

**DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE  
UNIVERSITY OF SOUTHERN DENMARK, ODENSE**

## **Mathematics seminar**

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### **Collaborative and Distributed Security Monitoring**

**Thursday 4 October 2018, 14:15-15:15  
IMADA seminar room**

#### **Abstract**

Attacks on IT systems increasingly threaten modern societies. As there will be always successful attacks, it is important to have a security monitoring as a second line of defense in place. Only when attacks are detected early on and countermeasures are enforced immediately, the resulting damage can be minimized. Intrusion Detection Systems (IDSs) are used for this purpose since decades. However, their deployment and usage did not change over time, even though the attack landscape changed drastically. An IDS usually monitors one transition point from one network to the other and this completely isolated from other IDSs. As a result, especially sophisticated, distributed attacks cannot be detected. Collaborative IDS as relatively new research field can close this gap by fostering the exchange of information and its distributed analysis in between different IDS sensors. Thus, these systems can protect large-scale networks with many devices, e.g., in the context of IoT and Industry 4.0. The talk will summarize my research on collaborative security monitoring and will put a particular emphasis on collaborative and distributed IDS.

Short CV: Mathias is an assistant professor at the University Hamburg since September 2016. Before that, he was an assistant professor at the University Münster (2015-16), a Postdoc at the International Computer Science Institute (ICSI) / UC Berkeley (2014-15), and Postdoc at the Center for Advanced Security Research Darmstadt (CASED) / TU Darmstadt from (2012-14). His research interests encompass IT and network security, resilient distributed systems, network monitoring, and botnets. Mathias received a PhD in 2012 and a diploma in computer science in 2008, both from TU Ilmenau.