

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

# COMPUTER SCIENCE COLLOQUIUM

## The Quest for Fast Learning from Few Examples

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### Abstract:

Though the data in our disposal are numerous and diverse, learning from them is often challenging. This talk centers on two key challenges of learning, relating to the sample complexity (how many examples suffice) and computational complexity (how long does the computation take) of learning algorithms. In particular, we are going to consider two famous algorithms and ask what can they learn when given very few examples or a fraction of the computation time. The talk will then move on to consider why deep learning works so well for images and whether its success can be replicated for data whose inherent structure is captured by a graph.

Short bio: Andreas Loukas received a doctorate in computer science from Delft University of Technology, The Netherlands, where he focused on graph algorithms for signal processing. He is currently a research scientist at the LTS2 Signal Processing Lab in EPFL, Switzerland. His research interests lie in the intersection of graph theory, machine learning, and signal processing.

Host: Fabrizio Montesi