

# Monday 20

|       |       |  |  |
|-------|-------|--|--|
| 8:45  | 9:00  | <b>Opening remarks (Amphitheater)</b>  |  |
| 9:00  | 10:00 | <b>Plenary talk (Amphitheater, Chair : Helmut Pottmann)</b>  |  |
| 9:00  | 10:00 | Johannes Wallner, TU Graz  | Computing with isometries and developable surfaces                           |
| 10:00 | 10:30 | <b>Coffee break (Lobby)</b>  |  |
| 10:30 | 12:35 | <b>Minisymposium 1 - Nonlocal and Geometric Data Analysis (Amphitheater, Chair : Daniel Tenbrinck)</b>         |  |
| 10:30 | 10:55 | Sren Dittmer, Cambridge University   | Provably convergent deep learning-based methods for imaging (...)            |
| 10:55 | 11:20 | Simon Masnou, Institut Camille Jordan  | Learning mean curvature flows with neural networks                           |
| 11:20 | 11:45 | Leon Bungert, Hausdorff Center for Mathematics   | The Geometry of Adversarial Training   |
| 11:45 | 12:10 | Hugo Raguét, LIFAT   | Cut Pursuit and Geometric Applications                                       |
| 12:10 | 12:35 | Daniel Tenbrinck, Univ. Erlangen-Nurnberg  | Variational Graph Methods for Efficient Point Cloud Sparsification           |
| 10:30 | 12:35 | <b>Minisymposium 2 - Random matrices and approximation using function values (Room A, chair Mario Ullrich)</b> |  |
| 10:30 | 10:55 | Mathias Sonnleitner, University of Graz  | The power of random information for function approximation on manifolds      |
| 10:55 | 11:20 | David Krieg - RICAM Linz   | Sampling recovery in $L^2$   |
| 11:20 | 11:45 | Matthieu Dolbeault, Laboratoire Jacques-Louis Lions  | Weighted least-squares approximation in expected $L^2$ norm                  |
| 11:45 | 12:10 | Simone Brugiapaglia, Concordia University  | Life beyond orthogonality: Sparse recovery in randomly sampled (...)         |
| 12:10 | 12:35 | Robert J. Kunsch, RWTH Aachen University   | How much randomness is needed for high-confidence Monte Carlo (...)          |
| 10:30 | 12:35 | <b>Contributed session 1 - Optimization (Room C, Chair : Pierre Ablin)</b>                                     |  |
| 10:30 | 10:55 | Thomas Yu, Drexel University   | Symmetry and Saddle Points in the Numerical Solutions of Geometric (...)     |
| 10:55 | 11:20 | Scott Pesme, EPFL  | Implicit Bias of SGD for Diagonal Linear Networks: a Provable Benefit (...)  |
| 11:20 | 11:45 | Oleh Melnyk, TU Munich   | On gradient-based methods for ptychography                                   |
| 11:45 | 12:10 | Jean-Jacques Godeme, GREYC   | Provable Phase retrieval via Mirror descent                                  |
| 12:10 | 12:35 | Thomas Moreau, INRIA   | SHINE: SHaring the INverse Estimate for bi-level optimization                |
| 10:30 | 12:35 | <b>Contributed session 2 - Splines (Room B, Chair : Thomas Sauer)</b>  |  |
| 10:30 | 10:55 | Jean-Louis Merrien, IRMAR  | C1 Simplex--Splines on Simplices in $R^n$                                    |
| 10:55 | 11:20 | Ognyan Kounchev, Ognyan Kounchev   | Error estimates for harmonic and biharmonic interpolation splines with (...) |
| 11:20 | 11:45 | Sandra Merchel, MTU Aero Engines AG  | Fast Formation of Matrices for Least-Squares Fitting by Tensor-Product (...) |
| 11:45 | 12:10 | Fabian Rainouard, Université de Grenoble Alpes   | Optimization of Curves Distributions Intersections for a Near to Eye (...)   |
| 12:10 | 12:35 | Sofia Imperatore, University of Florence   | Learning spline parameterization for noisy data fitting                      |
| 12:35 | 12:45 | Jean-Louis Merrien, IRMAR  | Souvenirs avec Paul Sablonniere  |

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|-------|-------|---|--|
| 12:35 | 14:30 | <b>Lunch</b>  |  |
| 14:30 | 15:30 | <b>Plenary talk (Amphitheater, Chair : Tino Ullrich)</b>  |  |
| 14:30 | 15:30 | Michael Griebel, Universität Bonn   | Generalized sparse grid methods and applications                               |
| 15:30 | 16:00 | <b>Coffee break (Lobby)</b>   |  |
| 16:00 | 18:30 | <b>Minisymposium 3 - Sparsity, optimization and learning (Amphitheater, Chair : Clarice Poon)</b> |  |
| 16:00 | 16:25 | Laurent Jacques, INMA, ICTEAM, UCLouvain  | Asymmetric compressive learning guarantees with applications to (...)          |
| 16:25 | 16:50 | Stephen Becker, University of Colorado Boulder  | High-probability Convergence Bounds for Non-convex Stochastic (...)            |
| 16:50 | 17:15 | Quentin Bertrand, Université de Montréal  | Implicit differentiation for fast hyperparameter selection in non-smooth (...) |
| 17:15 | 17:40 | Antonio Silveti-Falls, Toulouse School of Economics   | Nonsmooth Implicit Differentiation for Machine Learning                        |
| 17:40 | 18:05 | Yifan Sun, Stony Brook University   | Continuous Time Frank-Wolfe Does Not Zig-Zag, But Multistep Methods (...)      |
| 18:05 | 18:30 | Clarice Poon, University of Bath  | Smooth re-parametrizations for sparse regularization                           |
| 16:00 | 18:30 | <b>Minisymposium 4 - Advances in IGA and its applications (Room A, Chair : Deepesh Toshniwal)</b> |  |
| 16:00 | 16:25 | David Gunderman, Purdue University  | Advances in patient-specific IGA-based cardiovascular simulation               |
| 16:25 | 16:50 | Hendrik Speleers, University of Rome Tor Vergata  | Optimal spline subspaces for outlier-free isogeometric analysis                |
| 16:50 | 17:15 | Francesco Patrizi, Max-Planck   | Isogeometric de Rham complex discretization in solid toroidal domains          |
| 17:15 | 17:40 | Michelangelo Marsala, Inria, Aromath  | Geometrically Smooth Splines for IGA   |
| 17:40 | 18:05 | Deepesh Toshniwal - Delft Institute of Applied Mathematics  | Almost-C1 splines  |
| 16:00 | 18:30 | <b>Contributed session 3 - Imaging (Room B, Chair : Gabriele Steidl)</b>                          |  |
| 16:00 | 16:25 | Thomas Laporte, Université Côte d'Azur  | Manifold rewiring for unlabeled imaging in large noise                         |
| 16:25 | 16:50 | Raphaël Grosnot, CEREMADE   | Deformable Voxel Grids   |
| 16:50 | 17:15 | Tomas Sauer, University of Passau & Fraunhofer IIS  | Image Processing for Large Volume Data in Sparse Representations               |
| 17:15 | 17:40 | Valentin Debarnot, University of Basel  | Manifold rewiring for unlabeled imaging in large noise                         |
| 17:40 | 18:05 | Laurent Condat, King Abdullah University of Science and Technology                                | Tikhonov Regularization of Circle-Valued Signals                               |
| 18:05 | 18:30 | Simone Cammarasana, Ist. Matematica Applicata e Tecnologie  | A General Framework for Smoothing Arbitrary Signals in Computer (...)          |
| 16:00 | 18:30 | <b>Contributed session 4 - CAGD (Room C, Chair : Caroline Moosmueller)</b>                        |  |
| 16:00 | 16:25 | Henrik Schumacher, Chemnitz University of Technology  | Repulsive Curves and Surfaces  |
| 16:25 | 16:50 | Yoonae Song, Dongguk University, Korea  | G1 Hermite interpolation method for spatial PH curves over planar PH curves    |
| 16:50 | 17:15 | Andriamahanina Ramanantoanina, Università della Svizzera italiana                                 | New shape control tools for rational Bézier curve design                       |
| 17:15 | 17:40 | Salim Taleb, Laboratoire de Matériaux Céramiques et de Mathématiques                              | Planar Polynomial PH Curves revisited  |
| 17:40 | 18:05 | Jan Vrsek, University of West Bohemia   | Pythagorean-hodograph projections of spatial polynomial curves                 |
| 18:05 | 18:30 | Kai Hormann, Università della Svizzera Italiana   | Singular cases of planar and spatial C1 Hermite interpolation problems (...)   |
| 18:30 | 20:30 | <b>Welcome cocktail (Lobby)</b>   |  |

# Tuesday 21

|       |       |  |   |
|-------|-------|--|---|
| 9:00  | 10:00 | <b>Plenary talk (Amphitheater, Chair : Jean-François Aujol)</b>                                  |   |
| 9:00  | 10:00 | Gabriele Steidl, TU Berlin   | Approximation of Measures by Measures supported on Curves                           |
| 10:00 | 10:30 | <b>Coffee break (Lobby)</b>  |   |
| 10:30 | 12:35 | <b>Minisymposium 5 - Greedy and sparse approximation (Amphitheater, Chair: Gustavo Garrigos)</b> |   |
| 10:30 | 10:55 | Vladimir Temlyakov, University of South Carolina   | Greedy algorithms in numerical integration  |
| 10:55 | 11:20 | Simon Foucart, Texas A&M   | On LASSO-type Regularizations and Sparsity of their Minimizers                      |
| 11:20 | 11:45 | Tino Ullrich - Chemnitz University of Technology   | Constructive sparsification of finite frames with application in optimal (...)      |
| 11:45 | 12:10 | Eugenio Hernandez, Universidad Autonoma de Madrid  | Results for the Weak Chebyshev Greedy Algorithm in Banach spaces                    |
| 12:10 | 12:35 | <del>Jose L Ansorena, Universidad de La Rioja</del>  | <del>Lebesgue-type inequalities in greedy approximation with respect to bases</del> |
| 10:30 | 12:35 | <b>Minisymposium 6 - Advances in phase retrieval (Room A, Chair: Rima Alaifari)</b>              |   |
| 10:30 | 10:55 | Lukas Liehr, University of Vienna  | Infinite-dimensional STFT phase retrieval from lattice samples: (...)               |
| 10:55 | 11:20 | Philippe Jaming, Institut de Mathématiques de Bordeaux   | Uniqueness of phase retrieval from three measurements                               |
| 11:20 | 11:45 | Matthias Wellershoff, ETH Zurich   | Phase retrieval of entire functions   |
| 11:49 | 12:10 | Cheng Cheng, Sun Yat-Sen University  | Stable Phase Retrieval from Locally Connected Measurements                          |
| 12:10 | 12:35 | <del>Rima Alaifari, ETH Zürich</del>   | <del>On Gabor phase retrieval from samples</del>                                    |
| 10:30 | 12:35 | <b>Contributed session 5 - Partial Differential Equations (Room B, Chair : Ujué Etayo)</b>       |   |
| 10:30 | 10:55 | Tizian Wenzel, University of Stuttgart   | Adaptive meshfree solving of linear PDEs: Analysis of target-data (...)             |
| 10:55 | 11:20 | André Galligo, Université Côte d'Azur, INRIA, LJAD   | Comparison of 2 PDE models for anisotropic non local interactions in 2D             |
| 11:20 | 11:45 | Josua Sassen - University of Bonn  | A Phase-field Approach to Variational Hierarchical Surface Segmentation             |
| 11:45 | 12:10 | Jacob Blazejewski - Michigan Technological University  | A Stable Method for Discretizing Differential Operators on Curves and (...)         |
| 12:10 | 12:35 | Agustin Somacal, Laboratoire Jacques-Louis Lions   | Edge adaptive methods and machine learning for high-resolution image (...)          |
| 10:30 | 12:35 | <b>Contributed session 6 - Isogeometric Analysis (Room C, Chair : Hendrik Speleers)</b>          |   |
| 10:30 | 10:55 | Teymur Heydarov, Heydarov  | An algorithm for the unrefinement of domain parameterizations in (...)              |
| 10:55 | 11:20 | Thomas Takacs, Johann Radon Institute  | Approximate C1-smoothness for isogeometric analysis over multi-patch (...)          |
| 11:20 | 11:45 | Francesca Pelosi, Università Tor Vergata   | Isogeometric Immersed Methods   |
| 11:45 | 12:10 | Bert Juetter, Johannes Kepler University, Linz/Austria   | THB-spline projectors based on restricted hierarchical spline fitting and (...)     |
| 12:10 | 12:35 | Philipp Langgruber, JKU - Linz   | Topologically Unrestricted Isogeometric Splines on Multi-Patch (...)                |

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|-------|-------|--|--|
| 12:35 | 14:30 | <b>Lunch</b>   |  |
| 14:30 | 15:30 | <b>Plenary talk (Amphitheater, Chair: Irène Kaltenmark)</b>          |  |
| 14:30 | 15:30 | Yaron Lipman, Weizmann Institute and Meta Research                   | Designing Invariant and Equivariant Neural Networks                              |
| 15:30 | 16:30 | <b>Poster session (Lobby)</b>  |  |
| 15:30 | 16:30 | Mohamed-Yassir Nour - Univ. Lorraine                                 | A new family of non-uniform subdivision scheme with two tension and (...)        |
| 15:30 | 16:30 | Zeze Zhang - University of Alberta                                   | Convergence analysis of Hermite subdivision schemes of any arity                 |
| 15:30 | 16:30 | Thomas Laporte - Université Côte d'Azur                              | Algorithm for the modelling of the lung/bronchial tree coupling customised       |
| 15:30 | 16:30 | Mathieu Dagréou - Inria  | A framework for bilevel optimization that enables stochastic and global (...)    |
| 15:30 | 16:30 | Olivier Truffinet - CEA/SERMA/LPEC                                   | A new max-based compression algorithm for surrogate modelling. (...)             |
| 15:30 | 16:30 | Jinyoung Kim, Ewha Womans University, Seoul, South Korea             | A shape-preserving C2 stationary subdivision schemes with the (...)              |
| 15:30 | 16:30 | Javier Sánchez-Reyes - IMACI   | A streamlined NURBS-based workflow for precise Additive Manufacturing            |
| 15:30 | 16:30 | Alicia Cantón - Universidad Politécnica de Madrid,                   | Aesthetic planar curves  |
| 15:30 | 16:30 | Roberto Cavoretto - University of Turin                              | An adaptive residual sub-sampling algorithm for kernel interpolation (...)       |
| 15:30 | 16:30 | Caleb Jacobs - University of Colorado                                | An RBF-FD Method for Solving Partial Differential Equations on (...)             |
| 15:30 | 16:30 | <del>Valentin Debarnot - University of Basel</del>                   | <del>Blind inverse problems with isolated spikes</del>                           |
| 15:30 | 16:30 | Salah Eddargani - Hassan First University of Settat,                 | C <sup>2</sup> quartic splines on mixed macro-structures                         |
| 15:30 | 16:30 | Pierre-Louis Antonsanti - MAP5                                       | Diffeomorphic Deformations and Topological Changes for Trees of 3D Curves        |
| 15:30 | 16:30 | Pedro López-Gómez - Universidad de Cantabria                         | Distributing points on the real projective plane                                 |
| 15:30 | 16:30 | Filip Chudy - Institute of Computer Science, University of Wrocław   | Efficient evaluation of Bézier-type objects and their derivatives                |
| 15:30 | 16:30 | George Tzagkarakis - University of Bordeaux                          | Energy-Preserving Hamiltonian Neural Networks for Stock Price Forecasting        |
| 15:30 | 16:30 | Lisa Groiss - Johannes Kepler University Linz                        | Exploring refinement strategies for locally linear independent LR B-splines      |
| 15:30 | 16:30 | Soo Hyun Kim - Sungkyunkwan University                               | Gauss-Legendre polynomial for the shape control of parametric curves             |
| 15:30 | 16:30 | Raphaël Barboni - ENS Paris  | Global convergence of ResNets: From finite to infinite width using (...)         |
| 15:30 | 16:30 | <del>Hanane Dalimi - University Hassan II Casablanca</del>           | <del>Image Segmentation Using Hidden Markov Models and convolutional (...)</del> |
| 15:30 | 16:30 | Qingjun Chang - Università della Svizzera Italiana                   | Iterative coordinates  |
| 15:30 | 16:30 | Elodie Maignant - Université Côte d'Azur,                            | Looking for invariance in Locally Linear Embedding                               |
| 15:30 | 16:30 | Jiri Minarcik - Czech Technical University in Prague                 | Minimal Surface Generating Flow  |
| 15:30 | 16:30 | Mariantonia Cotronei - Mariantonia Cotronei                          | Multiple Multiresolution Analysis for Image Compression                          |
| 15:30 | 16:30 | Sébastien Herbretreau - SERPICO Project-Team Inria                   | NL-Ridge: a novel statistical patch-based approach for image denoising           |
| 15:30 | 16:30 | Florian Beier - Technische Universität Berlin                        | On a linear Gromov-Wasserstein distance  |
| 15:30 | 16:30 | Stephanie Jehan-Besson - CNRS  | Optimization of a mutual shape based on the Fréchet-Nikodym metric (...)         |
| 15:30 | 16:30 | Florentin Goyens - Paris Dauphine                                    | Point cloud registration for algebraic varieties using Riemannian optimization   |
| 15:30 | 16:30 | Alban Gossard - Institut de Mathématiques de Toulouse                | Spurious minimizers in non uniform Fourier sampling optimization                 |
| 15:30 | 16:30 | Nuha Diab - Tel-Aviv University, Israel                              | Super-resolution of generalized spikes and spectra of confluent (...)            |
| 15:30 | 16:30 | Philémon Beghin - Inst. of Information and Communication Technologie | Using photogrammetry for the objective study of ancient bowed(...)               |
| 15:30 | 16:30 | Michelangelo Marsala - Université Côte d'Azur                        | G1 smooth Biquintic Approximation of Catmull-Clark Subdivision Surfaces          |
| 15:30 | 16:30 | Rania Sefti - University Mohammed I, Morocco                         | Deep Network Multi-Spline Approximation Method                                   |

# Tuesday 21 afternoon (cont.)

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|-------|-------|---|---|
| 16:30 | 19:40 | <b>Minisymposium 7 - Advances in subdivision and applications (Amphitheater, Chair: Costanza Conti)</b> |   |
| 16:30 | 16:55 | Nira Dyn - Tel Aviv University (talk delivered by Costanza Conti)                                       | Multivariate Up-like Functions  |
| 16:55 | 17:20 | Jungho Yoon - Ewha Womans University  | A shape preserving C2 non-linear, non-uniform, subdivision scheme (...)         |
| 17:20 | 17:45 | Lucia Romani - Università di Bologna  | Dual subdivision and interpolation  |
| 17:45 | 18:10 | Nir Sharon - Tel Aviv   | Multiscaling manifold-valued data via approximation subdivision schemes         |
| 18:10 | 18:35 | Caroline Moosmueller - University of California, San Diego  | A factorization framework for Hermite subdivision schemes reproducing (...)     |
| 18:35 | 19:00 | Mejstrik Thomas - University of Vienna  | A novel algorithm to compute the joint spectral radius - Feta flavoured Ipa     |
| 19:00 | 19:25 | Hartmut Prautzsch - Karlsruhe Institute of Technology   | Cutting convex polyhedra  |
| 19:25 | 19:40 | Costanza Conti - University of Florence, Italy  | Memorial words on Maria Charina   |
| 16:30 | 19:25 | <b>Minisymposium 8 - Advances PH curves and PN surfaces (Room A, Chair: Marjeta Knez)</b>               |   |
| 16:30 | 16:55 | Alessandra Sestini - Università degli Studi di Firenze  | Interpolation of 3D data streams with C <sup>2</sup> PH quintic splines         |
| 16:55 | 17:20 | Maria Lucia Sampoli - University of Siena   | Construction of G <sup>2</sup> Hermite interpolants with prescribed arc lengths |
| 17:20 | 17:45 | Gudrun Albrecht - Universidad Nacional de Colombia, Sede Medellín                                       | Design by planar and spatial PH B-Spline curves                                 |
| 17:45 | 18:10 | Hwan Pyo Moon - Dongguk University, Korea   | Hodograph based shape control for polynomial curves                             |
| 18:10 | 18:35 | Miroslav Lavicka - University of West Bohemia   | Surfaces with polynomial area element and related topics                        |
| 18:35 | 19:00 | Emil Žagar - Faculty of mathematics and physics, University of Ljubljana                                | Construction of polynomial minimal surfaces with Pythagorean normals            |
| 19:00 | 19:25 | Zbynek Sir - Charles University Prague  | Polynomiality vs. rationality of Pythagorean hodograph/normal curves (...)      |
| 16:30 | 19:25 | <b>Contributed session 7 - Approximation (Room B, Chair: Michael Floater)</b>                           |   |
| 16:30 | 16:55 | Charles Poussot-Vassal - ONERA, Université de Toulouse  | Identifying the non-trivial zeros of the Riemann zeta function for prime (...)  |
| 16:55 | 17:20 | Laurent Baratchart - Inria Sophia Antipolis   | Lower bounds in rational approximation to delays                                |
| 17:20 | 17:45 | Henrik Eisenmann - Max Planck Institute for Mathematics in the Sciences                                 | Maximum relative distance between real rank-two and rank-one tensors            |
| 17:45 | 18:10 | Thomas Jahn - Chemnitz University of Technology   | On the optimal constants in the two-sided Stechkin inequalities                 |
| 18:10 | 18:35 | Peter Binev - University of South Carolina (UofSC)  | Optimal Learning  |
| 18:35 | 19:00 | Konstantin Usevich - Centre de Recherche en Automatique de Nancy  | Robust Eigenvectors of Symmetric Tensors  |
| 16:30 | 19:00 | <b>Contributed session 8 - Sampling (Room C, Chair: Michael Griebel)</b>                                |   |
| 16:30 | 16:55 | Laura Lippert - Chemnitz University of Technology   | High-dimensional hyperbolic wavelet regression using low-dimensional (...)      |
| 16:55 | 17:20 | Fabian Taubert - Chemnitz University of Technology  | The uniform sparse FFT with application to PDEs with random coefficients        |
| 17:20 | 17:45 | Ferizović Damir - KULeuven  | Spherical cap discrepancy of perturbed lattices under the Lambert projection    |
| 17:45 | 18:10 | Abdellah Chkifa - Université Mohammed VI Polytechnique  | Lattices enumeration via linear programming                                     |
| 18:10 | 18:35 | Philipp Trunschke - Nantes Université   | The local sample complexity of non-linear least squares approximation           |
| 18:35 | 19:00 | <del>Wen-shin Lee - University of Stirling</del>  | <del>Symbolically separable low-dimensional nonlinear least squares</del>       |

# Wednesday 22

|       |       |  |  |
|-------|-------|--|--|
| 9:00  | 10:00 | <b>Plenary talk (Amphitheater, Chair: Ed Saff)</b>   |  |
| 9:00  | 10:00 | Jean Bernard Lasserre - LAAS-CNRS-IMT  | Moments, positive polynomials and the Christoffel function                   |
| 10:00 | 10:30 | <b>Coffee break (Lobby)</b>  |  |
| 10:30 | 13:00 | <b>Minisymposium 9 - Interactive Simulation (Amphitheater, Chairs: Klaus Hildebrandt and Jorg Peters)</b>  |  |
| 10:30 | 10:55 | Jérémie Allard - InSimo  | Visual Haptic Feedback for Training of Robotic Suturing                      |
| 10:55 | 11:20 | Barbic Jernej - University of Southern California  | Virtual Assembly Using Haptic Force-Feedback Rendering                       |
| 11:20 | 11:45 | Miguel Otaduy - Universidad Rey Juan Carlos  | Subspaces for Simulation of Deformations and Contact                         |
| 11:45 | 12:10 | Martin Komaritzan - Dortmund University  | Physics-Based Character Animation in Real-Time                               |
| 12:10 | 12:35 | Mélina Skouras - Anima   | Direct (and inverse) modeling of inflatables and other wrinkled thin shells  |
| 12:35 | 13:00 | Jorg Peters - University of Florida  | Computing with trivariate splines on irregular meshes                        |
| 10:30 | 12:35 | <b>Minisymposium 10 - Point configurations on curves and surfaces and related energy problems (Room A, Chairs: Doug Hardin and Alex Vlasiuk)</b> |  |
| 10:30 | 10:55 | Ed Saff - Vanderbilt University  | On the solution of a Riesz equilibrium problem and integral identities (...) |
| 10:55 | 11:20 | Betermin Laurent - Institut Camille Jordan   | Effect of Periodic Arrays of Defects on Lattice Energy Minimizers            |
| 11:20 | 11:45 | Ujué Etayo - Universidad de Cantabria  | A use of the generalized Hopf bration in minimal energy problems             |
| 11:45 | 12:10 | Pierre Alliez - Inria Sophia Antipolis   | From Delaunay to Curved Optimal Delaunay Triangulations                      |
| 12:10 | 12:35 | Johann Brauchart - Graz University of Technology   | Spherical Fibonacci Points: Hyperuniformity, and more                        |
| 12:35 | 13:00 |  |  |
| 10:30 | 13:00 | <b>Contributed session 9 - Learning (Room B, Chair: Rachel Ward)</b>   |  |
| 10:30 | 10:55 | Antoine Gonon - Univ Lyon, ENS de Lyon   | Approximation speed of quantized vs. unquantized ReLU neural (...)           |
| 10:55 | 11:20 | Matthias Hermann - University of Applied Sciences Konstanz   | Fast and memory-efficient independent component analysis using (...)         |
| 11:20 | 11:45 | Nicholas Marshall - Princeton University   | Wasserstein distance, the Witten Laplacian, and Applications                 |
| 11:45 | 12:10 | Varun Khurana - San Diego  | Supervised learning of sheared distributions using linearized optimal (...)  |
| 12:10 | 12:35 | Thibault Sejourne - Departement de Mathematiques et Applications   | The Unbalanced Gromov-Wasserstein distance                                   |
| 10:30 | 13:00 | <b>Contributed session 10 - CAGD (Room C, Chair: Rida Farouki)</b>   |  |
| 10:30 | 10:55 | Victor Ceballos Inza - King Abdullah University of Science and Technology  | Discrete Developable Meshes  |
| 10:55 | 11:20 | Florian Rist - King Abdullah University of Science and Technology  | Interactive Design with Developable Surfaces                                 |
| 11:20 | 11:45 | Peter Salvi - Budapest University of Technology and Economics  | Multi-sided surfaces interpolating arbitrary boundaries with intuitive (...) |
| 11:45 | 12:10 | Delgado Jorge - Universidad de Zaragoza  | q-Bernstein bases over triangular domains                                    |
| 12:10 | 12:35 | Kokou Dotse - ONERA / DTIS   | Quadrilateral mesh create from a given cross field                           |
| 12:35 | 13:00 | Rajain Kanika - BCAM   | Curve-guided 5-axis CNC flank milling of free-form surfaces using (...)      |
| 19:00 | 22:00 | <b>Optional boat excursion and sunset dinner cocktail</b>  |  |

# Thursday 23

|       |       |   |  |
|-------|-------|---|--|
| 9:00  | 10:00 | <b>Plenary talk (Amphitheater, Chair : Virginie Ehrlacher)</b>  |  |
| 9:00  | 10:00 | Rachel Ward, University of Texas at Austin  | Concentration for random matrix products, with applications                |
| 10:00 | 10:30 | <b>Coffee break (Lobby)</b>   |  |
| 10:30 | 12:35 | <b>Minisymposium 11 - Approximation and deep network (Amphitheater, Chair: Johannes Schmidt-Hieber)</b> |  |
| 10:30 | 10:55 | Sophie Langer, University of Twente   | Image classification: A (new) statistical viewpoint                        |
| 10:55 | 11:20 | Dennis Elbrächter, ETH Zurich   | Intrinsic versus extrinsic dimensionality of ground truths                 |
| 11:20 | 11:45 | Matus Telgarsky, University of Illinois   | Alignment and convergence of kernels in deep learning                      |
| 11:45 | 12:10 | Michael E. Sander - ENS Paris   | Momentum Residual Neural Networks  |
| 12:10 | 12:35 | Johannes Schmidt-Hieber, University of Twente   | The Kolmogorov-Arnold representation theorem revisited                     |
| 10:30 | 12:35 | <b>Minisymposium 12 - Optimization on manifolds (Room A, Chair: Nicolas Boumal)</b>                     |  |
| 10:30 | 10:55 | Bart Vandereycken, Department of Mathematics, University of Geneva                                      | Revisiting Riemannian optimization for the symmetric eigenvalue problem    |
| 10:55 | 11:20 | Aurelien Lucchi, University of Basel  | A continuous-time perspective for modeling acceleration in (...)           |
| 11:20 | 11:45 | Christopher Criscitiello, EPFL  | Negative curvature obstructs acceleration for geodesically convex (...)    |
| 11:45 | 12:10 | Bamdev Mishra, Microsoft  | Riemannian optimization tools for optimal transport                        |
| 12:10 | 12:35 | Pierre Ablin, LAMSADE   | Fast and accurate optimization on the orthogonal manifold without (...)    |
| 10:30 | 12:35 | <b>Contributed session 11 - Multiresolution (Room B, Chair : Kai Hormann)</b>                           |  |
| 10:30 | 10:55 | Tatyana Zaitseva, Lomonosov Moscow State University   | Bear subdivision schemes for modeling smooth surfaces                      |
| 10:55 | 11:20 | Hofit Ben Vardi, Tel Aviv   | Geometric Hermite Interpolation  |
| 11:20 | 11:45 | Wolfgang Erb, University of Padova  | Graph Wedgelets: an Adaptive Tool for Data Compression on Graphs (...)     |
| 11:45 | 12:10 | Michelle Michelle, University of Alberta  | Wavelets on intervals derived from arbitrary compactly supported (...)     |
| 12:10 | 12:35 | Sergio LÓpez-UreÓa, Universitat de Valencia   | Non-oscillatory surfaces generation using subdivision schemes              |
| 10:30 | 12:35 | <b>Contributed session 12 - Approximation (Room C, Chair : Peter Binev)</b>                             |  |
| 10:30 | 10:55 | Marriaga Misael E., Universidad Rey Juan Carlos   | Sobolev approximation on the ball  |
| 10:55 | 11:20 | Cesare Bracco, University of Florence   | Discontinuity indicators based on null rules for non-regular surface (...) |
| 11:20 | 11:45 | Paola Lamberti, Department of Mathematics, University of Torino   | Modified Bernstein operator and new generalizations of Bézier curves       |
| 11:45 | 12:10 | Teresa E. PÉrez, IUniversity of Granada (Spain)   | On Bernstein-type operators preserving derivatives                         |
| 12:10 | 12:35 | Michael Floater, University of Oslo   | On the monotonicity of generalized barycentric coordinates on convex (...) |

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| 12:35 | 14:30 | <b>Lunch</b>  |  |
| 14:30 | 15:30 | <b>Plenary talk (Amphitheater, Chair : Quentin Merigot)</b>   |  |
| 14:30 | 15:30 | Keenan Crane, CMU   | Geometry Processing with Intrinsic Triangulations  |
| 15:30 | 16:30 | <b>Poster session (Lobby)</b>   |  |
| 16:30 | 19:25 | <b>Minisymposium 13 - High dimensional approximation and PDEs (Amphitheater, Chair: Anthony Nouy)</b> |  |
| 16:30 | 16:55 | Virginie Ehrlacher - CERMICS  | Influence of Monte-Carlo sampling on the convergence rates of greedy (...)                               |
| 16:55 | 17:20 | André Uschmajew - Max Planck  | Dynamical low-rank approximation for parabolic problems  |
| 17:20 | 17:45 | Martin Eigel - WIAS   | Empirical adaptive Galerkin FEM for parametric PDEs  |
| 17:45 | 18:10 | Michael Feischl - TU Wien   | Convergence of adaptive stochastic collocation with finite elements                                      |
| 18:10 | 18:35 | Jakob Zech - Heidelberg   | Analyticity and sparsity in uncertainty quantification for PDEs with (...)                               |
| 18:35 | 19:00 | Anthony Nouy - Laboratoire de Mathématiques Jean Leray  | Approximation classes of tree tensor networks  |
| 16:30 | 19:25 | <b>Minisymposium 14 - Optimal transport, shape analysis (Room A, Chair: François-Xavier Vialard)</b>  |  |
| 16:30 | 16:55 | Hugo Lavenant - Bocconi University  | Inferring cell dynamics by learning curves valued in the Wasserstein space                               |
| 16:55 | 17:20 | Alice Le Brigant - SAMM   | Fisher information geometry of beta and Dirichlet distributions  |
| 17:20 | 17:45 | Irène Kaltenmark - MAPS   | Démantèlement des métriques d'espaces de varifolds pour (...)  |
| 17:45 | 18:10 | Nicolas Guigui - Inria  | Parallel transport for cardiac motion modeling: exploration of relative (...)                            |
| 18:10 | 18:35 | Julius Lohmann - University of Munster  | Convexification of branched transport  |
| 18:35 | 19:00 | Jean Feydy - Inria Paris-Rocquencourt   | Computational optimal transport: mature tools and open problems  |
| 19:00 | 19:25 | Bernhard Schmitzer - Uni Goettingen   | The Linearized Hellinger-Kantorovich Distance  |
| 16:30 | 19:25 | <b>Contributed session 13 - Geometry (Room B, Chair : Carla Manni)</b>                                |  |
| 16:30 | 16:55 | Jonas Tervooren, Tervooren, Jonas   | Conical Surfaces   |
| 16:55 | 17:20 | Hui Wang - King Abdullah University of Science and Technology   | Designing asymptotic geodesic hybrid gridshells  |
| 17:20 | 17:45 | Carlos Heroso - Universidad de Alcalá   | Detecting projective equivalences of planar curves birational to elliptic (...)                          |
| 17:45 | 18:10 | Juan Gerardo Alcazar - Universidad de Alcalá  | Projective equivalences and Mu-bases of rational curves in any dimension.                                |
| 18:10 | 18:35 | Felix Dellinger, Vienna University of Technology  | A checkerboard pattern approach to isothermic surfaces   |
| 18:35 | 19:00 | Helmut Pottmann - King Abdullah University of Science and Technology                                  | Surfaces with a constant ratio of principal curvatures   |
| 19:00 | 19:25 | Uğur Gözütök, Karadeniz Technical University  | Projective equivalences of rational algebraic space curves using (...)                                   |
| 16:30 | 19:25 | <b>Contributed session 14 - Sampling (Room C, Chair : Paul Catala)</b>                                |  |
| 16:30 | 16:55 | Chiara Romanengo - CNR-IMATI  | Recognition and approximation of space curves on 3D digital models                                       |
| 16:55 | 17:20 | Aurelian Bejancu - Kuwait University  | Cardinal and semi-cardinal interpolation with Matérn kernels   |
| 17:20 | 17:45 | Melanie Kircheis - Chemnitz University  | Direct inversion methods for the multivariate nonequispaced fast (...)                                   |
| 17:45 | 18:10 | Francesco Marchetti - Università degli Studi di Padova  | From $(\beta, \gamma)$ -Chebyshev functions of the interval to $(\beta, \gamma)$ -Lissajous curves (...) |
| 18:10 | 18:35 | Simon Barthelmé - Grenoble  | Gaussian Processes in the Flat Limit   |
| 18:35 | 19:00 | Barak Sober - Hebrew University   | Non-Parametric Estimation of Manifolds from Noisy Data   |

# Friday 24

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|-------|-------|---|---|
| 9:00  | 11:05 | <b>Minisymposium 15 - Deep learning in geometry processing (Amphitheater, Chair: Gabriel Peyré)</b> |   |
| 9:00  | 9:25  | Maks Ovsjanikov - Ecole Polytechnique   | Efficient and robust learning on non-rigid surfaces                       |
| 9:25  | 9:50  | Maron Haggai - Nvidia Research  | Equivariant Subgraph Aggregation Networks                                 |
| 9:50  | 10:15 | Sara Hahner - University of Bonn  | Learning Deformation Patterns of Surface Meshes of Different Sizes        |
| 10:15 | 10:40 | Roy Velich - Technion   | Learning Scale Invariant Signatures for Planar Curves                     |
| 10:40 | 11:05 | Felix Scholz, Johannes Kepler University Linz   | Locally refined quad meshing based on convolutional neural networks       |
| 9:00  | 11:05 | <b>Minisymposium 16 - Graphs embedded on surfaces (Room A, Chair: Arnaud de Mesmay)</b>             |   |
| 9:00  | 9:25  | Hsien-Chih Chang - Dartmouth College  | Linear-size $\mathbb{R}^2$ -Emulators for Planar Graphs                   |
| 9:25  | 9:50  | Cabello Sergio - University of Ljubljana  | Distance related problems in planar graphs and graphs on surfaces         |
| 9:50  | 10:15 | Arnaud de Mesmay, CNRS, LIGM  | Short topological decompositions of non-orientable surfaces               |
| 10:15 | 10:40 | Tim Ophelders - Utrecht University  | Minimum Height Drawings of Ordered Trees in Polynomial Time (...)         |
| 10:40 | 11:05 | Francis Lazarus - CNRS  | A tour of algorithms for curves on surfaces                               |
| 9:00  | 11:05 | <b>Contributed session 15 - Sampling (Room B, Chair : Blanche Buet)</b>                             |   |
| 9:00  | 9:25  | Yann Traonmilin - Univ. Bordeaux  | A framework for optimal convex regularization for the recovery of (...)   |
| 9:25  | 9:50  | Paul Catala - University of Osnabrück   | Approximating Singular Measures on the Torus with Moment Polynomials      |
| 9:50  | 10:15 | Dmitry Batenkov - Tel Aviv University   | Super-resolution on compact manifolds                                     |
| 10:15 | 10:40 | Dominik Mokrš - MTU Aero Engines AG   | Low-rank approximation of least squares fitting with bivariate (...)      |
| 10:40 | 11:05 | Chiara Fuda, Università della Svizzera Italiana   | On the numerical stability of barycentric rational interpolation          |
| 9:00  | 11:05 | <b>Contributed session 16 - Splines (Room C, Chair : Gudrun Albrecht)</b>                           |   |
| 9:00  | 9:25  | Jean Michel Menjanahary - Vilnius university  | Dupin cyclide spline surfaces of arbitrary topology                       |
| 9:25  | 9:50  | Rosanna Campagna - University of the Study of Campania Luigi Vanvitelli                             | Hyperbolic-polynomial penalized splines: existence, uniqueness, and (...) |
| 9:50  | 10:15 | Jiri Kosinka - University of Groningen  | Numerical Quadrature for Quadrilateral Gregory Patches                    |
| 10:15 | 10:40 | Tatiana Kravetc - The Arctic University of Norway   | Properties and applications of polygonal blending splines                 |
| 10:40 | 11:05 | Arne Lakså - The Arctic University of Norway  | Spline based techniques to make any parametric curve / surface editable   |
| 11:05 | 11:30 | <b>Coffee break (Lobby)</b>   |   |
| 11:30 | 12:30 | <b>Plenary talk (Amphitheater, Chair : Dany Leviatan)</b>   |   |
| 11:30 | 12:30 | Rida Farouki - University of California , Davis   | Global constraints in Hermite interpolation problems                      |
| 12:30 | 12:40 | <b>Closing remarks (Amphitheater)</b>   |   |