

TNO-ESI symposium 2017

Keynote lectures



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Complex to complicated – An appropriate and timeless (partial) evolution

There is a near unanimous agreement within the systems community of the increasing complexity that we have to address as modern society becomes increasingly intertwined with technology – in just about every dimension – transportation, energy, healthcare, and just day to day life. As engineers, grappling with such socio-technical systems we have to develop strategies and approaches, and perhaps new mental models, that allow us to deal with this complexity. I will try to summarize such strategies and approaches, and perhaps outline areas where additional research could provide significant value.



Paul Hilkens, Océ-Technologies
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Embracing complexity in the system challenge

Océ Technologies is active in print and document management products and services for professional environments. As with many other high-tech companies, continuous and effective innovation is key for Océ. Market requirements and technological capabilities change rapidly and Océ is in a market of high-quality, high reliability products with fierce competition. Development effectiveness is therefore a must and to thrive in the industry it is vital to outsmart others. The industrial print systems have become so complex that the system insights and understandings can only be handled by larger teams. Dealing with the cross disciplinary nature of system design therefore means taking the right system decisions on basis of well-performed trade-offs over disciplines, taking into account aligned and balanced contributions from all involved persons. Dealing with uncertainty, team communication, knowing the unknown, modelling, personal skills and personal ambitions all form part of being smart. Océ experience will be used to explain the approach towards realizing the ambition to become “the smartest group of people” in developing professional printing systems.