Challenge Proposals from Every Mentor

List of oral presentations for student to attend in order to solve mentor's challenges:

Mentor	Date and time	Title of the presentation
Anne Auger	Sat 10:40 - 12:30	A Practical Guide to Benchmarking and Experimentation
Juergen Branke	Sat 16:10 - 18:00	Tutorial on Evolutionary Multiobjective Optimization
Carlos Coello	Mon 10:40 - 12:20	A Hyperheuristic of Scalarizing Functions
Carola Doerr	Sun 14:00 - 15:50	Tutorial Non-Static Parameter Choices in Evolutionary Computation
Manuel López-Ibáñez	Sat 08:30 - 10:20	Automated Offline Design of Algorithms
John McCall	Mon 16:10-17:50	Real World Applications 3
Justyna Petke	Sun 10:40 - 12:30	Genetic Improvement Workshop (session 1)
Mike Preuss	Sat 14:00 - 15:50	Exploratory Landscape Analysis
Thomas Stützle	Sat 08:30 - 10:20	Automated Offline Design of Algorithms
Una-May O'Reilly	Sun 4:10 - 6pm	W21: Genetic and Evolutionary Computation in Defense, Security, and Risk Management (SecDef), First Talk at 4:10

To share with students (alphabetical order)

Anne Auger

Challenge: How can we display in a single graph quantitative performance assessment aggregated over targets and functions? What does it represent? Can we find out from this graph the proportion of problems solved ? [one problem = a couple (target, function)]

Students attend to: Sat 10:40 - 12:30, Tutorial "A Practical Guide to Benchmarking and Experimentation" by Nikolaus Hansen

Juergen Branke

Challenge: What is the problem with a simple linear combination (weighted sum) of the objectives in multi-objective optimisation?

Students attend to: Sat 16:10-18:00, Tutorial on Evolutionary Multi-Objective Optimization

Carlos Coello

Challenge: What is the difference between a performance indicator that is "Pareto compliant" with respect to one that is "weakly Pareto compliant"?

Students attend to: EMO1: Monday 17th, 10:40-12:20 hrs: A Hyperheuristic of Scalarizing Functions

Carola Doerr

Challenge: What are the 3 main advantages of non-static parameter choices?

Students attend to: Sun 14:00 - 15:50, Tutorial Non-Static Parameter Choices in Evolutionary Computation

Manuel López-Ibáñez

Challenge: Do you need to use the hypervolume measure in order to tune multi-objective optimizers by means of irace?

Students attend to: Sat 08:30-10:20 Automated Offline Design of Algorithms

John McCall

Challenge: What is the real-world relevance of problem features abstracted by machine learning?

Students attend to: Mon 16:10 - 17:50 Real World Applications 3

Justyna Petke

Challenge: Which non-functional and which functional properties of software can be improved using genetic improvement? Please base your answers based on the talks you attend in this session.

Students attend to: Sun 10:50-12:30 Genetic Improvement Workshop (session 1)

Mike Preuss

Challenge: How does a "Cumulated Gradient Paths" heatmap help me selecting a suitable algorithm/good parameters for a multi-objective optimization problem?

Students attend to: Sat 14:00 - 15:50 Exploratory Landscape Analysis (Tutorial)

Thomas Stützle

Challenge: Offline and online parameter configuration are mutually exclusive techniques?

Students attend to: Sat 08:30-10:20 Automated Offline Design of Algorithms

Una-May O'Reilly

Challenge: Compare and contrast the value of 3 different solution concepts used in coevolutionary algorithm for network security.

Students attend: Sunday: 4:10 - 6pm W21: Genetic and Evolutionary Computation in Defense, Security, and Risk Management (SecDef), First talk: Investigating Coevolutionary Archive Based Genetic Algorithms on Cyber Defense Networks, Dennis Alberto Garcia, Anthony Edward Erb Lugo, Erik Hemberg, Una-May O'Reilly