

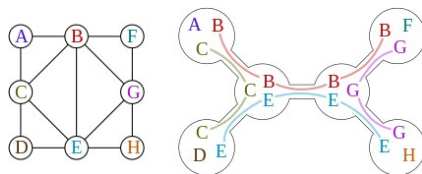
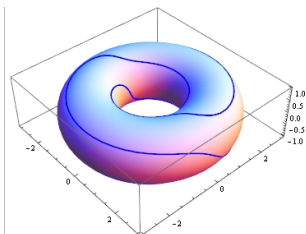
- **Graph Theory**

- implementation and evaluation of complex combinatorial algorithms, tests and hypothesis to open questions,
- pre-proposal and related theoretical and undergraduate and graduate degrees.



- **Examples from past years**

- Algorithm for drawing graphs on torus, approximation algorithm for plane graphs based on reduction to graphs constrained by trees and lines.

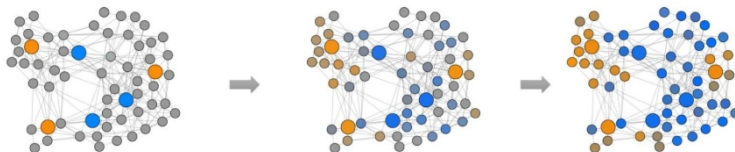


- Implementation of new algorithms for editing and educationality
- Secure passwords on the server
- N-machine for calibration of time for Atmel systems

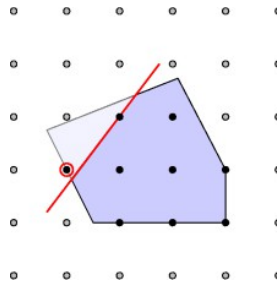
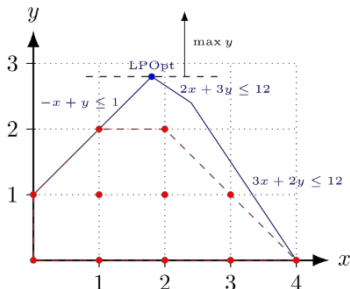


		E	L	E	P	H	A	N	T
	0	1	2	3	4	5	6	7	8
R	1	1	2	3	4	5	6	7	8
E	2	1	2	2	3	4	5	6	7
L	3	2	1	2	3	4	5	6	7
E	4	3	2	1	2	3	4	5	6
V	5	4	3	2	2	3	4	5	6
A	6	5	4	3	3	3	3	4	5
N	7	6	5	4	4	4	4	3	4
T	8	7	6	5	5	5	5	4	3

- Manipulation and surveillance in society



- Geometric techniques in combinatorial optimization
 - Whole-sale programs, combinatorial algorithms,...

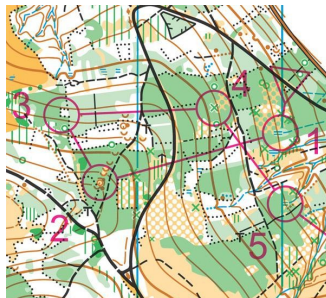
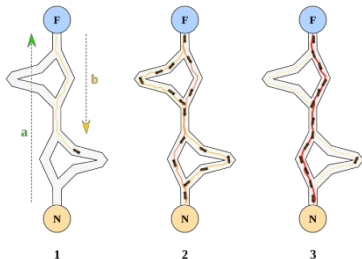


- **Optimization and heuristics**

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

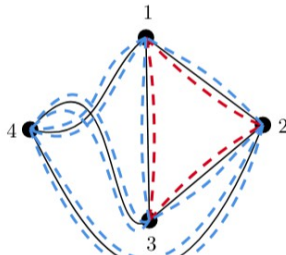
- **Mapování**

- applications related to orientation and maps in general.

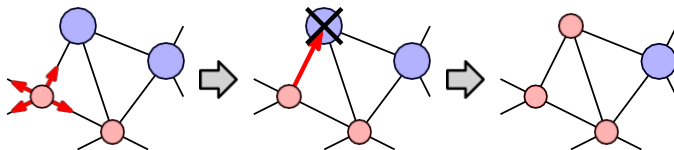


• Generating an n -regular and suitable graphs on the desktop

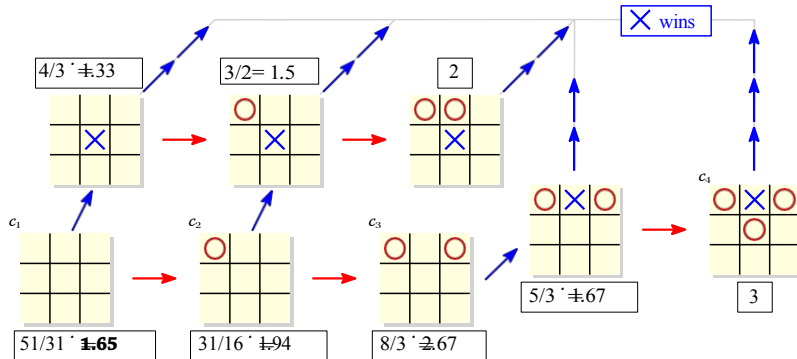
- In each vertex of the graph, select n and a suitable row of edges. This determines the graph to be drawn on some surface (a sphere with a value of eighth).
- The aim of the project is to develop a fast program that implements this and determine as quickly as possible whether all the walls are maintained by the circuits.
- If it done, it will lead to the 50 years old hypothesis Cycle Double Cover.



- Algorithms in evolution and graph theory



- Strategies for offering a version of simple mathematical games

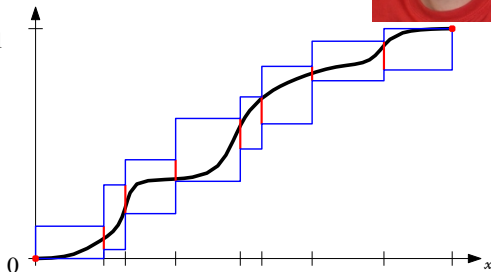




- Processing of large data with small memory

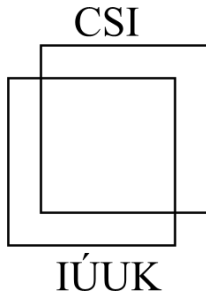
- call "Streaming algorithms", for example for: "ed."

- copper estimate and percentile and distribution
- clustering of geometric data

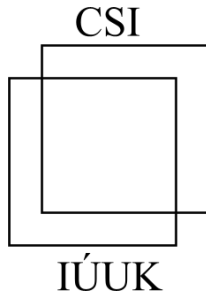


- **Online algorithms:** how to make decisions when you don't know the future?
 - E.g. schedules and packet scheduling of switching
 - Project: search and lower estimate
 - Spill for theoretical bachelor's work

- If you choose a project from the KAM IÚUK, please contact the project leader by at .
- Contacts can be found on each departments:
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Thank you for your attention.