

Program of the workshop “Around scattering by obstacles and billiards”

March 30, Friday

9.00 – 9.40 Sergei Tabachnikov, "Periodic billiard trajectories in the regular pentagon".

9.45 – 10.25 Leonid Bunimovich, "Principles to design chaotic (hyperbolic) billiards".

10.25-11.00 **Coffee break**

11.00 – 11.40 Alexei Iantchenko, "Inverse problems for scattering resonances".

11.45 – 12.25 Andreas Kirsch, "The Factorization Method for inverse scattering problems".

Lunch

14.00 – 14.40 Boris Gutkin, "Interior-exterior duality in quantum billiards".

14.45 – 15.25 Evgeny Lakshtanov, "Interior transmission eigenvalues and branching billiards".

15.25-16.00 **Coffee break**

16.00 – 16.40 Gregory Galperin, "A Billiard Ball Bouncing in Gravitational Field".

16.45 – 17.25 Victor Ivrii, "100 years of Weyl law".

March 31, Saturday

9.00 – 9.40 Dimitri Yafaev, "Scattering by non-compact obstacles".

9.45 – 10.25 Alexander Plakhov, "Invisibility in billiards and duality of interior and exterior billiards".

10.25-11.00 **Coffee break**

11.00 – 11.40 Konstantin Khanin, " 'Exotic' billiards and circle maps with breaks".

11.45 – 12.25 Brian Sleeman, "The Inverse Obstacle Scattering Problem".

Lunch

14.00 – 14.40 Maciej Wojtkowski, "Design of Hyperbolic Billiards"

14.45 – 15.25 Michael Bialy, "Conjugate points for convex billiards".

15.25-16.00 **Coffee break**

Section 1

16.00 – 16.40 Roman Schubert, "Open problems in wave propagation in billiards".

16.45 – 17.25 Dmitri Vassiliev, "Wave propagation in first order hyperbolic systems".

17.30 – 18.10 Lucas Chesnel, "Time harmonic Maxwell equations with sign changing coefficients".

Section 2

16.00 – 16.40 Vera Roshchina, "Fractal bodies invisible in 3 directions".

16.45 – 17.25 José Pedro Gaivão, "Chaos in the square billiard with a modified reflection law".

17.30 – 18.10 Eugene Gutkin, "Recurrence and ergodicity for the billiard on noncompact polygons".

A pedestrian trip in the city with the finishing cup of coffee and glass of porto wine in the Barrocas Park cafe.

April 1, Sunday

Section 1

9.00 – 9.40 Armin Lechleiter, "Sampling Methods for Time-Domain Inverse Scattering".

9.45 – 10.25 Nuno Martins, "Numerical methods for inverse problems using fundamental solutions techniques".

10.25-11.00 Coffee break

11.00 – 11.40 Euan Spence, "Hybrid asymptotic-numerical methods for scattering problems".

11.45 – 12.25 Yuri Safarov, "Branching billiards and associated Fourier integral operators".

Section 2

9.00 – 9.40 Roberto Markarian, "Structure and evolution of strange attractors in non-elastic triangular billiards".

9.45 – 10.25 Tatiana Yarmola, " Perfect retroreflectors in tubular domains".

10.25-11.00 Coffee break

11.00 – 11.40 Gianluigi Del Magno, "Ergodicity of chaotic billiards".

11.45 – 12.25 Alexey Glutsyuk, "On quadrilateral orbits in planar billiards".

Lunch

14.00 Trip to Costa Nova.