

# Student conference

Methods of Algebra and Functional Analysis In Applications

Děčín, May 16–19, 2022

Monday 16/5, chair: F. Štampach

8<sup>50</sup> – 9<sup>00</sup> **Opening**

9<sup>00</sup> – 9<sup>30</sup> **Vladimír Lotoreichik** Self-adjointness for the MIT bag model on a cone

9<sup>30</sup> – 10<sup>00</sup> **Vu Thi Bich Tuyen** Reverse isoperimetric inequality for the lowest Robin eigenvalue of a triangle

10<sup>00</sup> – 10<sup>30</sup> **Coffee break**

10<sup>30</sup> – 11<sup>00</sup> **Lukáš Heriban** Non-relativistic limit of the Dirac operator

11<sup>00</sup> – 11<sup>30</sup> **David Kramár** Stability of spectra for 1-parametric Dirac operators on a half-line

11<sup>30</sup> – 11<sup>55</sup> **Lukáš Vácha** The Klein paradox

12<sup>00</sup> – 13<sup>00</sup> **Lunch**

13<sup>00</sup> – 18<sup>00</sup> **Working on projects**

Tuesday 17/5, chair: M. Tušek

9<sup>00</sup> – 9<sup>30</sup> **Borbala Gerhat** Pseudo numerical ranges

9<sup>30</sup> – 10<sup>00</sup> **Petr Blaschke** Pedal coordinates, force problems and calculus of variation

10<sup>00</sup> – 10<sup>30</sup> **Coffee break**

10<sup>30</sup> – 11<sup>00</sup> **Aitor Balmaseda** Controlling quantum systems

11<sup>00</sup> – 11<sup>25</sup> **Tomáš Hrdina** Spectral enclosures for discrete bilaplacian with complex potential

11<sup>25</sup> – 11<sup>50</sup> **Vojtěch Bartoš** Discrete Schrödinger operator with a complex step potential

12<sup>00</sup> – 13<sup>00</sup> **Lunch**

13<sup>00</sup> – 18<sup>00</sup> **Working on projects**

Thursday 19/5, chair: B. Gerhat

9<sup>00</sup> – 9<sup>30</sup> **Matěj Tušek** Approximations of relativistic point and delta-shell interactions by regular potentials

9<sup>30</sup> – 10<sup>00</sup> **Marie Fialová** Quantum Hall effect

10<sup>00</sup> – 10<sup>30</sup> **Coffee break**

10<sup>30</sup> – 11<sup>00</sup> **Romana Kvasničková** Absence of embedded boundstates in semi-Dirac semi-metals

11<sup>00</sup> – 11<sup>30</sup> **Tomáš Fajkl** Spectral asymptotics of curved metamaterials

11<sup>30</sup> – 12<sup>00</sup> **Juraj Kováč** WKB analysis and reaction-diffusion equations

12<sup>00</sup> – 12<sup>10</sup> **Closing**

12<sup>10</sup> – 13<sup>00</sup> **Lunch**