Nikos Lappas

Chemical Engineering Ph.D. Candidate

5662 Hobart St.
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Education

Ph.D. in Chemical Engineering
2013– 2018 (expected)
Carnegie Mellon University
Chemical Engineering Department

Diploma in Chemical engineering
2007– 2012 (10 semesters)
University of Patras, Greece
Chemical Engineering Department

Experience

Researcher
2011– 2013
Laboratory of Air Quality, Forth ICE-HT
Simulation of atmospheric particulate matter over Europe using the 3-D chemical transport model PMCAMx.

Practical training
2010 (1 month)
Heineken S.A., Patras Plant
Preliminary optimization and assessment of pilot facility for water reclamation from brewery effluent.

Journal Papers

"Adjustable Robust Optimization for Multi-tasking Scheduling with Reprocessing of Imperfect Tasks"
(N. Lappas; L.R. Sandoval; R. Fukasawa; C. Gounaris)
(Manuscript in preparation)

"Robust Optimization under Endogenous Uncertainty"
(N. Lappas; A. Subramanyam; C. Gounaris)
Comp. & Chem. Eng., 2017 (Under Review).

"A Theoretical and Computational Study of Continuous-Time Process Scheduling Models in the Context of Adjustable Robust Optimization"
(N. Lappas; C. Gounaris)
AIChE J., 2017 (Under Review).

"Multi-Stage Adjustable Robust Optimization for Process Scheduling under Uncertainty"
(N. Lappas; C. Gounaris)
AIChE J., 62:1646-1667, 2016.

Conference Proceedings

"A Theoretical and Computational Study of Continuous-Time Process Scheduling Models in the Context of Adjustable Robust Optimization"
(N. Lappas; C. Gounaris)
AIChE Annual Meeting, November 2016, San Francisco.

"Adjustable Robust Optimization for Handling Uncertainty in Process Scheduling"
(N. Lappas; C. Gounaris)
INFORMS Annual Meeting, November 2015, Philadelphia.

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Awards

AIChE Computing and Systems Technology Division, Best Student Presentation Award
"A Theoretical and Computational Study of Continuous-Time Process Scheduling Models in the Context of Adjustable Robust Optimization"
AIChE Annual Meeting, November 2016, San Francisco.

Editor's choice paper
"Multi-Stage Adjustable Robust Optimization for Process Scheduling under Uncertainty"
(N. Lappas; C. Gounaris)
AIChE J., May 2016.

Best Presentation Award
"Adjustable Robust Optimization for Scheduling Multipurpose Batch Plants under Uncertainty"
AIChE Annual Meeting, November 2015, Salt Lake City.

Andreas Mentzelopoulos Scholarship for Greek Students Abroad
September 2015.

Carnegie Mellon University, Dean's Fellowship
September 2013.

Key Technical Skills

Mathematical Programming with specialization in **Enterprise Wide Optimization**

Management of **Uncertainty in Supply Chain** and Production **Planning / Scheduling** operations

High efficiency algorithmic development in **C++, Python, Fortran** with additional experience in **High-Performance Computing** (OpenMP, MPI parallel programming)

Extensive experience with Mathematical Programming APIs (**IBM CPLEX, GUROBI, SCIP**)

Familiarity with **Machine Learning** concepts and widely available tools (**scikit, TensorFlow**)

Languages

English - full professional proficiency

German - elementary proficiency

Greek - native language

Activities

Member of Student Council of Chemical Engineering Dept.
(2008-2012)

Member of the General Assembly of Chemical Engineering Dept.
(2008-2012)