



EDWIN JAGER

From Sweden to France



Project: **Soft-microrobots driven by electroactive polymers**

Research topic: **Physics**

Swedish Institution: **Linköping University**

French Institution: **University of Lille / University of Cergy Pontoise / University of Toulouse**

Dates of mobility: **19/03/2017 to 24/03/2017**

Program: **SFVE-A (ex-FRÖ)**



PRESENTATION

[Edwin Jager](#) is Senior Associate Professor of Biosensors and Bioelectronics and Head of the Division for Sensor and Actuator Systems ([SAS](#)) at the Department of Physics, Chemistry and Biology ([IFM](#)) at [Linköping University](#) (LiU). He obtained his PhD in Applied Physics from LiU in 2001 and his Docent title in 2014. During his PhD-studies, he developed biomedical applications of polypyrrole microactuators, such as a “cell clinic” and a [microrobot](#). He co-founded the company [Micromuscle AB](#), later acquired by [Creganna Medical](#), where medical applications of the polypyrrole actuator technology were developed. His main research interests are electroactive polymers, soft microactuators and microrobotics.

ACTIVITIES IN FRANCE

During his mobility to Lille, he met with [Prof. Eric Cattan](#) and [Prof. Sébastien Grondel](#) at the National Centre for Scientific Research ([CNRS](#)) and the Institute of Electronics, Microelectronics and Nanotechnology ([IEMN](#)) of the Université Polytechnique Hauts-de-France ([UPHF](#)). They discussed soft-microrobots driven by electroactive polymers. Cattan and Grondel presented their research on artificial insects the bio-theme labs and their research on microfluidics and cell stimulation. He held a seminar entitled “Electroactive polymers for bioelectronics and soft microrobotics”. In Paris, he held the same seminar and exchanged views with [Dr. Cedric Plesse](#), [Dr. Pierre-Henri Aubert](#), [Prof. Frédéric Vidal](#) from the Laboratory of Physical Chemistry of Polymers and Interfaces ([LPPI](#)) at the University of Cergy Pontoise ([UCP](#)). They discussed improvements of photopatternable ionically conductive gels in a collaborative project within the framework of [Marie Skłodowska Curie Initial Training Network](#), and envisaged a new project on artificial textile muscles. In Toulouse, he met [Prof. Christian Bergaud](#), [Dr. Ali Maziz](#), [Prof. Bertrand Tondy](#) and others from the Laboratory of System Analysis and Architecture ([LAAS-CNRS](#)) at the [University of Toulouse](#), where he also held the same seminar with ensuing discussions on [bioMEMS](#) and McKibben actuators for soft robotics.