Workshop on

"Rigidity and Flexibility of Geometric Structures"

September 24 – 28, 2018

organized by

Georg Nawratil (TU Vienna), Anthony Nixon (Lancaster U), Josef Schicho (JKU Linz), Brigitte Servatius (Worcester Polytechnic Inst.)

- **Monday, September 24, 2018**

  09:00 – 09:30 **Registration**

  09:20 – 09:30 **Opening**

  09:30 – 10:30 **Hellmuth Stachel**
  Between rigidity and flexibility

  10:30 – 11:00 *Coffee / Tea break*

  11:00 – 12:00 **Bill Jackson**
  Rigidity of graphs and frameworks

  12:00 – 14:00 *Lunch break*

  14:00 – 15:00 **Open Session (part 1)**
  Short talks

  15:00 – 15:30 *Coffee / Tea break*

  15:30 – 16:30 **Open Session (part 2)**
  Short talks

- **Tuesday, September 25, 2018**

  09:30 – 10:30 **Oleg Karpenkov**
  Configuration spaces of tensegrities on graphs and CW-complexes

  10:30 – 11:00 *Coffee / Tea break*

  11:00 – 11:25 **Andrea Micheletti**
  Some questions on molecular structures and rigid-panel structures

  11:25 – 11:50 **Brigitte Servatius**
  Delta matroids and rigidity matroids for graphs and maps on surfaces

  11:50 – 13:50 *Lunch break*

  13:50 – 14:50 **Ivan Izmestiev**
  Flexible Kokotsakis polyhedra and elliptic functions

  14:50 – 15:20 *Coffee / Tea break*

15:20 – 15:45 **Grigory Ivanov**
Orthodiagonal Kokotsakis polyhedra

15:45 – 16:10 **Zeyuan He**
Rigid-foldable quadrilateral creased papers

16:10 – 16:35 **Klara Mundilova**
"Rigid" curved crease origami

- **Wednesday, September 26, 2018**

  09:30 – 10:30 **Meera Sitharam**
  Realization Certificates for Solving Geometric Constraint Systems (and a polynomial time algorithm for planar, minimally rigid, bar-joint systems)

  10:30 – 11:00 *Coffee / Tea break*

  11:00 – 11:25 **Jean-Marc Schlenker**
  Polyhedra inscribed in quadrics

  11:25 – 11:50 **Andreas Mueller**
  Higher-order rigidity revisited from screw theory

  11:50 – 13:50 *Lunch break*

  13:50 – 14:50 **Louis Theran**
  Unlabeled generalisations of global rigidity

  14:50 – 15:20 *Coffee / Tea break*

  15:20 – 15:45 **Ciprian Borcea**
  Ellipsoids and auxetics

  15:45 – 16:10 **James Cruickshank**
  Periodic packings of curves

  16:10 – 16:35 **Stephen Power**
  Counting 3-periodic nets and their isotopy classes

  16:35 – 16:45 **Workshop photo**

  17:00 – **Workshop dinner**

- **Thursday, September 27, 2018**

  09:30 – 10:30 **Matteo Gallet**
  Tropical geometry for minimally rigid graphs

  10:30 – 11:00 *Coffee / Tea break*

  11:00 – 11:25 **Jan Legersky**
  Graphs with flexible labelings allowing injective realizations

  11:25 – 11:50 **Hans-Christian van Bothmer**
  Hexapods with a small linear span

  11:50 – 13:50 *Lunch break*

  13:50 – 14:50 **Leo Liberti**
  Distance geometry in data science

  14:50 – 15:20 *Coffee / Tea break*

  15:20 – 15:45 **John Owen**
  Symmetry, redundancy and quadratic solvability in point-line-plane frameworks

15:45 – 16:10 **Sean Dewar**
Rigidity in the normed plane

16:10 – 16:35 **Bernd Schulze**
Frameworks with coordinated edge motions

- **Friday, September 28, 2018**

  09:30 – 10:30 **Gaiane Panina**
  Oriented area as a Morse function

  10:30 – 11:00 *Coffee / Tea break*

  11:00 – 11:25 **Daniel Scharler**
  Rational motions with trajectories of low degree

  11:25 – 11:50 **Niels Lubbes**
  On an invariant for linkages

  11:50 – 13:50 *Lunch break*

  13:50 – 16:35 **Discussions**

All talks take place at ESI, Boltzmann Lecture Hall!