

## Seminar Announcement

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Monday, September 21, 2015  
Green Hall, Room 0120  
10:10 AM

## Signal Processing in Motion Sensing Systems

**Abstract:** Motion sensing is an essential capability in many systems to achieve a high level of autonomy. Nowadays, motion sensors are therefore ubiquitous in everything from industrial manufacturing equipment to consumer electronic devices. I will in this talk, through examples linked to indoor positioning, insurance telematics, and elevator monitoring systems, illustrate some of the signal processing challenges faced when transforming low-level motion sensor data into high-level system information. Focus will be on sensor-near signal processing techniques, but aspects such as scalability and sustainability in large-scale measurement systems will also be touched upon.

**Bio:** Isaac Skog received the MSc degree in Electrical Engineering from the KTH Royal Institute of Technology, Stockholm, Sweden, in 2005. In 2010, he received the Ph.D. degree in Signal Processing with a thesis on low-cost navigation systems. He has been a visiting scholar at the University of Calgary and the Indian Institute of Science. He has been involved in the development of the OpenShoe ([www.openshoe.org](http://www.openshoe.org)) and Tactical Locator (TOR) systems. The TOR system was awarded the best technical demonstrator award at the IEEE Indoor Positioning and Indoor Navigation (IPIN) conference 2014. In 2011 he, together with colleagues, started the insurance telematics company Movelo, specialized in smartphone based driver behavior measurements. Currently he is, together with the company SafeLine, conducting research in the area of predictive maintenance for elevator systems.