

CV Stefan Andersson-Engels

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Personal	Born February 21, 1960, in Ängelholm, Sweden. Swedish citizen. Married to Kristina Engels 1987. Two children: Alexander born 1988 and Caroline born 1990.		
Personal preparation	Lund University/LTH	Engineering physics	M. Sc 1980-1985
	Lund University/LTH	Medical Laser Physics	PhD 1985-1990
	McMasters University	Medical Physics	postdoc. 1990-1991
	Lund University/LTH	Medical Laser Physics	postdoc 1991-1993
	Lund University/LTH	Medical Laser Physics	Docent/Habilitation 1994
Appointments	Lund University/LTH	Research associate	1993-1997
	Lund University/LTH	Ass. Prof.	1997-1999
	Lund University/LTH	Professor	1999-pres
Tutoring experience	I have been the main advisor for 16 PhD students successfully completing their studies, and have been assisting advisor for another completed 6 PhD students. I am presently main advisor for 6 PhD students and assistant advisor for another 3 PhD students. I have also contributed to successfully guiding 80 students through their MSC projects.		
Networks in Academia	Member of Optical Society of America (OSA) The International Society for Optical Engineering (SPIE) European Society for Photobiology (ASP) Coordinated one EC research programme supported by the European Commission (LAIC), and participated as project partner in another seven programmes (OPTIMAMM, MedPhot, Molecular Imaging, BRIGHT, BRIGHTER, Nano UB Sources and Photonics 4 Life). I am also participating in the European Infrastructure programme LaserLab Europe and the Linneaus project running at Lund Laser Centre. The group I am leading has also participated within research projects within the "Network for Translational Research in Optical Imaging" programme financially supported by NIH (USA). The group is also part of a research team working on the project "Neuro-engineering for navigation, intervention and implementation in neurosurgery", with Karin Wårdell as coordinator at Linköping University. We also have a long ongoing collaboration with AstraZeneca R&D Mölndal, sponsoring one and a half position in the group since about seven years. I have also been invited to lecture at many summer schools within Biophotonics and Biomedical Optics in Greece, Romania and Bulgaria. I am together with Prof. Peter Andersen at DTU Photonics in Copenhagen biannually arranging a summer school in Biophotonics since 2003. This school has gained a very high interest/impact in the field and we have been invited to arrange a special section in the Journal of Biomedical Optics (the most central journal within our field of research) from the last school and the one now under preparations. The first such issue occurred in Aug/Sept 2008 containing 19 papers in this special section.		
Commissions of trust	Chair of board, Lund University Medical Laser Centre		2000-pres
	Board member, Lund University Medical Laser Centre		1991-pres
	Deputy board member, Lund Laser Centre		1995-2001
	Deputy board member, SpectraCure AB, Lund, Sweden		2004-pres

Program co-chair Gordon Conference on Lasers in Medicine and Biol. 2000
 Program co-chair European Conference on Biomedical Optics 2005
 General co-chair European Conference on Biomedical Optics 2007
 Co-organizer biannual Biophotonics summer school 2003-pres
 Chair of Docent Committee at FIME, Lund University 2002-2006
 Participated in numerous international conference programs
 committees and organizations
 Served as an external committee member at more than 10
 dissertations in Sweden, Denmark, Norway, Holland, Italy and Canada
 Served in a committee to assess the qualifications for a position
 as an Associate Prof. at University of Cyprus 2005
 Written several letters of evaluation/recommendation in connection with
 promotion of researchers or evaluation of candidates for open positions.

Entrepreneurial achievements

Co-founder of two spin-off companies: *Spectraphos AB* and *SpectraCure AB*. Co-author of more than 10 patent applications resulting in many granted patents. Received SKAPA innovation prize 2004, the most prestigious entrepreneur prize in Sweden. Grant holder of several research contract from industrial collaborators. Several of the PhD students advised have/have had industrial connections during their studies (Industrial PhD student programmes).

Other merits

Received Erna Ebelings prize, Swedish Society for Medical Engineering and Medical Physics in 2003
 Selected as the first-choice candidate in the appointment of the professorship in Biomedical Physics at the Royal Institute of Technology, Stockholm in 1996

Scientific achievements

Stefan Andersson-Engels started his academic career by studying novel medical diagnostic techniques using laser spectroscopy. The work resulted in a PhD thesis based on 16 scientific publications in 1990. He spent the following year in the group of Profs Brian Wilson and Michael Patterson at McMasters University in Hamilton, Ontario, Canada. During this period he worked especially on research involving light propagation in turbid media, such as tissue. He brought this knowledge back to Lund University and the research now also involved photodynamic therapy and optical mammography, two fields involving much modeling of light propagation in tissue. The group introduced PDT as a clinical modality in Scandinavia, and was also the first to perform time-resolved transillumination imaging of living tissue. The latter work was an important step in the initiation of the research field "photon migration", now having frequent international conferences, each attracting hundreds of researchers.

The research interests of Stefan Andersson-Engels remains within laser spectroscopy of tissue mainly for detection, localisation or delineation of diseased regions, but also for measurements of physiological properties. The techniques developed and evaluated in clinical studies at the moment are fluorescence and NIR spectroscopy. The clinical applications of this research could be demarcation of malignant tumours in the skin, oral or laryngeal regions, in the brain or breast or in the gastrointestinal or gynecological tracts. The developed spectroscopic techniques can also be applied for analyzing pharmaceutical preparations and tablets. A second major part of my research is the development and evaluation methods for laser treatments of diseases. Photodynamic therapy, both with superficial and interstitial illumination, is investigated. Mainly skin malignancies and prostate are treated, but other applications are foreseen, especially for IPDT. A concept of interstitial PDT involving spectroscopic measurements to provide an individualized feedback is developed and pursued.

Stefan Andersson-Engels has co-authored more than 150 papers in peer-reviewed journals, with an h-index of 29 according to ISI.