

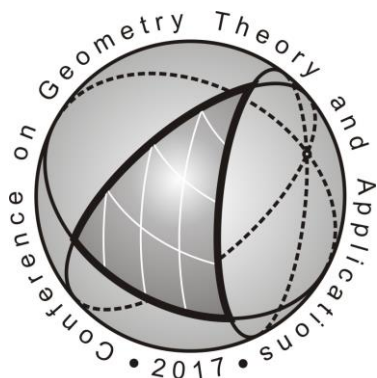
# Conference on Geometry Theory and Applications

June 26 – June 30, 2017/Plzeň, Czech Republic

## Monday, June 26, 2017

Morning sessions		
08:00-09:15	<b>REGISTRATION</b>	
09:15-09:30	O. Röschel, M. Lávička	<b>Opening ceremony</b>
09:30-09:45	Z. Erjavec	Isometry between two models of <b>SL(2,ℝ)</b> geometry
09:50-10:05	M. Katić Žlepalo	Curves of Vertices of Conic Pencils in Pseudo-Euclidean Plane
10:10-10:40	<b>COFFEE BREAK</b>	
10:40-10:55	G. Nawratil	On the set of oriented line-elements: point-models, metrics and applications
	<b>MSO:</b> <i>M. Hoffmann</i>	<b>MS Higher geometry and its applications</b>
11:00-11:15	K. Kruppa	An extension to circle and sphere skinning algorithms
11:20-11:35	F. Nagy	New algorithms to find isoptic surfaces for three-dimensional objects
11:40-11:55	Á. Toth	An efficient cage generation algorithm for 3D triangulated meshes
<b>LUNCH</b>		

Afternoon sessions		
14:00-14:45	I. Talata <i>Plenary lecture</i>	Kissing Numbers of Translative Packings of Convex Bodies
14:50-15:00	<b>SHORT BREAK</b>	
15:00-15:15	E. Molnár	Visualization of hyperbolic cobweb manifolds
15:20-15:35	C. Remsing	Nonholonomic Riemannian Structures on Lie Groups
15:40-15:55	Z. Šír	Multivalued support function at inflection points of planar curves
16:00-16:30	<b>COFFEE BREAK</b>	
16:30-16:45	M. Šimić Horvath	Parabolas of cyclic quadrangle in isotropic plane
16:50-17:05	O. Röschel	Curved Folding with Pairs of Cones
17:10-17:25	R. Tornai	Design of a Massively Parallelized Image Processing System
18:00-19:00	<b>WELCOME WINE</b>	



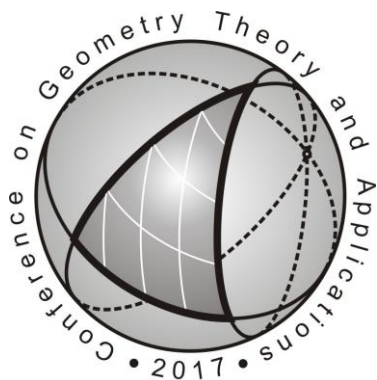
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## Tuesday, June 27, 2017

Morning sessions		
08:30-09:15	M. Kerber <i>Plenary lecture</i>	The Persistent Homology Pipeline: Shapes, Computations, and Applications
09:20-9:30	<b>SHORT BREAK</b>	
09:30-09:45	C. Arioli	On the relation of scaled boundary IGA and classical Galerkin IGA
09:50-10:05	K.-H. Brakhage	Analytical investigations on fast approximation methods for fitting with surfaces or folding structures
10:10-10:40	<b>COFFEE BREAK</b>	
<b>MSO:</b>	<i>M. Peternell</i>	<b>MS Applied geometry</b>
10:40-10:55	C. Giannelli	On the characterization of polynomial curves with rational rotation--minimizing frames
11:00-11:15	D. Mokriš	Import and triangulate splines efficiently by the example of IGES and STEP files
11:20-11:35	K. Mundilova	Interactive Design of Developable Surfaces with Curved Creases
11:40-11:55	C. Müller	From Architecture to Differential Geometry - Discrete Isothermic Nets
<b>LUNCH</b>		

Afternoon sessions		
14:00-14:45	M. L. Sampoli <i>Plenary lecture</i>	Pythagorean-hodograph curves and their application to Geometric Modelling
14:50-15:00	<b>SHORT BREAK</b>	
15:00-15:15	M. Bizzarri	Hermite interpolation by polynomial PN surfaces
15:20-15:35	K. Ferjančič	On $C^2$ rational motions of degree six
15:40-15:55	T. Kanduč	Hierarchical box splines in numerical simulation
16:00-16:30	<b>COFFEE BREAK</b>	
16:30-16:45	M. Marvan	On constant astigmatism surfaces and spherical orthogonal equiareal patterns
16:50-17:05	R. Krasauskas	Rational offsets of regular quadrics revisited
17:10-17:25	N. Yoshida	Arc Length Parameterization Curves based on Explicit Polynomial B-splines



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## Wednesday, June 28, 2017

Morning sessions		
08:30-09:15	E. Jurkin <i>Plenary lecture</i>	On some properties of cyclic quadrangles in isotropic plane
09:20-9:30	<b>SHORT BREAK</b>	
09:30-09:45	Z. Kovacs	Reasoning about linkages with dynamic geometry
09:50-10:05	M. C. Marquez-Garcia	Free approximations of regular curves and surfaces
10:10-10:40	<b>COFFEE BREAK</b>	
<b>MSO:</b>	<i>L. Gonzalez-Vega</i>	<b>MS Algebraic methods for computing in geometry</b>
10:40-10:55	C. D'Andrea	The use of higher order syzygies in the implicitization of rational parametrizations
11:00-11:15	T. Theobald	Sum of Squares Certificates for Containment of $H$ -polytopes in $V$ -polytopes
11:20-11:35	M. Fioravanti	Computing the topology of an arrangement of real algebraic plane curves presented parametrically or implicitly and including offsets
11:40-11:55	J. Schicho	Linear Sections of the Study Quadric
<b>LUNCH</b>		
Afternoon 14:00-19:00	<b>EXCURSION</b>	
20:00	<b>CONFERENCE DINNER</b>	

## Thursday, June 29, 2017

Morning sessions		
08:30-09:15	M. Krajnc <i>Plenary lecture</i>	Dual approach to rational curves with Pythagorean properties
09:20-9:30	<b>SHORT BREAK</b>	
09:30-09:45	S. E. Moore	Discontinuous Galerkin Isogeometric Analysis For The Biharmonic Equation
09:50-10:05	N. Lubbes	Hexagonal webs of circles
10:10-10:40	<b>COFFEE BREAK</b>	

<b>MSO:</b>	<i>B. Bastl</i>	<b>MS Isogeometric analysis</b>
10:40-10:55	J. Hinz	The Multigrid Algorithm For Planar Parameterization In Isogeometric Analysis
11:00-11:15	M. Haberleitner	Isogeometric Segmentation
11:20-11:35	T. Takacs	Analysis-suitable $G^1$ multi-patch domains in IGA
11:40-11:55	V. Vitrih	Space of $C^2$ -smooth geometrically continuous isogeometric functions on planar multi-patch geometries
<b>LUNCH</b>		

<b>Afternoon sessions</b>		
14:00-14:45	J. G. Alcázar <i>Plenary lecture</i>	Symmetries of canal surfaces and Dupin cyclides
14:50-15:00	<b>SHORT BREAK</b>	
15:00-15:15	K. Michálková	Dynamic B-spline surface and volumetric models of selected water turbines
15:20-15:35	D. Mugnaini	Trajectory planning with smooth feedrate based on PH quintic splines
15:40-15:55	F. Botana	A protocol for the exact computation of envelopes of families of plane curves
16:00-16:30	<b>COFFEE BREAK</b>	
16:30-16:45	M. Pember	Singularities and Lie sphere transformations
16:50-17:05	M.-J. Pereira-Sáez	Collision detection between a sphere and another quadric
17:10-17:25	K. Vlachkova	Comparing tensor product Bézier surfaces for coincidence

## Friday, June 30, 2017

<b>Morning sessions</b>		
08:30-08:45	H.-P. Schröcker	Uniqueness of Minimal Motions
08:50-09:05	D. Scharler	Straight Lines in the Extended Kinematic Image Space
09:10-09:25	H. Stachel	Reflection in Quadrics
09:30-09:45	J. Vršek	Contour curves and isophotes on rational ruled surfaces
09:50-10:20	<b>COFFEE BREAK</b>	
10:20-10:35	D. Velichová	Minkowski operations on free-form curves
10:40-10:55	J. Pospíšil	Isogeometric analysis for partial integro-differential equations arising in option pricing
11:00-11:15	E. Žagar	General Framework for Approximation of Circular Arcs by $G^k$ Parametric Polynomial Interpolants
11:20	B. Jüttler, H.-P. Schröcker	<b>Closing ceremony</b>