Abstract
All plants produce cell walls that may be seen as cellular exoskeletons that protect cells against their environment and direct the growth and shape of cells and therefore also of the plant. Cellulose is a major constituent of the cell wall and consists of glucan chains that coalesce into microfibrils. These cellulose microfibrils are synthesized at the plasma membrane of plant cells by Cellulose Synthase (CESA) protein complexes. Due to the incorporation of cellulose into the wall structure, the microfibrils become immobilized and further synthesis therefore results in movement of the CESAs. The direction of this movement is steered by underlying cortical microtubules that work as rails that template CESA trajectories. My lab is particularly interested in how this guiding mechanism occurs and how it is regulated. In this talk I will outline how a family of proteins referred to as Companion of Cellulose synthase (CC) impact the guidance and the ability of cellulose production to withstand exposure to external stress. I will also touch upon how the microtubules are re-organized to template different types of cell wall patterns in plants and possible mechanisms that drive these patterns.

Biography
Staffan Persson completed his PhD in 2003 was a joint degree between Lund University (Sweden) and North Carolina State University (US). Staffan pursued a postdoc at the Carnegie Institution of Washington at Stanford University 2004-2007, and after that, appointed as a Group Leader at Max-Planck Institute, Potsdam, during 2008-2014. Since Jan 2015, Staffan is an ARC Future Fellow (level 3) and a R@MAP Professor at the University of Melbourne, Australia. He is a Thomson Reuter/Web of Science highly cited researcher 2016 and 2017.

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