

Thomas Langø

**Senior Research Scientist (PhD) and
Project Manager**



Curriculum Vitae

Name: Thomas Langø
Date of birth: November 13, 1970
Work address: SINTEF Technology & Society, Dept. Medical Technology
7465 Trondheim, Norway

Employment record:

- 2001-dd: Senior Research Scientist and Project Manager at Department of Medical Technology, SINTEF Technology & Society, Trondheim, Norway. Project Manager for 3D Ultrasound in Laparoscopy (Center for 3D Ultrasound, Trondheim) and European project VECTOR (2006-10). Annual project budget approx 3 mill NOK
- 2001-dd: Lecturer and sensor at Faculty of Information Technology, Mathematics and Electrical Engineering (Dept. of Computer and Information Sciences and Dept. of Mathematical Sciences).
- 2002-dd: Reviewer at Journal of Ultrasound in Medicine & Biology, IEEE Transactions on Medical Imaging, MITAT (Minimal Invasive Therapy and Allied Technologies), and others.
- 1995-1996: Military services conducted at Department of Physiology and Biomedical Technology, NTNU, Trondheim, Norway, studying decompression sickness and treatment methods.
- 1994: Summer employment at Department of Extreme Working Environments, SINTEF Unimed, Trondheim, Norway.
- 1992-1994: Student assistant in Mathematics at Department of Mathematical Sciences, Faculty of Physics, Informatics and Mathematics, NTNU, Trondheim, NTNU.

Education:

- 2001-2003: Postdoc fellow at SINTEF Health Research
- 1996-2000: PhD studies at Department of Engineering Cybernetics, Faculty of Electrical Engineering and Telecommunications, Norwegian University of Science and Technology (NTNU), Trondheim, Norway. The project work was performed at the Department of Ultrasound (now Medical Technology), SINTEF Unimed (now Health Research), Trondheim, Norway. Thesis title: Ultrasound guided surgery: Image processing and navigation.
- 1990-1995: MSc studies at Department of Biophysics and Medical Technology, Faculty of Physics, NTNU, Trondheim, Norway.
- 1986-1990: Natural Sciences at the high school in Finnfjordbotn, Finnsnes, Norway. 1987-1988: Natural Sciences at Oakes High school, North Dakota, USA.

Courses:

- 2005-7: International research and project management in SINTEF.
- 2002 (June): Technology symposium and course at the 10th International Congress "Mini-invasive approach to cancer" of the European Association for Endoscopic Surgery.

- 2001 (December): Project management in SINTEF. 3-day course for project leaders in SINTEF. Course by Runit AS (Øyvind Husby).
- 2000 (June): DICOM/HL7 Seminar at Computer Assisted Radiology and Surgery (CARS) 2000, San Francisco, CA, USA. Course by Herman Oosterwijk, President OTech Inc.
- 2000 (June): Virtual Reality in Biomedical Applications Seminar, CARS 2000, San Francisco, CA, USA. Course by R. A. Robb, Biomedical Imaging Resource, Mayo Foundation, Rochester, MN, USA.
- 2000 (May-June): Course in Health, Environment and Safety work for SINTEF, NTNU, and Studentsamskibnaden in Trondheim (SiT).
- 1996 (June 22): Pre-congress course in Ultrasound in minimal invasive surgery, at the Medical Center for Research and Technology, Trondheim, Norway. Course by Program for Medical Technology, NTNU, Trondheim.
- 1992 (Fall): Course in "Pedagogisk ledelse", NTNU, Trondheim, Norway.
- 1992 (Spring): Student assistant course, 3x2 hours, NTNU, Trondheim, Norway.

Key qualifications:

- Technology and methods for image guided surgery
- Tracking technology combined with surgical instruments, integration
- From idea to prototype – medical technology and ergonomics in laparoscopic surgery
- Three-dimensional ultrasound-based guidance and navigation in surgery
- Integrated position tracking and visualization of medical images – surgical navigation
- Ultrasound image analysis and restoration
- Bayesian statistical methods
- Programming (MATLAB, LabVIEW)
- Video editing, photo editing, design and implementation of web pages
- Project management

Languages (spoken and written):

- Norwegian, English, Italian (some), German (some)

Publications:

- Scientific papers in peer reviewed journals: 30
- PostDoc fellowship theme: Accuracy evaluation and improvements in ultrasound-based neuronavigation. Scientific papers, NTNU / SINTEF, Trondheim, Norway, 2001-2003.
- PhD Thesis: Ultrasound guided surgery: Image processing and navigation. PhD thesis, Norwegian University of Science and Technology (NTNU), Trondheim, Norway, 2000.
- Oral presentations at international conferences and seminars: 80
- Awards: 5 (2 Norwegian, 3 International/European)
- Reviews for international journals: 20