

Symposium on Solid and Physical Modeling

SESSION TITLE	DATE / TIME	PAPERS	AUTHORS	TYPE
Curves & Folding	Monday 09:00 - 10:00	Bézier Curves that are Close to Elastica	David Brander, Jakob Andreas Bærentzen, Ann-Sofie Fisker Gravesen	CAD
		Geometric interpolation by PH curves with quadratic or quartic rational normals	Xunnian Yang	SPM
		On Mathematical Folding of Curved Crease Origami: Sliding Developables and Parametrizations of Folds into Cylinders and Cones	Klara Mundilova	SPM
Manufacturing	Monday 10:20 - 12:00	Fabricating QR Codes on 3D Objects using Self-shadows	Hao Peng, Lin Lu, Lin Liu, Andrei Sharf and Baoquan Chen	SPM
		Binary Image Carving for 3D Printing	Jingru Yang, Sha He and Lin Lu	SPM
		Automatic Support Removal for Additive Manufacturing Post-Processing	Saigopal Nelaturi, Morad Behandish, Amir M. Mirzendehtel and Johan de Kler	SPM
		A Classification of Topological Discrepancies in Additive Manufacturing	Morad Behandish, Amir M. Mirzendehtel and Saigopal Nelaturi	SPM
		Digital Material Design Using Tensor-based Error Diffusion for Additive Manufacturing	Yuen-Sham Leung, Tsz-Ho Kwok, Huachao Mao and Yong Chen	SPM
Keynote: Annalisa Buffa	Monday 13:30 - 14:30			
Geometry processing	Monday 14:50 - 16:30	Multiscale Representation of 3D Surfaces via Stochastic Mesh Laplacian	Ran Song and Liping Wang	SPM
		Extending discrete exterior calculus to a fractional derivative	Justin Crum, Joshua A. Levine and Andrew Gillette	SPM
		An Economical Representation of PDE Solution by using Compressive Sensing Approach	Hongmei Kang, Mingjun Lai and Xin Li	SPM
		Structure-guided Shape-preserving Mesh Texture Smoothing via Joint Low-rank Matrix Recovery	Honghua Chen, Jin Huang, Haoran Xie, Jing Qin, Yanwen Guo, Mingqiang Wei and Jun Wang	SPM
		Data-driven Geometry-recovering Mesh Denoising	Jun Wang, Jin Huang, Fu Lee Wang, Mingqiang Wei, Haoran Xie and Jing Qin	SPM
Curves & Paths	Monday 16:50 - 18:30	Interpolatory Curve Modeling with Feature Points Control	Zhonggui Chen, Jinxin Huang, Juan Cao and Yongjie Jessica Zhang	SPM
		Implicitizing rational curves by the method of moving quadrics	Laurent Busé, Clément Laroche and Fatmanur Yildirim	SPM
		Parallelizing Discrete Geodesic Algorithms with Perfect Efficiency	Xiang Ying, Caibao Huang, Xuzhou Fu, Ying He, Ruiguo Yu, Jianrong Wang and Mei Yu	SPM
		DE-Path: A Differential Evolution Based Method for Computing Energy-Minimizing Paths on Surfaces	Zipeng Ye, Yong-Jin Liu, Jianmin Zheng, Kai Hormann and Ying He	SPM

Keynote: Ligang Liu	Tuesday 09:00 - 10:00			
Modeling	Tuesday 10:20 - 12:00	Multi-strip smooth developable surfaces from sparse design curves	Pengbo Bo, Yujian Zheng, Xiaohong Jia and Caiming Zhang	SPM
		Generative design conversion to editable and watertight boundary representation	Martin Marinov, Marco Amagliani, Tristan Barback, Jean Flower, Stephen Barley, Suguru Furuta, Peter Charrot, Iain Henley, Nanda Santhanam, Gordon Thomas Finnigan, Siavash Meshkat, Justin Hallet, Maciej Sapun and Pawel Wolski	SPM
		3D Shape Synthesis via Content-Style Revealing Priors	Oussama Remil, Qian Xie, Honghua Chen and Jun Wang	SPM
		Non-iterative Structural Topology Optimization using Deep Learning	Baotong Li, Congjia Huang, Xin Li, Shuai Zheng and Jun Hong	SPM
		Hierarchical Tunnel Modeling from 3D Raw LIDAR Point Cloud	Cheng Yi, Dening Lu, Qian Xie and Jun Wang	SPM
Optimal Transport	Tuesday 13:30 - 15:10	Initialization procedures for discrete and semi-discrete optimal transport	Jocelyn Meyron	SPM
		Boundary Correspondence of Planar Domains for Isogeometric Analysis Based on Optimal Mass Transport	Ye Zheng, Maodong Pan and Falai Chen	SPM
		Spherical Optimal Transportation	Li Cui, Xin Qi, Chengfeng Wen, Na Lei, Xinyuan Li, Min Zhang and Xianfeng Gu	SPM
		Vectorization based Portrait Image Color Transfer	Qian Fu, Ying He, Fei Hou, Juyong Zhang, Anxiang Zeng and Yong-Jin Liu	SPM
Structures	Tuesday 15:30 - 17:10	Exact representations and geometric queries for lattice structures with quadric beams	Ashish Gupta, George Allen and Jarek Rossignac	SPM
		Optimizing micro-tiles in micro-structures as a design paradigm	Pablo Antolin, Annalisa Buffa, Elaine Cohen, John F. Danneffer, Gershon Elber, Stefanie Elgeti, Robert Haimes and Richard Riesenfeld	SPM
		CrossFill: Foam Structures with Graded Density for Continuous Material Extrusion	Tim Kuipers, Jun Wu and Charlie C. L. Wang	SPM
		Parametric design of graded truss lattice structures for enhanced thermal dissipation	Benjamin Vaissier, Jean-Philippe Pernot, Laurent Chougrani and Philippe Véron	SPM
		Corner-Sharing Tetrahedra for Modeling Micro-Structure	Meera Sitharam, Jeremy Youngquist, Maxwell Nolan and Jorg Peters	SPM
Solids	Tuesday 17:30 - 18:30	Low-rank Parameterization of Volumetric Domains for Isogeometric Analysis	Maodong Pan and Falai Chen	SPM
		Isogeometric Segmentation via Midpoint Subdivision Suitable Solids	Michael Haberleithner, Bert Juettler and Yannick Masson	SPM
		Watertight Boolean Operations: A Framework for Creating CAD-Compatible Gap-Free Editable Solid Models	Benjamin Urick, Benjamin Marussig, Elaine Cohen, Richard H. Crawford, Thomas J.R. Hughes and Richard F. Riesenfeld	SPM

SPM Bézier talk: Gershon Elber	Wednesday 11:00 - 12:00			
CAD	Wednesday 15:50 - 17:30	On verification of interoperability of CAD systems with a focus on invariant properties	Duygu Sap and Vadim Shapiro	SPM
		Parameterizing and extending trimmed regions for tensor-product surface fitting	Márton Vaitkus and Tamás Várady	CAD
		Free Isotropic Material Optimization via Second order Cone Programming	Xingtong Yang and Ming Li	SPM
		Curvature-bounded guided subdivision: biquartics vs bicubics	Kestutis Karčiauskas and Jorg Peters	SPM
		Accessibility for Line-Cutting in Freeform Surfaces	Boris van Sossin, Michael Barton and Gershon Elber	SPM
SPM/SMA business meeting	Wednesday 17:30 - 18:30		Jessica Zhang & SMA executive committee	