

Tuesday 28th	
12:30–14:30	REGISTRATION — “FOSCOLO” ROOM
14:30–14:45	WELCOME & OPENING
14:45–15:10	A. Buffa, <i>Isogeometric methods on V-reps: results and challenges</i> Chair: G. Sangalli
15:10–15:35	A. Leichner, <i>A contact algorithm for voxel-based meshes using implicit boundary representations</i>
15:35–16:00	Z. Yosibash, <i>CT-based Autonomous FEs (AFE) — a leap to clinical practice</i>
16:00–16:45	COFFEE BREAK
16:45–17:10	C. Canuto, <i>Adaptive hp-type finite element methods for eigenvalue computations</i> Chair: E. Rank
17:10–17:35	C. Marcati, <i>Analytic regularity and exponential convergence of hp approximations: applications to...</i>
17:35–18:00	A. Schroeder, <i>hp-finite elements for elliptic optimal control problems with control constraints</i>
18:30	POSTER SESSION & BUFFET DINNER — “DISEGNO” AND “FORLANINI” ROOMS
Wednesday 29th	
9:25–9:50	L. Beirão da Veiga, <i>Adaptive hp Virtual Elements</i> Chair: C. Canuto
9:50–10:15	C. Lovadina, <i>A family of Virtual Element Methods for linear elasticity problems</i>
10:15–10:40	H. Hakula, <i>Adaptive reference elements via harmonic extension shape functions</i>
10:40–11:25	COFFEE BREAK
11:25–11:50	M. Tani, <i>Efficient algorithms for assembling and solving linear systems for isogeometric analysis</i> Chair: Y. Bazilevs
11:50–12:15	S. Takacs, <i>Multigrid solvers for isogeometric analysis – numerical experience and convergence theory</i>
12:15–12:40	H. Speleers, <i>Error estimates for approximation using high-order splines</i>
12:40–14:20	LUNCH
14:20–14:45	Y. Bazilevs, <i>Extreme-events modeling & simulation using the coupling of IGA & meshfree methods</i> Chair: A. Düster
14:45–15:10	M.S. Pigazzini, <i>Recent advancements in isogeometric analysis in LS-Dyna</i>
15:10–15:35	M. Möller, <i>Isogeometric analysis for compressible flows in complex industrial geometries</i>
15:35–16:00	H. van Brummelen, <i>Recent advances in solution methods for high-order CutFEM and CutIGA</i>
16:00–16:45	COFFEE BREAK
16:45–17:10	J. Beck, <i>IGA-based Multi-Index Stochastic Collocation for PDEs with random input data</i> Chair: E. Ramm
17:10–17:35	D. Tsapetis, <i>Algorithms of enhanced efficiency for solving computational mechanics problems using IGA</i>
17:35–18:00	M. Kaestner, <i>Adaptive isogeometric analysis with hierarchical B-splines</i>
18:00–19:00	HOFEIM SCIENTIFIC COMMITTEE MEETING — “FOSCOLO” ROOM
20:00	DINNER — VITA RESTAURANT & CAFÈ
Thursday 30th	
9:00–9:25	M. Melenk, <i>Wavenumber-explicit hp-FEM for Maxwell’s equations</i> Chair: L. D. Marini
9:25–9:50	L. Demkowicz, <i>Adaptive multilevel solvers for the DPG method... high-frequency wave propagation</i>
9:50–10:15	G. Delay, <i>Hybrid High-Order methods for indefinite problems on unfitted meshes</i>
10:15–11:00	COFFEE BREAK
11:00–11:25	I. Harari, <i>Embedded boundary conditions for shear deformable plate bending</i> Chair: A. Reali
11:25–11:50	J. Kiendl, <i>A new penalty formulation for patch coupling in Kirchhoff–Love shell analysis</i>
11:50–12:15	E. Ramm, <i>Avoiding locking a-priori on shell theory level — State of research</i>
12:15–12:40	C. Xenophontos, <i>IGA for singularly perturbed high-order, two-point BVPs of reaction-diffusion type</i>
12:40–14:20	LUNCH
14:20–14:45	F. Auricchio, <i>Advanced numerical methods in additive manufacturing applications</i> Chair: Z. Yosibash
14:45–15:10	S. Elgeti, <i>Unsteady, temperature-dependent, and non-Newtonian simulations in plastics processing</i>
15:10–15:35	N. Korshunova, <i>From CT-Scans to material characterization: mechanical behavior of micro-porous metal structures</i>
15:35–16:00	M. Carraturo, <i>Adaptive isogeometric thermal analysis for additive manufacturing processes</i>
16:00–16:45	COFFEE BREAK
16:45–17:10	A. Düster, <i>The finite cell method for nonlinear structural analysis including large deformations</i> Chair: H. van Brummelen
17:10–17:35	G. Legrain, <i>Non-negative moment-fitting quadrature rules for high-order fictitious domain methods</i>
17:35–18:00	S. Kollmannsberger, <i>Structural analysis of domains defined by point clouds</i>
20:00	SOCIAL DINNER — RISTORANTE BARDELLI
Friday 31th	
9:25–9:50	F. Brezzi, <i>VEMs - Basic ideas and recent developments</i> Chair: L. Demkowicz
9:50–10:15	J. Schöberl, <i>High order matrix-valued finite element spaces</i>
10:15–11:00	COFFEE BREAK
11:00–11:25	G. Rozza, <i>Reduced Order Methods for PDEs: state of the art & perspectives with applications in CFD</i> Chair: L. Tamellini
11:25–11:50	S. Duczek, <i>On different mass lumping techniques for high order serendipity and spectral elements</i>
11:50–12:15	L. Radtke, <i>Optimally blended spectral elements for structural dynamics & fluid-structure interaction</i>
12:20–14:00	LUNCH
Afternoon	TOUR

All talks will take place in the “Foscolo” room. Coffee breaks & lunches will be served on the balcony next to the lecture room.

The secretariat of Palazzo Vistarino is open for room payment from Tuesday to Friday 8:30–13 and 14–17:30.

Please make sure to stop by to pay for your room.

M. Bosy, M. Montardini, G. Sangalli, M. Tani

Fast domain decomposition solvers for isogeometric analysis

A. Bressan, S. Takacs

Sum factorization techniques in isogeometric analysis

W. Cecot, M. Oleksy

A prolongation operator for MsFEM upscaling combined with DPG methodology

L. Beirão da Veiga, A. Chernov, L. Mascotto, A. Russo

hp-version of the Virtual Element Method

D. D'Angella, L. Coradello, M. Carraturo, L. Kudela, S. Kollmannsberger, E. Rank, A. Reali

Trimming and local refinement for isogeometric shells analysis

N. Hosters, A. Patton, A. Reali, S. Elgeti, M. Behr

*Combining NURBS-enhanced finite elements and isogeometric collocation
in the context of fluid-structure interaction*

G. Loli, M. Montardini, G. Sangalli, M. Tani

Space-time isogeometric Galerkin method and efficient solver for parabolic problems

G. Lorenzo, T.J.R. Hughes, A. Reali, H. Gomez

*An in silico study of mechanical obstruction of prostate cancer growth
by benign prostatic hyperplasia with clinical implications*

E. Marino, J. Kiendl, L. De Lorenzis

*Isogeometric collocation for the dynamics of three-dimensional nonlinear Timoshenko beams:
explicit and implicit formulations*

I. Páczelt, B. Szabó

Application of the p -version of FEM to hierarchic rod models

M. Paszyński

Supermodeling of a tumor with isogeometric analysis solvers

A. Patton, J.-E. Dufour, P. Antolin, J. Kiendl, A. Reali

A stress recovery approach for accurate elastic analysis of laminated composites via isogeometric analysis

G. Sangalli, L. Tamellini, J. Beck

A sparse-grid isogeometric solver

B. Tóth

Hybrid-mixed hp -finite element method for shells of revolution

N. Zander, H. Beriot, C. Hoff, P. Kodl

Anisotropic multi-level hp -refinement
