

6.1 Honorary Lectures in International Conferences

Plenary, semi-plenary and keynote lectures in International Conferences

1. **Key-note Lecture:** CSF Workshop on Generalized Barycentric Coordinates in Computer Graphics and Computational Mechanics, Monte Verità, Ascona, Switzerland, May 20–23 2020.
2. **Plenary Lecture:** *Geometrically-exact time-integration mesh-free schemes for advection-diffusion problems derived from optimal transportation theory*, XXIV Congresso Italiano di Meccanica Teorica ed Applicata, Roma, Italy, September 13–15 2019.
3. **Plenary Lecture:** *Geometrically-exact time-integration mesh-free schemes for advection-diffusion problems derived from optimal transportation theory*, ECCOMAS Thematic Conference on eXtended Discretization MethodS X-DEM 2019, Lugano, Switzerland, July 3–5 2019.
4. **Plenary Lecture:** *Modelling the biomechanics of the human cornea*, French National Congress on Computational Mechanics, Giens, France, May 13–17 2019.
5. **Plenary Lecture:** *On the relevance of the collagen architecture on the biomechanics of the human cornea*, XII Argentine Congress on Computational Mechanics, San Miguel de Tucuman, Argentina, November 6–9 2018.
6. **Key-Note Lecture:** *A multiscale model of brittle damage extended to porous materials*, 55th Annual Technical meeting of Society of Engineering Science (SES 2018), Madrid, Spain, October 10–12, 2018.
7. **Invited Lecture:** *A Class of Electro-Active Anisotropic Material Models*, Current Trends and Open Problems in Computational Solid Mechanics Leibniz Universität Hannover, Germany, October 8–9, 2018.
8. **Plenary Lecture:** *Geometrically-exact time-integration mesh-free schemes for advection-diffusion problems derived from optimal transportation theory*, European Conference in Computational Mechanics & European Conference in Computational Fluid Dynamics (ECCM & ECFD 2018), Glasgow, UK, June 11–15 2018.
9. **Plenary Lecture:** *Modelling the collagen architecture of the cornea*, III International Conference on Biomedical Technology (ICBT 2017), Hanover, Germany, November 6–8 2017.
10. **Plenary Lecture:** *Biomechanics of the anterior segment of the eye*, 14th International Conference on Computational Plasticity (COMPLAS 2017), Barcelona, Spain, September 5–7 2017.
11. **Key-Note Lecture:** *A porous brittle damage material model with distributed frictional-cohesive faults*, Engineering Mechanics Institute International Conference, Metz, France, October 24–27, 2016.
12. **Key-Note Lecture:** *A micro-structured multi-scale brittle damage model of porous material*, Workshop MIST (Laboratory of Micromechanics and Integrity des Structure) Friction, Fracture, Failure [Microstructural Effects], Montpellier, France, October 12–15, 2015.
13. **Key-Note Lecture:** *Elastic and brittle behavior of metaconcrete*, 8-th International Congress of Croatian Society of Mechanics, Opatija, Croatia, September 29–October 3 2015.
14. **Plenary Lecture:** *Metaconcrete: designed aggregates to enhance dynamic performance*, International Conference on Computational Modelling of Concrete and Concrete Structures (EURO-C 2014), St. Anton am Arlberg, Austria, March 24–27 2014.
15. **Plenary Lecture:** *Convergent Erosion Schemes for Three-Dimensional Fracture and Fragmentation*, Third Thematic Eccomas Conference in Computational Fracture Mechanics, CFRAC 2013, Prague, Czech Republic, June 5–7, 2013.

16. **Key-Note Lecture:** *Modeling Fracture within Local Max-Ent Meshfree Approximation Schemes*, International Congress on Computational Mechanics and Simulation, Hyderabad, India, December 10-12, 2012.
17. **Key-Note Lecture:** *Eigenerosion Approaches to Brittle Fracture*, International Workshop on “Evolution problems in damage, plasticity and fracture: mathematical models and numerical analysis”, Udine, September 19-21, 2012.
18. **Semi-Plenary Lecture:** *Eigenerosion Approaches to Brittle Fracture*, European Congress in Computational methods in Applied Sciences and Engineering, ECCOMAS 2012, Vienna, Austria, September 10–14, 2012.
19. **Plenary Lecture:** *Computational Biomechanics of the Human Cornea*, EuroMech Colloquium Number 518 *Biomechanics of the Eye*, London, UK, July 26–28, 2010.
20. **Key-note Lecture:** *Numerical simulations of arterial plaque ruptures*, XI Esaform2008 Conference on Material Forming, Lyon, France, April 23–25, 2008.
21. **Key-note Lecture:** *Blast induced fragmentation and wave propagation in rocks*, VII World Congress in Computational Mechanics, WCCM 7, Los Angeles, CA, July 16–21, 2006.
22. **Key-note Lecture:** *A model of distributed faulting in confined brittle materials*, XV US National Congress in Theoretical and Applied Mechanics, USNCTAM15, Boulder, CO, June 25–30, 2006.
23. **Key-note Lecture:** *Numerical simulations of monolithic elastomeric microvalves*, TCN–CAE Conference, Forte Village, Sardinia, October 2–5, 2003.

6.2 Invited Seminars

Seminars presented in International and National scientific institutions

In evidence: **Caltech, Harvard, Stanford, Oxford, Postech, EPFL, UCSD, UCLA, Paris VI, MOX Polimi, Stockholm, Glasgow.**

1. *Modelling and simulations of hydraulic fracking processes*, Dipartimento di Strutture, University of **Napoli Federico II**, May 8, 2019.
2. *Theoretical and experimental analysis of metaconcrete, using engineered aggregates for enhanced dynamic performance*, University of **Houston**, TX USA, February 26, 2019.
3. *On the relevance of the collagen architecture and of the external shape on the biomechanics of the human cornea*, **École Polytechnique, Palaiseau**, France, February 7, 2019.
4. *Modelling Fracture within Local Max-Ent Meshfree Approximation Schemes*, University of **Tucuman**, Argentina, November 4, 2018.
5. *Metaconcrete: Engineered Aggregates for Enhanced Dynamic Performance*, University of **Buenos Aires**, Argentina, November 2, 2018.
6. *Metaconcrete: Engineered Aggregates for Enhanced Dynamic Performance*, University of **Brescia**, May 18, 2017.
7. *Metaconcrete: Engineered Aggregates for Enhanced Dynamic Performance*, University of **Salerno**, May 12, 2017.
8. *Understanding and Modeling the Biomechanics of the Human Cornea*, University of **Napoli Federico II**, May 11, 2017.
9. *A porous brittle damage material model with distributed frictional-cohesive faults*, MOX, Politecnico di Milano, November 11, 2016.

10. *Metaconcrete: Engineered Aggregates for Enhanced Dynamic Performance*, Solid Mechanics and Materials Engineering, Oxford University, **Oxford**, UK, March 8, 2016.
11. *On Electro-Active Anisotropic Material Models for the Behavior of the Large Intestine*, Hopkins Extreme Materials Institute, Johns Hopkins University **Baltimore**, USA, February 22, 2016.
12. *Metaconcrete: Engineered Aggregates for Enhanced Dynamic Performance*, Engineering Department, University Roma III, **Roma**, February 3, 2016.
13. *Metaconcrete: Engineered Aggregates for Enhanced Dynamic Performance*, Civil and Environmental Engineering Department, Politecnico, **Milano**, October 28, 2015.
14. *Understanding and Modeling the Biomechanics of the Human Cornea*, School of Mechanical and Material Engineering, University College Dublin, **Dublin**, Ireland, May 27, 2015.
15. *On Electro-Active Anisotropic Material Models for the Behavior of the Large Intestine* Computational Mechanics & Advanced Materials Group - DICA, Università degli Studi, **Pavia**, January 28, 2015.
16. *Geometry and material models for the biomechanics of the human cornea*, within the Webinar "A Year in Visual Optics: Understanding the Anterior Human Eye", hosted by the Optical Society of America Technical Group "Applications of Visual Science", **online Webinar**, January 15, 2015.
17. *Understanding and Modeling the Biomechanics of the Human Cornea*, Solid Mechanics Department, Royal Institute of Technology, **Stockholm**, Sweden, September 17, 2014.
18. *The biomechanics of the human cornea: theoretical modeling, experiments and numerical simulations*, Robotics Laboratory, **Postech**, Pohang University of Science and Technology, South Korea, June 26, 2014.
19. *Numerical modeling of physics and engineering problems*, Università degli Studi di **Brescia**, February 24, 2014.
20. *Modeling the biomechanics of the human cornea*, GalCit Colloquium, **Caltech**, Pasadena CA, April 19, 2013.
21. *A peek in metaconcrete numerical results*, **Caltech**, Pasadena CA, Aerospace Graduate Laboratories, April 16, 2013.
22. *The biomechanics of the human cornea: new advances and new issues*, Department of Mechanical and Aerospace Engineering, University of California **Los Angeles**, CA, April 3, 2013.
23. *New studies and new issues concerning the human cornea*, Department of Mechanical and Aerospace Engineering, University of California **San Diego**, CA, March 4, 2013.
24. *Numerical models for the nonlinear behavior of materials and structures*, Centro di Ricerca General Electrics Oil & Gas, **Firenze**, November 16, 2012.
25. *New studies and new issues concerning the human cornea*, School of Mathematics & Statistic, **Glasgow**, UK, November 8, 2012.
26. *Modelling Fracture within Local Max-Ent Meshfree Approximation Schemes*, MOX, Politecnico di **Milano**, June 8, 2012.
27. *Modelling Fracture within Local Max-Ent Meshfree Approximation Schemes*, Centre for Geotechnical and Materials Modelling, University of **Newcastle**, Australia, May 24, 2012.
28. *Modelling Fracture within Local Max-Ent Meshfree Approximation Schemes*, Institut für Mechanik und Regelungstechnik, Universität **Siegen**, Germany, May 8, 2012.

29. *New studies and new issues concerning the human cornea*, Aerospace Graduate Laboratories, **Caltech**, Pasadena CA, March 16 & April 6, 2012.
30. *Cohesive Models of Fracture and 3D Fragmentation Procedures*, Università “Gabriele d’Annunzio” di **Pescara-Chieti**, Chieti, February 15, 2012.
31. *Fiber distributed hyperelastic modeling of biological tissues*, Dipartimento di Ingegneria Strutturale, **Politecnico**, Milano, February 13, 2012.
32. *Eigenerosion Approaches to Brittle Fracture*, Graduate Aerospace Laboratories, **Caltech**, Pasadena CA, August 19, 2011.
33. *Eigenerosion Approaches to Brittle Fracture*, School of Engineering and Applied Science, **Harvard**, Cambridge MA, April 28, 2011.
34. *Fiber distributed hyperelastic modeling of biological tissues*, Dipartimento di Ingegneria Civile, Università di **Salerno**, Fisciano, December 9, 2010.
35. *A numerical approach to field-induced phase transitions in nematic liquid crystals*, Laboratoire de simulation en mécanique des solides, Ecole Polytechnique Fédérale de **Lausanne**, Switzerland, June 1, 2010.
36. *Modeling the behavior of fiber reinforced biological tissues*, Graduate Aeronautical Laboratories, **Caltech**, Pasadena CA, April 2 and April 9, 2010.
37. *Three-dimensional modeling and computational analysis of the human cornea*, Dipartimento di Ingegneria Civile, Università di **Pisa**, February 18, 2010.
38. *Three-dimensional modeling and computational analysis of the human cornea*, Institute of Computational Science, Università della Svizzera Italiana, **Lugano**, Switzerland, December 11, 2009.
39. *Cohesive theories of fracture in numerical modeling of material failure*, Institut für Mechanik und Regelungstechnik, Universität **Siegen**, Germany, June 19, 2009.
40. *A numerical approach to field-induced phase transitions in nematic liquid crystals*, Dipartimento de Matematica Applicada III, Universitat Politecnica de Catalunya, **Barcelona**, Spain, May 15, 2009.
41. *Numerical applications of time-discretized variational formulations of nonsmooth contact*, Institut für Analysis, Fachbereich Mathematik, Technische Universität **Dresden**, Germany, April 30, 2009.
42. *Cohesive models of fracture and 3D fragmentation procedures*, Fakultät Bauingenieurwesen, Technische Universität **Dresden**, Germany, April 27, 2009.
43. *Three-dimensional modeling and computational analysis of the human cornea*, Facoltà di Ingegneria Biomedica, Università Campus Bio-Medico, **Roma**, April 23, 2009.
44. *Cohesive theories of fracture in numerical modeling of material failure*, Dipartimento di Ingegneria Civile e Ambientale, Università degli Studi di **Catania**, November 27, 2008.
45. *A model of distributed faulting and numerical applications*, Laboratoire 3S-R, Institut National Polytechnique & Université Joseph Fourier, **Grenoble**, September 11, 2008.
46. *Computational modeling of the mechanical and optical behavior of human corneas*, Institut Jean Le Rond d’Alembert, CNRS & Université Pierre et Marie Curie, **Paris**, May 23, 2008.
47. *A numerical approach to field-induced phase transitions in nematic liquid crystals*, Graduate Aeronautical Laboratories, **Caltech**, Pasadena CA, April 11, 2008.

48. *Three-dimensional modeling and computational analysis of the human cornea*, Mechanics and Computation Group, **Stanford** University, Palo Alto CA, April 3, 2008.
49. *A numerical model of atherosclerotic lesions in human arteries*, School of Engineering, University of **Durham**, UK, August 30, 2007.
50. *Three-dimensional modeling and computational analysis of the human cornea*, Dipartimento di Ingegneria Civile, Università di **Salerno**, Fisciano, June 29, 2007.
51. *Variational cohesive fracture models and three-dimensional crack tracking*, Dipartimento di Ingegneria, Università di **Ferrara**, April 16, 2007.
52. *Cohesive models of fracture and 3D fragmentation procedures*, Laboratoire 3S, Institut National Polytechnique & Université Joseph Fourier, **Grenoble**, March 29, 2007.
53. *Numerical simulations of the mechanical and optical behavior of human corneas*, Graduate Aeronautical Laboratories, **Caltech**, Pasadena, CA, March 23, 2007.
54. *A model of distributed faulting in confined brittle materials*, Department of Civil, Environmental and Architectural Engineering, University of Colorado at **Boulder**, June 28, 2006.
55. *Variational cohesive fracture models and three-dimensional crack tracking*, Dipartimento di Ingegneria Civile, Università di **Roma Tor Vergata**, June 20, 2006.
56. *3D numerical procedures for cohesive crack tracking*, Division of Biomechanics, Royal Institute of Technology, **Stockholm**, January 31, 2006.
57. *A numerical model of the human cornea*, Dipartimento di Ingegneria Meccanica e Strutturale, Università di **Trento**, November 21, 2005.
58. *A model of distributed faulting in confined brittle materials*, Institute of Structural Mechanics, Universität **Stuttgart**, Germany, September 29, 2005.
59. *Cohesive models of fracture and 3D fragmentation procedures*, Technische Universität **Kaiserslautern**, Germany, September 27, 2005.
60. *Cohesive models of fracture and 3D fragmentation procedures*, Intel Corporation, **Chandler**, AZ, July 7, 2005.
61. *A constitutive theory of distributed faulting in brittle materials*, Graduate Aeronautical Laboratories, **Caltech**, Pasadena, CA, April 15, 2005.
62. *Finite element simulations of refractive surgery*, Dipartimento di Ingegneria Civile, Università di **Salerno**, Fisciano, November 17, 2004.
63. *Numerical time stepping algorithms*, Dipartimento di Ingegneria Civile, Università di **Salerno**, Fisciano, November 16, 2004.
64. *Cohesive models of fracture and 3D fragmentation procedures*, Università di Trento, Dipartimento di Ingegneria Meccanica e Strutturale, **Trento**, September 7, 2004.
65. *3D finite element simulation of fracture and fragmentation*, Intel Corporation, **Chandler**, AZ, May 6, 2003.
66. *Numerical simulations of monolithic elastomeric microvalves*, Graduate Aeronautical Laboratories, **Caltech**, Pasadena, CA, February 28, 2003.
67. *Nonsmooth frictional contact algorithms*, Mathematics Institute, Universität **Bonn**, Germany, June 18, 2002.

68. *Nonsmooth frictional contact algorithms*, Mathematics Institute, Universität **Köln**, Germany, June 17, 2002.
69. *Variational formulation of nonsmooth contact algorithms*, CRS4, **Cagliari**, November 29, 2001.
70. *Fragmentation and contact algorithms in practice*, Graduate Aeronautical Laboratories, **Caltech**, Pasadena, CA, April 6, 2001.
71. *3D finite element simulations of fracture and fragmentation*, E.T.S. de Ingenieros de Caminos, Canales y Puertos, Universidad de Castilla–La Mancha, **Ciudad Real**, Spain, September 15, 2000.
72. *3D Finite element simulations of fracture, fragmentation and collision*, Control and Dynamical Systems, **Caltech**, Pasadena, CA, June 5, 2000.
73. *Collision algorithms for elastic and rigid bodies*, Computer Science, **Caltech**, Pasadena, CA, May 30, 2000.
74. *Nonsmooth frictional contact algorithms*, Graduate Aeronautical Laboratories, **Caltech**, Pasadena, CA, May 26, 2000.
75. *A class of cohesive finite element for 3D simulation of fracture propagation*, Dipartimento di Ingegneria Strutturale, Politecnico di **Milano**, October 20, 1998.
76. *Solid modelling aspects of 3D fragmentation*, Graduate Aeronautical Laboratories, **Caltech**, Pasadena, CA, September 15, 1997.
77. *Finite element simulation of 3D crack propagation*, Graduate Aeronautical Laboratories, **Caltech**, Pasadena, CA, December 9, 1996.

6.3 International Conference and Workshop Presentations

(*) denotes an invited talk.

1. (*) *A microstructured brittle damage model for the simulation of laboratory tests*, international ECCOMAS Thematic Conference on Computational Modeling of Complex Materials across the Scales (CMCS), Glasgow, UK, October 1–4, 2019.
2. *A Multiscale Microstructure-informed Model of Distributed Fractures to Simulate Laboratory Tests on Rocks*, XV International Conference on Computational Plasticity. Fundamentals and Applications, COMPLAS 2019, Barcelona, Spain, September 3–5, 2019.
3. *What the cornea shape can tell about collagen microstructure and stress distribution*, International Workshop on The Multiscale Spectrum of Constitutive Modeling in Solid Mechanics, Castro Urdiales, Spain, July 1–5, 2019.
4. *A microstructured brittle damage model applied to laboratory tests on rocks*, ICoNSoM2019, International Conference on Nonlinear Solid Mechanics, Roma, Italy, June 16–19, 2019.
5. *Metaconcrete and its attenuation properties: random or lattice-like pattern of inclusions?*, ICoNSoM2019, International Conference on Nonlinear Solid Mechanics, Roma, Italy, June 16–19, 2019.
6. *Application of a Microstructured Brittle Damage Model to laboratory Tests on Rocks*, VI International Conference on Computational Modeling of Fracture and Failure of Materials and Structures, CFRAC 2019, Braunschweig, Germany, June 12-14, 2019.
7. (*) *A microstructural model of crosslink interaction between collagen fibrils in the human cornea*, RAMSS2019-Recent Advances in Mechanics of Solids and Structures, A symposium to honor Davide Bigoni’s 60 birthday, Trento, June 6–7, 2019.
8. (*) *A microstructural model of crosslink interaction between collagen fibrils in the human cornea*, Fourth Soft Tissue Modelling Workshop, Glasgow, June 5–7, 2019.
9. (*) *Performance of metaconcrete under impact loading*, EuroMech Colloquium 605 “Damage and failure of engineering materials under extreme loading conditions”, Madrid, May 21–24, 2019.
10. (*) *Theoretical and computational modeling of visco-electro-elastic active tissues with distributed fibers*, The 11th International Conference on the Mechanics of Time Dependent Materials, Milano, Italy, September 4-7, 2018.
11. *A numerical algorithm for the solution of the Fluid-Structure Interaction problem in the corneal air puff test*, 13th World Congress on Computational Mechanics & IInd Pan American Congress on Computational Mechanics (WCCM XIII & PANACM II 2018), New York, USA, July 22–27 2018.
12. (*) *The relevance of the collagen architecture on the ability of the cornea to react to non physiological loads*, 7th World Congress of Biomechanics, Dublin, Ireland, July 8-12, 2018.
13. *A 3D Fluid-Structure Interaction algorithm for the corneal air puff test*, European Conference in Computational Mechanics & European Conference in Computational Fluid Dynamics (ECCM & ECFD 2018), Glasgow, UK, June 11–15 2018.
14. (*) *The influence of the collagen architecture on the mechanical response of the human cornea*, International Workshop on Modelling of Nonlinear Continua, Castro Urdiales, Spain, June 26-30, 2017.
15. (*) *A model for poro-mechanical damage material*, V International Conference on Computational Modeling of Fracture and Failure of Materials and Structures, CFRAC 2017, Nantes, France, June 13-15, 2017.

16. (*) *Modeling the air puff test in the human cornea with a meshfree FSI approach*, Maths for the Body, Brescia, Italy, May 31, 2017.
17. (*) *Computational Biomechanics of the Human Cornea*, International Society of Presbyopia, Presbyopia 2016, Copenhagen, Denmark, September 9, 2016.
18. (*) *A model of poro-mechanical damaging material*, International Conference in Theoretical and Applied Mechanics, ICTAM 2016, Montreal, Canada, August 22–27, 2016.
19. *A porous brittle damage material model*, European Congress in Computational methods in Applied Sciences and Engineering, ECCOMAS 2016, Crete Island, Greece, June 5–10, 2016.
20. (*) *Constitutive Modeling of Active Electro-Mechanics with Distributed Fiber for Anisotropic Soft Tissues*, Conference on Emerging Trends in Applied Mathematics and Mechanics, Perpignan, May 30–June 3, 2016.
21. (*) *A variational model of poro-mechanical damaging material*, Workshop on “Variational Models of Fracture”, BIRS Center Banff, Canada, May 8–13, 2016.
22. (*) *Using corneal imaging to determine corneal properties and influence of IOP*, International Congress on Advanced Technologies and Treatments for Glaucoma, Politecnico di Milano, Italy, October 29–31, 2015.
23. (*) *Customized finite element modeling of the human cornea*, XIII International Conference on Computational Plasticity, COMPLAS 2015, Barcelona, Spain, September 1–4, 2015.
24. (*) *Patient specific models of the eye refractive system*, Trends in Non-Linear Analysis 2015, SISSA, Trieste, Italy, July 1–3, 2015.
25. (*) *Brittle damage model of micro-structured multiscale porous materials*, European Solid Mechanics Conference ESMC 2015, Madrid, Spain, July 6–10, 2015.
26. (*) *Brittle fracture effects in a metaconcrete slab under shock loading*, IV International Conference on Computational Modeling of Fracture and Failure of Materials and Structures, CFRAC 2015, Paris, France, June 3–5, 2015.
27. (*) *On the thermo-visco-hyperelasticity of electro-active biological soft tissues*, 11th World Congress on Computational Mechanics (WCCM XI, Barcelona Spain, July 20–25, 2014.
28. (*) *Statistically distributed fiber reinforced material models with fiber recruitment mechanism for the mechanical behavior of eye shells*, 7th World Congress of Biomechanics, Boston MA, USA, July 6–11, 2014.
29. (*) *Thermo-visco-hyperelasticity of electro-active soft tissues*, IUTAM 2104 Symposium on “Mechanics of Soft Active Materials”, Haifa, Israel, May 10–15, 2014.
30. (*) *On the constitutive relationships of active media electro-mechanics*, 3rd International Conference on Material Modelling and 13th European Mechanics of Materials Conference, Warsaw, Poland, September 8–11, 2013.
31. (*) *Numerical simulations of corneal refractive surgery*, EuroMech Colloquium 533 “Biomechanics of the eye”, Genova, July 22–24, 2013.
32. (*) *The Mechanical Behavior of the Human Cornea*, Workshop on “Integrated multidisciplinary approaches in the study and care of the Human Eye”, Milano, June 26–27, 2013.
33. (*) *Dynamic Fragmentation in Ductile Materials via Optimal Transportation Meshfree Method*, IUTAM 2013 Symposium on “Materials and interfaces under high strain rate and large deformation”, Metz, France, June 17–21, 2013.

34. *A coupled electromechanical material model for active tissue*, European Congress in Computational methods in Applied Sciences and Engineering, ECCOMAS 2012, Vienna, Austria, September 10–14, 2012.
35. *Testing and modeling the behavior of porcine corneas*, European Solid Mechanics Conference ESMC 2012, Graz, Austria, July 8–13, 2012.
36. (*) *An Eigenerosion Approach to Brittle Fracture*, IUTAM 2012 Symposium “Fracture Phenomena in Nature and Technology, Brescia, Italy, July 1–5, 2012.
37. (*) *Modeling Fracture within Local Max-Ent Meshfree Approximation Schemes*, XI International Conference on Computational Plasticity, COMPLAS 2011, Barcelona, Spain, September 6–9, 2011.
38. (*) *Electro-Mechanics of Cardiac Excitation*, Second International Conference on Material Modelling - ICMM2, Paris, August 30–September 2, 2011.
39. (*) *Eigendeformation Based Approaches to Griffith Fracture*, II International Conference on Computational Modeling of Fracture and Failure of Materials and Structures, CFRAC 2011, Barcelona, Spain, June 6–9, 2011.
40. (*) *Computational Biomechanics of the Human Cornea*, IX Congresso Internazionale SOI, Società Oftalmologica Italiana, Roma, May 18–21, 2011.
41. (*) *Field-Induced Phase Transitions in Nematic Liquid Crystals: A Numerical Study*, Advances in Geomaterial and Structures, AGS’10, Djerba, Tunisia, May 8–10, 2010.
42. *Failure Modes of Silicon Dies*, X International Conference in Computational Plasticity, COMPLAS 2009, Barcelona, September 2–4, 2009.
43. (*) *Modelling Cracks in Clogged Arteries*, International Symposium on Defect and Material Mechanics, ISDMM09, Trento, July 6–9, 2009.
44. (*) *Cohesive Fracture in Fiber-Reinforced Materials*, EuroMech Colloquium 502 “Reinforced Elastomers: Fracture Mechanics, Statistical Physics and Numerical Simulations”, Dresden, Germany, September 8–10, 2008.
45. (*) *Numerical applications of distributed damage in confined brittle materials*, VIII World Congress in Computational Mechanics, WCCM 8 and Eccomas 2008, Venezia, Italy, June 29–July 4, 2008.
46. (*) *A numerical approach to field-induced phase transitions in nematic liquid crystals*, Fourth International Conference in Advanced Computational Methods in Engineering, Acomen 2008, Liege, Belgium, May 26–28, 2008.
47. *A numerical model of light adjustable lens*, IX International Conference in Computational Plasticity, COMPLAS 2007, Barcelona, September 5–7, 2007.
48. (*) *Numerical applications of distributed damage in confined brittle materials*, IX International Conference in Computational Plasticity, COMPLAS 2007, Barcelona, September 5–7, 2007.
49. (*) *Numerical modeling of fracture and fatigue damage in human arteries*, IX US National Congress on Computational Mechanics, USNCCM9, San Francisco, July 23–26 2007.
50. (*) *Modeling Small-Scale Field Blast Tests on a Layered Rock-Soil Site*, IX US National Congress on Computational Mechanics, USNCCM9, San Francisco, July 23–26 2007.
51. *Numerical simulations of arterial plaque ruptures*, VI International Congress on Industrial and Applied Mathematics ICIAM’07, Zurich, Switzerland, 16–20 July 2007.
52. (*) *A model of distributed faulting in confined brittle materials*, VI International Congress on Industrial and Applied Mathematics, ICIAM’07, Zurich, Switzerland, 16–20 July 2007.

53. (*) *A numerical model of atherosclerotic lesions in human arteries*, Intelligent Processing and Manufacturing of Materials, IPMM 2007, Salerno, Italy, June 25–29, 2007.
54. (*) *Explosively-driven damage to rock mass and environmental consequences*, Eccomas International Conference on Computational Modeling of Fracture and Failure of Materials and Structures, CFRAC, Nantes, France, June 11–13, 2007.
55. (*) *Finite element analysis of cohesive and Griffith fracture*, Eccomas International Conference on Computational Modeling of Fracture and Failure of Materials and Structures, CFRAC, Nantes, France, June 11–13, 2007.
56. (*) *Variational cohesive fracture models and three-dimensional crack tracking*, International Symposium on Defect and Material Mechanics, ISDMM 2007, Aussois, France, March 25–29, 2007.
57. (*) *Time-discretized variational formulations of nonsmooth contact*, IUTAM Symposium on Computational Contact Mechanics, Hannover, Germany, November 5–8, 2006.
58. (*) *Blast induced fragmentation and wave propagation in rocks*, ALERT Workshop in Geomaterials, Aussois, France, October 9–13, 2006.
59. (*) *Variational cohesive fracture models and three-dimensional crack tracking*, IUTAM Symposium on Evolving Discontinuities, Lyon, France, September 4–7, 2006.
60. *Variational cohesive fracture models and three-dimensional crack tracking*, VII World Congress in Computational Mechanics, WCCM 7, Los Angeles, CA, July 16–21, 2006.
61. *Simulations of refractive surgery procedures on the human cornea*, VII World Congress in Computational Mechanics, WCCM 7, Los Angeles, CA, July 16–21, 2006.
62. (*) *Modelling new design of fluidic microvalves*, Thermal, Mechanical and Multiphysics Simulation and Experiments in Micro-Electronics and Micro-Systems, Eurosime2006, Como, April 24–26, 2006.
63. (*) *Variational cohesive fracture models and three-dimensional crack tracking*, International Conference on Adaptive Modelling and Simulation, ADMOS 2005, Barcelona, September 8–10, 2005.
64. *Modelling a new design of fluidic microvalves*, VIII International Conference in Computational Plasticity, COMPLAS 2005, Barcelona, September 4–7, 2005.
65. *A model of distributed faulting in confined brittle materials*, VIII US National Congress in Computational Mechanics, USNCCM8, Austin, Texas, July 24–27, 2005.
66. *A micromechanical material model for degenerated human cornea*, MRS Spring Meeting 2005, San Francisco CA, March 27–April 1, 2005.
67. (*) *Variational cohesive fracture models and three-dimensional crack tracking*, XI International Conference on Fracture, ICF–11, Torino, March 20–25, 2005.
68. (*) *Nonsmooth frictional contact algorithms*, First Workshop on Contact Mechanics and Free Discontinuity Problems, Fisciano SA, July 8–9, 2004.
69. (*) *Variational cohesive fracture models and three-dimensional crack tracking*, First Workshop on Contact Mechanics and Free Discontinuity Problems, Fisciano SA, July 8–9, 2004.
70. *A variational Cam-clay plasticity model*, VII US National Congress in Computational Mechanics, USCCM7, Albuquerque, NM, July 28–30, 2003.
71. *A constitutive model of distributed faulting in brittle materials*, VII International Conference in Computational Plasticity, Barcelona, Spain, COMPLAS 2003, April 7–10, 2003.

72. (*) *Blast wave damage to a concrete tunnel crossing a rock embankment*, EnginSoft Conference and User Meeting, Stezzano, October 3–4, 2002.
73. *A large deformation Cam–clay theory of plasticity*, V World Congress in Computational Mechanics, WCCM V, Vienna, July 7–12, 2002.
74. *3D Modelling intersonic crack growth in unidirectional composite plates*, II International Conference on Fracture and Damage Mechanics, FDM II, Milano, Italy, September 18–20, 2001.
75. *3D Cohesive investigation on branching for brittle materials*, II International Conference on Fracture and Damage Mechanics, FDM II, Milano, Italy, September 18–20, 2001.
76. *Nonsmooth frictional contact algorithms*, European Congress on Computational Methods in Applied Science and Engineering, ECCOMAS 2000, Barcelona, Spain, September 11–14, 2000.
77. *3D cohesive modelling of dynamic mixed–mode fracture*, European Congress on Computational Methods in Applied Science and Engineering, ECCOMAS 2000, Barcelona, Spain, September 11–14, 2000.
78. (*) *Finite element analysis of fracture and fragmentation*, V US National Congress in Computational Mechanics, USNCCM V, Boulder, CO, August 6–8 1999.
79. (*) *Nonsmooth contact and fragmentation*, V SIAM Conference on Application of Dynamical Systems, Snowbird UT, May 23–27 1999.
80. *Three–dimensional analysis and experiments of dynamic fracture of metals*, XIII US National Congress of Applied Mechanics, USNCAM XIII, Gainesville FL, June 21–26 1998.
81. *A class of cohesive elements for the simulation of three–dimensional crack propagation*, ASME IMECE 1997, Dallas TX, November 16–21 1997.

6.4 Italian Conference and Workshop Presentations

(*) denotes an invited talk.

1. (*) *A model of crosslink interaction between collagen fibrils in the human cornea*, XI international Ophthalmic and Ophthalmic-plastic Training Courses, Aci Castello, May 29–31, 2019.
2. (*) *The Meaning of the Demarcation Line after CXL*, XI international Ophthalmic and Ophthalmic-plastic Training Courses, Aci Castello, May 29–31, 2019.
3. (*) *Biomechanics of the Cornea*, X international Ophthalmic and Ophthalmic-plastic Training Courses, Chia Laguna, Pula, October 3–6, 2018.
4. (*) *Electro-mechanical modeling of cardiac tissue considering time-dependent spatially distributed fibers*, 2016 Congress of the Italian Society of Industrial and Applied Mathematics (SIMAI), Milano, September 13–16, 2016.
5. (*) *Metaconcrete: engineered aggregates for enhanced dynamic performance*, XXII AIMETA Italian National Congress, Genova, September 14–17, 2015.
6. (*) *Theoretical and numerical analysis of the corneal air puff tests*, XXII AIMETA Italian National Congress, Genova, September 14–17, 2015.
7. (*) *On three- and two-dimensional fiber distributed models of biological tissues*, XXI AIMETA Italian National Congress, Torino, September 17–20, 2013.
8. *Numerical simulations of corneal refractive surgery*, Workshop PRIN “Mathematics and Mechanics of Biological Assemblies and Soft Tissues”, Roma, February 14–15, 2013.

9. *A misunderstood dynamical test on the human cornea*, Workshop PRIN “Mathematics and Mechanics of Biological Assemblies and Soft Tissues”, Milano, February 20–22, 2012.
10. (*) *A numerical model of PRK*, 91 Congresso Nazionale SOI, Società Oftalmologica Italiana Milano, November 23–26, 2011.
11. *Fiber distributed hyperelastic modeling of biological tissues*, V Reunion of AIMETA Materials Group 2011, Udine, February 23–26, 2011.
12. *A Numerical Investigation on Field Induced Distortions in Nematic Liquid Crystals*, GIMC 2010, XVIII Italian Conference of Computational Mechanics, Siracusa, September 22–24, 2010.
13. (*) *The use of cohesive theories of fracture for 3D numerical simulations*, Workshop “Problematiche di Frattura nei Materiali per l’Ingegneria. Aspetti teorici e problemi applicativi”, Gruppo Italiano di Frattura, Forni di Sopra (UD), January 7–9, 2010.
14. (*) *A cohesive model of dissection in arterial layers*, XIX AIMETA Italian National Congress, Ancona, September 14–17, 2009.
15. (*) *Variational cohesive fracture models and 3D crack tracking*, XIX AIMETA Italian National Congress, Ancona, September 14–17, 2009.
16. (*) *A recursive-faulting model of distributed damage in confined brittle materials*, VIII SIMAI Italian National Congress, Baia Samuele, Ragusa, May 22–26, 2006.
17. (*) *Variational cohesive fracture models and three-dimensional crack tracking*, VIII SIMAI Italian National Congress, Baia Samuele, Ragusa, May 22–26, 2006.
18. (*) *A cohesive approach to thin shell fragmentation*, VIII SIMAI Italian National Congress, Baia Samuele, Ragusa, May 22–26, 2006.
19. (*) *A constitutive theory of distributed faulting in brittle materials*, VII SIMAI Italian National Congress, Venezia, September 20–24, 2004.
20. *A cohesive approach to thin-shell fracture and fragmentation*, X GIMC Conference, Genova, June 21–23, 2004.
21. *Time-dependent fracture processes in dynamic delamination of composites*, XVI AIMETA Italian National Congress, Ferrara, September 9–12, 2003.
22. (*) *Simulation of firearm injury to the human cranium*, VI SIMAI Italian National Congress, Chia Laguna, May 27–31, 2002.
23. (*) *Modeling dynamic fracture in transversely isotropic composites: a cohesive approach*, XV AIMETA Italian National Congress, Taormina, September 26–28, 2001.
24. (*) *A new class of cohesive elements for thin-shells*, XIII GIMC, Italian Conference, Brescia, November 13–15, 2000.
25. *Brazilian tests on concrete: 3D finite element simulation*, XIV AIMETA, Italian National Congress, Como, October 6–9, 1999.
26. *A numerical application of quadratic extremum principles in dynamics of large deformation rigid-plastic structures*, XIV AIMETA Italian National Congress, Como, October 6–9, 1999.
27. *Some extremum properties of finite-step solutions in elasto-plasticity*, XII AIMETA, Italian National Congress, Napoli, October 3–6 1995.