

<b>9 Sept. 2015 - Morning</b>		
<b>TIME</b>	<b>Session Room</b>	<b>EVENT</b>
09:00 - 09:30	Salone	<b>Opening</b>
09:30 - 10:15	Plenary lecture salone	<b>Extended Discretization Methods for Dynamic Fragmentation Lecture in honor of Professor Ted Belytschko Professor John Dolbow</b>
10:15 - 11:15	SA1-I1	<b>Smooth approximations on unstructured nodal discretizations: finite elements, spline-based techniques and meshfree - Sukumar</b>
10:15 - 10:35		3D Finite Element remeshing with Smooth Particle Hydrodynamics : An application to high speed impacts simulation - Lionel Morancay
10:35 - 10:55		Volumetric locking in Local maximum entropy approximations - Kinnia Moise
10:55 - 11:15		Comparison of Meshfree Galerkin Methods Based on MLS and Maximum-Entropy Approximation Schemes - N. Sukumar
10:15 - 11:15	NLM1-I5	<b>Non-linear Moving interface problems (contact, dynamic loadings) - Gravouil</b>
10:15 - 10:35		SPH-modeling of fast impacts with adhesion - Alain Combescure
10:35 - 10:55		Contact modeling based on the lagrangian method with the Stable Generalized Finite Element Method (SGFEM) - Yuan Jin
10:55 - 11:15		A posteriori error estimate for fictitious domain and Nitsche's method applied to contact problems in elasticity - Mathieu Fabre
10:15 - 11:15	PF1-SC	<b>Phase field and enhanced finite element formulations for fracture mechanics - Reinoso</b>
10:15 - 10:35		XFEM/Phase Field methods for crack propagation in brittle materials - Bianca Giovanardi
10:35 - 10:55		Modelling damage and cracking in polycrystalline solar cells using the cohesive zone model and the phase field approach - José Reinoso
10:55 - 11:15		Simulation of damage and crack propagation at re-entrant corners according to the phase field method - Vigneswaran Govindarajan
11:15 - 11:40	<b>Coffee break in Palazzo Tassoni courtyard</b>	
11:40 - 13:20	UD1-I5	<b>Unfitted discretization methods for PDEs on embedded manifolds and coupled manifold-bulk problems - Formaggia</b>
11:40 - 12:00		A trace finite element method for a class of coupled bulk-interface transport problems - Arnold Reusken
12:00 - 12:20		A Cut Discontinuous Galerkin Method for the Laplace-Beltrami Operator with Applications to Surface-Bulk Problems - Andre Massing
12:20 - 12:40		Nitsche-XFEM immersed boundary methods for incompressible fluid-structure interaction - Miguel A. Fernández
12:40 - 13:00		An adaptive fictitious domain method for elliptic problems: convergence and optimality properties - Marco Verani
13:00 - 13:20		A 3D-1D coupled model for elastic response of fibre-reinforced composites - Jan Stebel
11:40 - 13:20	HOD1-I1	<b>Higher order eXtended discretization methods- Müller</b>
11:40 - 12:00		High order discretizations for two-phase flow: spatial discretization, curvature evaluation and solver strategies - Thomas Utz
12:00 - 12:20		A higher-order accurate numerical integration for the XFEM and fictitious domain methods - Thomas-Peter Fries
12:20 - 12:40		Phase Field Approach to Fluid Filled Fractures using Unfitted Discontinuous Galerkin Methods - Liesel Schumacher
12:40 - 13:00		Robust implementation of X-FEM with quadratic elements - Ndeffo Marcel
13:00 - 13:20		High order embedded domain methods: thermo-mechanical simulation of additive manufacturing processes - Ali Özcan
13:20 - 14:15	<b>Lunch in Palazzo Tassoni courtyard</b>	

## 9 Sept. 2015 - Afternoon

TIME	Session Room	EVENT
14:15 - 15:00	Plenary lecture salone	<b>The use of Powell-Sabin B-splines for solving fourth-order differential equations in structural mechanics</b> <b>Professor Renè de Borst</b>
15:00 - 16:40	A1-I5	<b>Applications of XFEM/GFEM to practical engineering problems - Waisman</b>
15:00 - 15:20		Crack Propagation in poly crystalline materials - Steffen Beese
15:20 - 15:40		An XFEM based multiscale method for flaws detection in structures - Haim Waisman
15:40 - 16:00		Three-dimensional modelling of the delamination process in FRP reinforced concrete blocks - Elena Benvenuti
16:00 - 16:20		A medial-axis geometrical approach for crack propagation and branching - Antonio Rodríguez-Ferran
16:20 - 16:40		Three-Dimensional Crack Propagation with Global Enrichment XFEM and Vector Level Sets - Konstantinos Agathos
15:00 - 16:40	EFV - SC	<b>Extended Finite Volumes - Wittum</b>
15:00 - 15:20		Extended discretization and smooth subdivision of hybrid tetra/octahedral grids with application in neuroscientific numerical simulations - Martin Stepniewski
15:20 - 15:40		A Multiscale Model of Synaptic Contacts between Brain Cells - Stephan Grein
15:40 - 16:00		A fully-coupled Finite-Volume Method for Particulate Flow in Bio-Fluids - Susanne Hoellbacher
16:00- 16:20		On the validity of models of density-driven flows in porous media with low-dimensional fractures - Dmitrij Logashenko
16:20 - 16:40		A Finite Element Sub-Partition Method for Crack Extension Simulation - Chuwei Zhou
16:40 - 17:10	<b><i>Coffee break in Palazzo Tassoni courtyard</i></b>	
17:10 - 18:10	SA2-I1	<b>Smooth approximations on unstructured nodal discretizations: finite elements, spline-based techniques and meshfree - Sukumar</b>
17:10 - 17:30		An Adaptive Iso-Geometric Analysis for solving plane problems - Umesh Basappa
17:30 - 17:50		Application of the Meshless Natural Neighbour Galerkin Method - Amirtham Rajagopal
17:10 - 18:10	NLM2 - I5	<b>Non-linear Moving interface problems (contact, dynamic loadings) - Gravouil</b>
17:10 - 17:30		On the development of a plate-finite element framework using the strong discontinuity approach for reinforced concrete components - Ejona Kishta
17:30 - 17:50		A X-FEM Shell model for dynamic fracture of thin structures - Jan Yannick
17:50 - 18:10		A Dynamic Contact Solution Procedure in The Framework of XFEM - Zhiqiang Hu
17:10 - 18:10	PF2 - SC	<b>Phase field and enhanced finite element formulations for fracture mechanics - Reinoso</b>
17:10 - 17:30		Three-dimensional crack nucleation, growth and coalescence using the Thick Level Set approach to fracture - Nicolas Moës
17:30 - 17:50		Crack propagation by using crack opening displacements in 2D and 3D XFEM - Markus Schätzer
17:50 - 18:10		Transition from damage to localized cracks in dynamic fracture of polycrystalline ceramics - Florin Bobaru

<b>10 Sept. 2015 - Morning</b>		
<b>TIME</b>	<b>Session Room</b>	<b>EVENT</b>
08:45 - 09:30	Plenary lecture salone	<b>Virtual Element Methods and their Applications</b> <b>Professor Franco Brezzi</b>
09:30 - 11:10	PM1 - I5	<b>Polygonal and Polyhedral Methods - Beirao da Veiga</b>
09:30 - 09:50		Mixed Virtual Element Methods for general second order elliptic problems on polygonal meshes - Luisa Donatella Marini
09:50 - 10:10		A Virtual Element Method for some Structural Mechanics problems - Carlo Lovadina
10:10 - 10:30		A discontinuous-skeletal method for advection-diffusion-reaction on general meshes - Daniele Di Pietro
10:30 - 10:50		The Virtual Element Method for Discrete Fracture Network simulations - Stefano Berrone
10:50 - 11:10		Spectral Properties and Conservation Laws in Mimetic Finite Difference Methods for PDEs - Giuseppe Vacca
09:30 - 11:10	CM1 - SC	<b>Coupling methods for the local enrichment of FE models - Gosselet</b>
09:30 - 09:50		On the application of a non-intrusive coupling strategy for the local enrichment of NURBS patches: geometrical details - Robin Bouclier
09:50 - 10:10		Hierarchic hp-refinements for high-order finite elements - Stefan Kollmannsberger
10:10 - 10:30		Non-intrusive global-local coupling applied to the design of bolted assemblies - Guillaume Guguin
10:30 - 10:50		Multiscale coupling approach for solving high-dimensional stochastic problems featuring localized uncertainties and non-linearities - Florent Pled
10:50 - 11:10		Numerical zoom for multi-scale and multi-model problems on general meshes - Alexei Lozinski
11:10 - 11:40		<i>Coffee break in Palazzo Tassoni courtyard</i>
11:40 - 13:20	PM2 - I5	<b>Polygonal and Polyhedral Methods - Antonietti</b>
11:40 - 12:00		hp-Version Discontinuous Galerkin Methods on Polytopic Meshes - Paul Houston
12:00 - 12:20		A Plane Wave Virtual Element Method for the Helmholtz Problem - Paola Pietra
12:20 - 12:40		Application of the virtual element method to non-conforming contact interfaces - Wilhelm Rust
12:40 - 13:00		Can h-multigrid redeem coupled variables dG discretizations of the incompressible Navier-Stokes equations? - Lorenzo Botti
13:00 - 13:20		Bijjective Finite Element Method - Teseo Schneider
11:40 - 13:20	A3 - I1	<b>Applications of XFEM/GFEM to practical engineering problems - Simone</b>
11:40 - 12:00		XFEM vs. r-Refinement for Higher-Order Approximations in Elastoplasticity - Samir Omerovic
12:00 - 12:20		Recent Developments in the Generalized Finite Element Method for the Simulation of 3-D Hydraulic Fracture Propagation and Interactions - A. Duarte
12:20 - 12:40		Advances in partition of unity-based mesoscopic masonry models - Bram Vandoren
12:40 - 13:00		The XFEM applied to porous saturated media - Paul Bertrand
13:00 - 13:20		A Dynamic Conformal Decomposition Finite Element Method with Guaranteed Quality - David Noble
11:40 - 13:20	UD1-SC	<b>Unfitted discretization methods for PDEs on embedded manifolds and coupled manifold-bulk problems - Larsson</b>
11:40 - 12:00		Stabilized XFEM based discretization approaches for complex coupled flow problems using cut elements - Benedikt Schott
12:00 - 12:20		Extensions of the Unfitted Discontinuous Galerkin method for coupled bulk-surface PDEs - Christian Engwer
12:20 - 12:40		Numerical simulations on embedded solids : integration of CAD and eXtended Finite Element Analysis - Frédéric Duboeuf
12:40 - 13:00		A Coupling Method for Modelling Flow and Transport Processes in Vascularized Biological Tissue using a Finite Volume Scheme - Timo Koch
13:00 - 13:20		Numerical simulation of fractured and heterogeneous porous media with non-matching grids - Anna Scotti
13:20 - 14:15		<i>Lunch in Palazzo Tassoni courtyard</i>

<b>10 Sept. 2015 - Afternoon</b>		
<b>TIME</b>	<b>Session Room</b>	<b>EVENT</b>
14:15 - 15:00	Plenary lecture salone	<b>Finite element technology using reduced integration – investigations of stability and model adaptivity</b> <b>Professor Stefanie Reese</b>
15:00 - 16:40	PM3 - I5	<b>Polygonal and Polyhedral Methods - Verani</b>
15:00 - 15:20		Virtual Element Methods for general second order elliptic problems on polygonal meshes - Alessandro Russo
15:20 - 15:40		Virtual Element Methods for Elliptic Problems - Andrea Cangiani
15:40 - 16:00		Convection-adapted BEM-based Finite Element Method on Tetrahedral and Polyhedral Meshes - Steffen Weißer
16:00 - 16:20		Virtual element approximation of the Steklov eigenvalue problem - David Mora
16:20 - 16:40		Basic principles of hp Virtual Element Methods - Lorenzo Mascotto
15:00 - 16:40	CM2 - SC	<b>Coupling methods for the local enrichment of FE models - Passieux</b>
15:00 - 15:20		Non-intrusive local/global coupling as a Schwarz method: Krylov acceleration and handling of incompatible meshes - Pierre Gosselet
15:20 - 15:40		A non-intrusive global/local method for fatigue computations on hot aeronautical structures - Maxime Blanchard
15:40 - 16:00		ICARE: a joint initiative for transferring Non Intrusive Coupling Techniques towards Industry - Stephane Guinard
16:00 - 16:20		Mesoscale prediction of concrete mechanical properties by random phase allocation - Loredana Contrafatto
15:00 - 16:40	A3 - I1	<b>Applications of XFEM/GFEM to practical engineering problems - Duarte</b>
15:00 - 15:20		Modeling Fiber Reinforced Composites with a Generalized Finite Element Method - Angelo Simone
15:20 - 15:40		A multiscale projection method for the thermomechanical simulation of the interaction of microcracks with a macrocrack - Artsem Kunin
15:40 - 16:00		Development of a damage propagation analysis system based on XFEM using CZM and application to fracture problems - Toshio Nagashima
16:00 - 16:20		Stabilizing the XFEM for static and dynamic fracture simulations - Stefan Loehnert
16:20 - 16:40		Stabilized X-FEM for Heaviside and Nonlinear Enrichments - Giulio Ventura
16:40 - 17:10	<b>Coffee break in Palazzo Tassoni courtyard</b>	
17:10 - 18:50	PM4 - I5	<b>Polygonal and Polyhedral Methods - Brezzi</b>
17:10 - 17:30		The Nonconforming Virtual Element Method for the Convection-Diffusion-Reaction Equation - Gianmarco Manzini
17:30 - 17:50		A Virtual Element Method for the Cahn-Hilliard equation - Lourenco Beirao da Veiga
17:50 - 18:10		Low-order reconstruction operators on polyhedral meshes - Jérôme Bonelle
18:10 - 18:30		Multigrid algorithms for hp-version Discontinuous Galerkin methods on polygonal and polyhedral meshes - Paola F. Antonietti
20:20 - 23:00	<b>Gala dinner at Sala San Francesco, via Savonarola 3</b>	

## 11 Sept. 2015 - Morning

TIME	Session Room	EVENT
08:45 - 09:30	Plenary lecture salone	<b>Computational Continua (C<sup>2</sup>)</b> <b>Professor Jacob Fish</b>
09:30 - 09:40	<b>Acknowledgements - Organizers</b>	
09:40 - 11:00	EM1 - I5	<b>Enriched methods for flow and mechanics in heterogeneous porous media - Scotti</b>
09:40 - 10:00		Partition of unity methods for approximation of point water sources in porous media - Pavel Exner
10:00 - 10:20		Quasi-static crack propagation in porous media due to hydraulic pressure within the crack - Alina Juan-Lien Ramirez
10:20 - 10:40		Software infrastructure for simulating coupled bulk-fracture systems - Oliver Sander
10:40 - 11:00		Non-matching schemes for upscaling in fractured porous media - Alessio Fumagalli
09:40 - 11:00	HOD2 - I1	<b>Higher order eXtended discretization methods - Kummer</b>
09:40 - 10:00		eXtended Hybridizable Discontinuous Galerkin (X-HDG) for void problems - Sonia Fernandez-Mendez
10:00 - 10:20		Extended Hybridizable Discontinuous Galerkin (X-HDG) for Bimaterial Problems - Ceren Gürkan
10:20 - 10:40		Stabilization and preconditioning of XFEM discretizations for 3D incompressible two-phase flows - Sven Gross
10:40 - 11:00		Efficient Discontinuous Galerkin methods with local time stepping for immersed boundary problems - Stephan Kraemer-Eis
09:40 - 11:00	NT11 - SC	<b>Numerical techniques for interface problems - Távora Mendoza</b>
09:40 - 10:00		A new formulation for imposing Dirichlet boundary conditions on non-matching meshes - Alejandro Aragón
10:00 - 10:20		Three dimensional FE analysis of interfacial fibre/matrix debonding in fibre-reinforced composites - Luis Távora
10:20 - 10:40		On the use of standard integration schemes for X-FEM in solid mechanics plasticity - Alexandre Martin
11:00 - 11:30	<b>Coffee break in Palazzo Tassoni courtyard</b>	
11:30 - 13:10	EM2 - I5	<b>Enriched methods for flow and mechanics in heterogeneous porous media - Fumagalli</b>
11:30 - 11:50		Flow simulation in heterogeneous large-scale DFNs with a robust optimization based approach - Stefano Scialo
11:50 - 12:10		Comparison of Fracture-Tip Models for Fluid Flow in Fractured Porous Media - Bernd Flemisch
12:10 - 12:30		Coupled Fluid-Solid Interaction and Fracture Propagation in a Poroelastic Medium - Katja Hanowski
12:30 - 12:50		Numerical approximation of coupled PDEs with high dimensionality gap - Paolo Zunino
12:50 - 13:10		Robust Discretization of Flow in Fractured Porous Media - Wietse Boon
11:30 - 13:10	MC - I1	<b>Multiscale numerical coupling between coarse and fine models - Lozinski</b>
11:30 - 11:50		Direct Estimation of Stress Intensity Factors by a 3D multi-grid DEK-FEM Anthony Gravouil
11:50 - 12:10		Non-intrusive coupling: multiscale computation and finite element mesh adaptation - Mickaël Duval
12:10 - 12:30		The fat boundary method for the Stokes problem - Silvia Bertoluzza
12:30 - 12:50		Multiscale superposition and profile computations for linear elasticity - Grégory Vial
12:50 - 13:10		Reduced model for the scattering by small obstacles in time domain - Sébastien Tordeux
11:30 - 13:10	NTI2 - SC	<b>Numerical techniques for interface problems - Távora Mendoza</b>
11:30 - 11:50		Magnetostatic XFEM analysis for internal discontinuity under uniform flux based on Joukowski transform - Nakasumi Shogo
11:50 - 12:10		Fast marching method for three-dimensional crack propagation - Patrick Massin
12:10 - 12:30		3D crack propagation with X-FEM cohesive elements - Patrick Massin
12:30 - 12:50		Solving Stefan problem through C-NEM and level-set approach - Philippe Lorong
13:10 - 14:30	<b>Lunch in Palazzo Tassoni courtyard</b>	