**SIKS-DKE-Colloquium**

Title: Modern Game AI Algorithms Solve Real-World Problems: From Chemical Retrosynthesis to Peruvian Bug Control Campaigns

Speaker: Dr. Mike Preus (Universität Münster)

When and Where:

Date: Wednesday, February 28th, 2018

Time: 16:00-17:00

Room: 2.015

Location: Maastricht University, Department of Data Science & Knowledge Engineering, Bouillonstraat 8-10

**Abstract:**   
Monte Carlo Tree Search and Deep Neural Networks in combination have pushed the limits of what AI can do in areas where humans have been perceived as dominant over machines, as for the game Go. While this line of research continues towards even more complex game problems, there are many other application areas that could benefit a lot from these new techniques. Chemical retrosynthesis (you know the product, but not how to get there) is one of these, and we show that this problem can very effectively be tackled with MCTS/DNN. But it does not have to end here. We generalize the approach and then provide another testbed that is currently investigated: directing inspectors in bug control campaigns in Arequipa, a city in Peru.

See also [https://project.dke.maastrichtuniversity.nl/colloquia/](https://solismail.uu.nl/owa/redir.aspx?C=dT6TbFxrWNvP5gqxofvJJ-1Pq4soFJTx5vzVSSEybeTUmjJTT3jVCA..&URL=https%3a%2f%2fproject.dke.maastrichtuniversity.nl%2fcolloquia%2f)  for information on coming and previous talks.