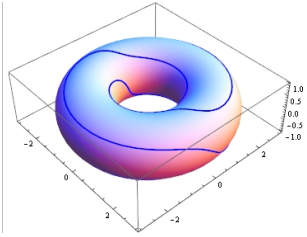
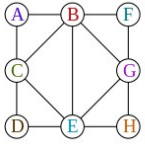
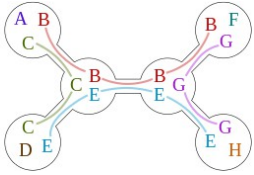
Zdeněk Dvořák

https://iuuk.mff.cuni.cz/~rakdver/

- Graph theory
  - implementation and evaluation of complex combinatorial algorithms, testing of hypotheses for open questions
  - theoretical bachelor's theses assumed.
- Deposits from previous years
  - an algorithm for drawing graphs on the torus, an approximation algorithm for plane graphs based on reduction to graphs restricted to tree-nets.







Michal Kouck´y

https://iuuk.mff.cuni.cz/~cookies/

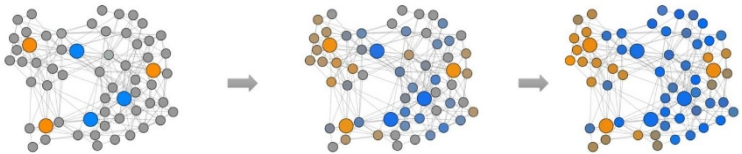
- Implementation of new algorithms for editing distance
- Securing passwords on the server
- Calibration tool for Atmel systems

		E	L	E	P	H	A	N	T
	0	1	2	3	4	5	6	7	8
R	1	1	2	3	4	5	6	7	8
E	2	1	2	2	3	4	5	6	7
L	3	2	1	2	3	4	5	6	7
E	4	3	2	1	2	3	4	5	6
V	5	4	3	2	2	3	4	5	6
A	6	5	4	3	3	3	3	4	5
N	7	6	5	4	4	4	4	3	4
T	8	7	6	5	5	5	5	4	3

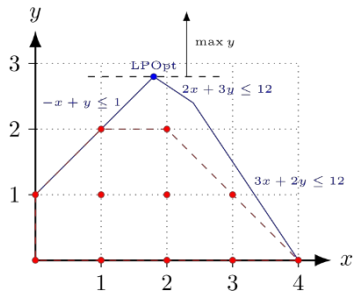
Martin Kouteck´y

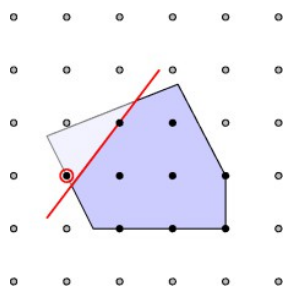
https://research.koutecky.name/

- Manipulation and management of resources in society



- Geometric techniques in combinatorial optimization
  - integer programming, combinatorial algorithms, . . .



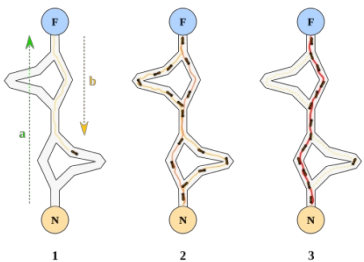


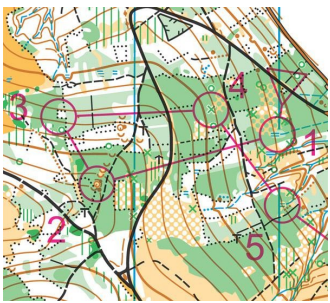
Ondrej Pangr´ac

https://iuuk.mff.cuni.cz/~pangrac/

- Optimization and heuristics
  - optimization graph problems and related games, use of heuristics for these problems.

- Mapov´an´ı
  - applications related to orientation and mapping in graphs

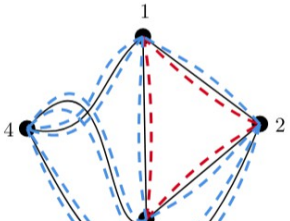




Robert Šámal

https://iuuk.mff.cuni.cz/~samal/

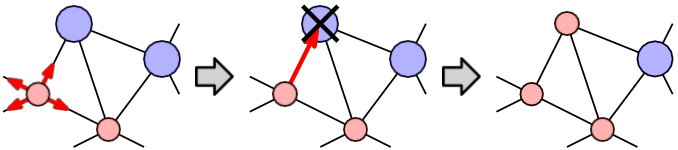
- Generation of random drawings of graphs on the surface
  - In each vertex of the graph we select a different order of edges. This determines the graph to be drawn on some surface (a sphere with a rank of eight).
  - The aim of the project is to develop a fast program that implements this and determines as quickly as possible whether all the walls are preserved by the edits.
  - If successful, this would lead to the verification of the 50-year-old Cycle Double Cover hypothesis.



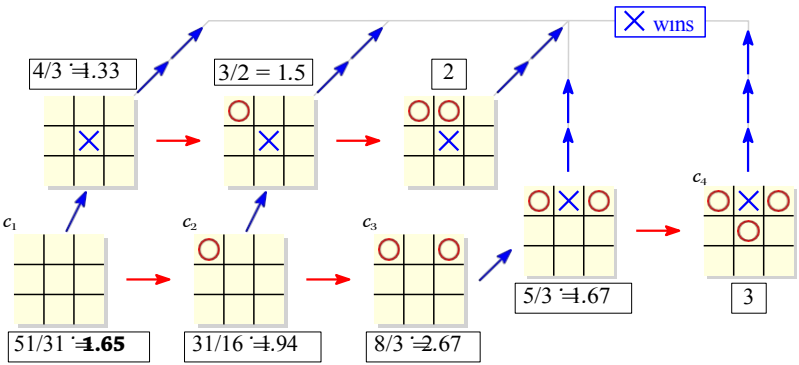
Pepa Tkadlec

https://sites.google.com/view/pepa-tkadlec/

- Algorithms in evolutionary graph theory



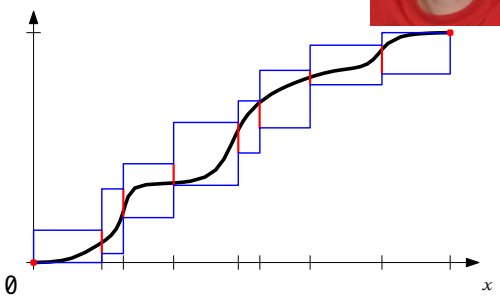
- Strategies for bidding versions of simple mathematical games



Pavel Veselý

https://iuuk.mff.cuni.cz/~vesely/

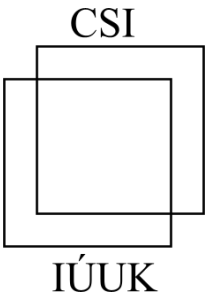
- Processing of large data with small memory
- called "Streaming algorithms", for example for:
  - median estimate, percentile estimated. and distribution
  - clustering of geometric data



- Online algorithms: how to make decisions when you don't know the future?
  - E.g. packet scheduling in network devices
  - Project: search for lower estimates

- You are studying for a theoretical bachelor's degree

- If you choose a project from the KAM through IU´UK, please contact your supervisor by e-mail.
- Contacts can be found on the pages of the departments:
  - WHERE TO: https://kam.mff.cuni.cz/
  - IU´UK: https://iuuk.mff.cuni.cz/



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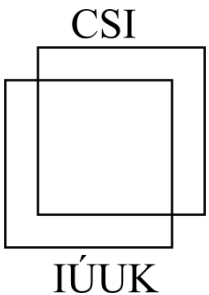

Thank you for your attention.