

Géométrie différentielle, billards et optique géométrique
Differential Geometry, Billiards, and Geometric Optics
CIRM Marseille

Monday, 4 October 2021

Morning session		Chair: Alexey Glutsyuk
9:00–9:10		<i>Opening</i>
9:10–10:00	Alexander Veselov	Geodesic scattering on hyperboloids
10:10–10:40		<i>Coffee break</i>
10:40–11:30	Misha Bialy	Birkhoff-Poritsky conjecture for centrally-symmetric billiards
11:40–12:30	Diana Davis	Billiards on regular polygons
12:40		<i>Lunch</i>
Afternoon session		Chair: Alexander Veselov
14:00–14:50	Gil Bor	Geometry and new symmetries of the Kepler problem
15:00–15:50	Alexander Plakhov	Newton’s problem of minimal resistance for convex bodies
16:00–16:30		<i>Coffee break</i>
16:30–17:20	Richard Montgomery	Billiards arising in N-body problems
19:30		<i>Dinner</i>

Tuesday, 5 October 2021

Morning session		Chair: Serge Troubetzkoy
9:00–9:50	Michael Berry	Geometric optics of four illusions
10:00–10:30		<i>Coffee break</i>
10:30–11:20	Dmitry Treschev	On isochronous dynamics
11:30–12:20	Olga Paris-Romaskevich	Novikov’s problem and tiling billiards
12:30		<i>Lunch</i>
Afternoon session		Chair: Gil Bor
14:00–14:50	Leonid Bunimovich	Elliptic flowers
15:00–15:50	Ronald Perline	Free-form mirror design and the prescribed mean curvature problem
16:00–16:30		<i>Coffee break</i>
16:30–17:20	Arseniy Akopyan	The beauty of random polytopes inscribed in the 2-sphere
19:30		<i>Dinner</i>

Wednesday, 6 October 2021

Morning session		Chair: Ivan Izmetiev
9:00–9:50	Alfonso Sorrentino	On the persistence of completely periodic tori for symplectic twist maps
10:00–10:30		<i>Coffee break</i>
10:30–11:20	Vladimir Matveev	Superintegrable metrics on surfaces
11:30–12:20	Peter Albers	A symplectic dynamics proof of the degree-genus formula
12:30		<i>Lunch</i>
		<i>Free afternoon</i>
19:30		<i>Dinner</i>

Thursday, 7 October 2021

Morning session		Chair: Sergei Tabachnikov
9:00–9:50	Sergey Bolotin	Degenerate billiards
10:00–10:30		<i>Coffee break</i>
10:30–11:20	Vladimir Dragovic	Integrable billiards, Chebyshev dynamics, and isoharmonic and isomonodromic deformations
11:30–12:20	Marco Mazzucchelli	C^2 structurally stable Riemannian geodesic flows of closed surfaces are Anosov
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12:30		<i>Lunch</i>
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Afternoon session		Chair: Olga Paris-Romaskevich
14:00–14:50	Andrew Clarke	Arnold diffusion in multi-dimensional convex billiards
15:00–15:30		<i>Coffee break</i>
15:30–16:30		<i>Poster session</i>
		Filipe Bellio Da Nobrega, Dylan Jacob Langharst, Daniel Tsodikovich, Omer Yaniv and Vered Rom-Kedar
16:30–17:30		<i>Online poster session</i>
		Sean Gasiorek, Robert MacKay, Sylvie Oliffson Kamphorst, Sonia Pinto De Carvalho, Marcos Salvai
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19:30		<i>Banquet: bouillabaisse</i>

Friday, 8 October 2021

Morning session		Chair: Vered Rom-Kedar
9:00–9:50	Vadim Kaloshin	Deformational spectral rigidity of analytic Bunimovich stadia and Bunimovich squashes
10:00–10:30		<i>Coffee break</i>
10:30–11:20	Vadim Zharnitsky	Whispering gallery orbits in Sinai oscillator trap
11:30–12:20	Mark Levi	Spectral asymptotics and Lamé spectrum in periodic potentials
12:30–12:40		<i>Closing</i>
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12:40		<i>Lunch</i>
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19:30		<i>Dinner</i>
