

# Dagstuhl Seminar 22182

## Estimation-of-Distribution Algorithms: Theory and Applications

### Seminar schedule

Monday, 2 May 2022 – Lecture Hall Karlsruhe

---

07:15 – 08:00	Mandatory Covid test in Lecture Hall Karlsruhe
07:30 – 09:00	Breakfast
09:00 – 09:15	Welcome and seminar opening
09:15 – 10:30	Participant introduction
10:30 – 11:00	Coffee break
11:00 – 12:00	Introductory talk: <b>Martin Krejca</b> on <i>Theoretical Analyses of EDAs — Introduction and Overview</i>
12:15 – 13:30	Lunch
13:30 – 14:00	Time for individual discussions
14:00 – 15:30	Introductory talk: <b>Nikolaus Hansen</b> on <i>A Gentle Introduction to Information-Geometric Optimization</i>
15:30 – 16:00	Cake
16:00 – 16:45	Talk: <b>Vicente Soloviev</b> on <i>EDA applications in real industrial problems</i>
16:45 – 17:30	Discussion and organization of group work
17:30 – 18:00	Time for individual discussions
18:00 – 19:00	Dinner
19:00 –	Individual discussions (and sleep ;-)

---

## Tuesday, 3 May 2022 – Lecture Hall Karlsruhe

---

07:30 – 08:45	Breakfast
09:00 – 10:00	Long Talk: <b>Ekhine Iruozki</b> on <i>Generating permutations - How to compute medians for permutations for several distances</i>
10:00 – 10:30	Coffee break
10:30 – 11:15	Talk: <b>John McCall</b> on <i>EDAs, epistatis, and structure</i>
11:15 – 12:00	Talk: <b>Dirk Sudholt</b> on <i>Different parameter regimes in the cGA, genetic drift, and their effect on performance</i>
12:15 – 13:30	Lunch
13:30 – 14:00	Time for individual discussions
14:00 – 15:00	<b>Breakout sessions (in parallel):</b> <ul style="list-style-type: none"><li>◇ Adding interactions in discrete optimization (chair: Jon Shapiro, room S104)</li><li>◇ Dealing with constraint search spaces (chair: Josu Ceberio, room S005)</li></ul>
15:00 – 15:30	Debrief of breakout sessions (lecture hall Karlsruhe)
15:30 – 16:00	Cake
16:00 – 16:30	Flash talk + discussion: <b>Carlos Andreu</b> on <i>EDAs in random differential equations and applications</i>
16:30 – 16:45	Flash talk: <b>Per Kristian Lehre</b> on <i>Do univariate EDAs cope well with deception/epistatis?</i>
16:45 – 17:30	<b>Breakout session (whole seminar)</b> <ul style="list-style-type: none"><li>◇ Univariate EDAs, deception and epistatis (chair: Per Kristian Lehre)</li></ul>
17:30 – 18:00	Time for individual discussions
18:00 – 19:00	Dinner
19:00 –	Individual discussions (and sleep ;-)

---

## Wednesday, 4 May 2022 – Lecture Hall Karlsruhe

---

07:30 – 08:45	Breakfast
09:10 – 09:15	Announcements
09:15 – 10:00	Talk: <b>Andrew Sutton</b> on <i>EDAs, noise and graceful scaling</i>
10:00 – 10:30	Coffee break (plus testing)
10:30 – 11:15	Talk: <b>Johannes Lengler</b> on <i>EDAs and more noise</i>
11:15 – 12:00	Talk: <b>Thomas Stütze</b> on <i>A bit about parameter tuning</i>
12:15 – 13:30	Lunch
13:30 – 15:30	Hike/free time (depending on weather)
15:30 – 16:00	Cake
16:00 – 16:30	Flash talk + discussion: <b>Vicente Soloviev</b> on <i>Semi-parametric Bayesian networks in EDAs</i>
16:30 – 17:30	<b>Breakout session (whole seminar)</b> ◊ Explainability (chair: John McCall, room S111 "Wappensaal")
17:30 – 18:00	Time for individual discussions
18:00 – 19:00	Dinner
19:00 –	Individual discussions (and sleep ;-)

---

## Thursday, 5 May 2022 – Lecture Hall Karlsruhe

---

07:30 – 08:45	Breakfast
09:00 – 09:10	Announcements
09:10 – 10:00	Talk: <b>Alexander Brownlee</b> on <i>The question of structure in Markov Network EDAs</i>
10:00 – 10:30	Coffee break
10:30 – 11:15	Talk: <b>Benjamin Doerr</b> on <i>Genetic drift and a smart restart scheme</i>
11:15 – 12:00	Talk: <b>Manuel López-Ibañez</b> on <i>Expensive black-box optimization problem on permutation spaces</i>
12:15 – 13:00	Lunch
13:00 – 13:15	Group photo
13:15 – 14:15	Time for individual discussions
14:15 – 14:45	Talk: <b>Ekhine Irurozki</b> on <i>Universal permutation aggregation</i>
14:45 – 15:30	Talk: <b>Mayowa Ayodele</b> on <i>EDAs on QUBOs</i>
15:30 – 16:00	Cake
16:00 – 17:00	<b>Breakout session (whole seminar)</b> ◇ Genetic drift (chair: Dirk Sudholt, room S111 "Wappensaal")
17:00 – 18:00	Time for individual discussions
18:00 – 19:00	Dinner
19:00 – 20:30	Time for individual discussions
20:30 –	Get-together in Wine Cellar

---

## Friday, 6 May 2022 – Lecture Hall Karlsruhe

---

07:30 – 08:45	Breakfast
09:15 - 09:40	Flash talk: <b>Johannes Lengler</b> on <i>Where and how does the brain use EDAs?</i>
09:40 - 10:00	Flash talk: <b>Benjamin Doerr</b> on <i>General univariate EDAs</i>
10:00 – 10:30	Coffee break
10:30 – 11:30	Group discussion: <i>Practice-relevant EDAs and barriers for theory of EDAs</i>
11:30 – 12:00	Closing session, feedback, and goodbye
12:15 – 13:30	Lunch
13:30 –	Individual departure (please sign up for shuttles to the train station with the staff at the reception)

---