Czochralski Silicon Crystal Pulling Process.

Lester Kalemba (2017). Thesis title: Multi-variable Control Systems and Analysis Techniques Applied to Power Systems, Controller interaction; Nonlinear control systems; On-line transient stability assessment; Coordinated secondary voltage regulation. (Co-supervised with prof. K. Uhlen, Dept. of Electric Power Engineering)

Muhammad Faisal Aftab (2018). Thesis title: Controller Performance Monitoring. Detection and Diagnosis of Oscillations in Control Loops.

Sarmad Munir (2018). Thesis title: Complexity Reduction in Explicit Model Predictive Control.

Jonatan Ralf Axel Klemets (2019). Thesis title: Topics in the Optimal Operation of Process Plants.

Miodrag D. Spasić (2019). Thesis title: Model Predictive Control Based on Sliding Mode Control

Halima Zahra Bukhari (2021). Thesis title: Modeling and Control of the Czochralski Crystal Growth Process.

Mohammad Ali Abooshahab (2021). Thesis title: Dynamic State Estimation for Electrical Power Grids.

Courses taught:

Modeling of continuous-time dynamical systems (1998)
Structures in process control (1999 – 2000)
Robust control (2001 – 2007)
Advanced process control (2001 – 2007)
Advanced control of industrial processes (2008 -)

Research interest and application areas

Theoretical interests:

- Control structure design
- Limitations on achievable control performance
- Model Predictive Control (MPC)
- State estimation

- Control performance monitoring
- Controller design and stability analysis for piecewise linear, piecewise affine, and polynomial nonlinear systems

Application areas: Large-scale systems such as chemical processes and electrical power transmission