Richárd Molnár-Szipai

Phone: (30) 359-3663
Email: molnarszipai.richard@gmail.com
Homepage: http://www.math.bme.hu/~mricsi

Education

2012-: Doctoral School of Mathematics and Computer Science
Budapest University of Technology and Economics.
Supervisor: Tibor Illés.

2010-2012 : M.Sc. in Applied Mathematics, specialized in operations research.
Budapest University of Technology and Economics.
Grade of degree: Excellent with highest honors.
Degree number: 2836/2012.
Date of acquisition: June 18, 2012.
Thesis title: Efficient pivot algorithms on network flow problems [in Hungarian].
Thesis advisor: Tibor Illés.

2007-2010: B.Sc. in Mathematics.
Budapest University of Technology and Economics.
Grade of degree: Excellent.
Degree number: 2105/2010.
Date of acquisition: June 22, 2010.
Thesis title: Bounds on the probability of the union and the intersection of events, [in Hungarian].
Thesis advisor: Tamás Szántai.

2001-2007: Eötvös József Secondary School, Budapest
Excellent exit exams

Publications

Tibor Illés, Richárd Molnár-Szipai: Strongly polynomial primal monotonic build-up simplex algorithm for maximal flow problems, *Discrete Applied Mathematics*, **214**, 2016, 201–210.

Tibor Illés, Richárd Molnár-Szipai: Multimodal transportation in Budapest, *ORMS Today* **43** (2), 2016.

Tibor Illés, Richárd Molnár-Szipai: On Strongly Polynomial Variants of the MBU-Simplex Algorithm for a Maximum Flow Problem with Nonzero Lower bounds, *Optimization* **63** *(1), 2014, 39–47.*

Conferences

Veszprém Optimization Conference: Advanced Algorithms. Esztergom, 2016. December 12–15.

Presentation: Monotonic build up simplex algorithms for the maximum flow problem. Richárd Molnár-Szipai, Tibor Illés.

Co-author in: Integrating combinatorial algorithms into an LP-solver. Anita Varga, Richárd Molnár-Szipai.

XXXI. Hungarian Operations Research Conference. Cegléd, 2015. June 10–12.

Presentation: Primál MBU-szimplex algoritmus maximális folyam feladaton ("Primal MBU-simplex algorithm on the maximum flow problem" in Hungarian). Richárd Molnár-Szipai, Tibor Illés.

Veszprém Optimization Conference: Advanced Algorithms. 2014. December 14–17.

Presentation: Day-ahead power markets with coupled regions. Richárd Molnár-Szipai, Attila Egri, Marianna Eisenberg-Nagy, Boglárka Gazdag-Tóth, Tibor Illés.

MINO/COST Spring School on Convex Optimization, Klagenfurt, 2014. April 8–11.

XXX. Hungarian Operations Research Conference. Balatonőszöd, 2013. June 10–13.

Presentation: Az alsó korlátos hálózati folyam feladat megoldása MBU szimplex algoritmussal ("Solving Network Flow Problems with lower bounds using the MBU simplex algorithm" in Hungarian). Richárd Molnár-Szipai, Tibor Illés.

Veszprém Optimization Conference: Advanced Algorithms. 2012. December 11–14.

Presentation: On Strongly Polynomial Variants of the MBU-Simplex Algorithm for a Maximum Flow Problem with Nonzero Lower Bounds. Richárd Molnár-Szipai, Tibor Illés.

Co-author in: The Locomotive Assignment Problem in Freight Transportation. Zsuzsanna Barta, Attila Egri, Tibor Illés, Zoltán Kelemen, Richárd Molnár-Szipai.

Awards

Gyula Kőnig Young Researcher Award, Budapest University of Technology and Economics, Faculty of Natural Sciences, 2014. June 11.

Teaching Experience

Supervising mathematician thesis works.

B.Sc. level mathematician practice courses: operations research, optmization models.

M.Sc. level engineering practice courses (Mathematics M1-M2): probability theory, complex analysis, ordinary and partial differential equations.

B.Sc. level engineering practice courses (Mathematics A1-A3): one- and multivariable analysis, linear algebra, ordinary differential equations, probability theory.

Projects

2014-15: Developing, implementing and testing models of day-ahead coupled regions in the R & D project "Villamos energia piac modellezés, szimuláció és kísérleti rendszer fejlesztése kooptimalizációs eljárások kutatásával" ("Modelling, simulating and developing experimental systems for electric power markets by researching cooptimalization methods" in Hungarian).

2013: Developing models for transportation processes in the project "AIMS Multimodal Mobility".

2012: Developing and implementing models for engine assignment in railway transportation in a joint R & D project of the Department of Differential Equations, BUTE and MÁV-TRAKCIÓ Railway Traction Co.

Spoken Languages

Hungarian, native

English, advanced level (c1)
BME Language Exam Center, January 31, 2007.
Degree number: 879618

Computer Skills

Microsoft Office, TeX, C++, XPRESS-MP, Mathematica, Matlab, AMPL

Budapest, 2017 January 14