Optimization and Simulation

Michel Bierlaire

Transport and Mobility Laboratory
School of Architecture, Civil and Environmental Engineering
Ecole Polytechnique Fédérale de Lausanne

Organization

- Class every Tuesday from 13:15 to 17:00.
- 4 credits = 4 contact periods + 4 periods for homework
- Assignments: reading + implementation in Octave/Matlab
- Evaluation: two presentations on April 10 and May 29
- All students in a group should be presenting something at each of the sessions

Tentative outline

- 20.02.2017: Introduction to simulation
- 27.02.2017: Advanced topics on simulation
- 06.03.2017: Markov Chan Monte Carlo
- 13.03.2017: Simulation project
- 20.03.2017: Simulation project
- 27.03.2017: Simulation project
- 03.04.2017: Spring break
- 10.04.2017: Presentations of the students
- 17.04.2017: Optimization: lecture
- 24.04.2017: Optimization: exercices
- 01.05.2017: Optimization: exercices
- 08.05.2017: Optimization project
- 15.05.2017: Optimization project
- 22.05.2017: Optimization project
- 29.05.2017: Presentations of the students

References


Bierlaire, M. (2015).
Optimization: Principles and Algorithms.
EPFL Press, Lausanne.


Ross, S. M. (2006).
Simulation.
Elsevier, fourth edition.