

Invited Talk Abstract

ICOML 2026 | July 27–29, 2026

Learning-Enhanced Approximations of Mixed Integer Nonlinear Optimization Problems**Claudia D'Ambrosio***École Polytechnique*

Date	July 27, 2026
Time	14:00–14:30
Session	Session 2
Venue	Department of Mathematics, National Taiwan Normal University, Taipei, Taiwan

Abstract

Mixed Integer Non Linear Optimization (MINLP) problems are a challenging class of mathematical optimization problems. In this talk, we present and compare several approaches to approximate MINLP with the aim of finding good quality heuristic solutions. In particular, we focus on classic and learning-enhanced piecewise linear and non-linear approximations. The methods are computationally tested on a benchmark of diverse MINLO instances, some from real-world applications arising in engineering.