

Publications by B.A. Schrefler

Refereed Journal Publications

1. "Zur Berechnung aussteifender Systeme allgemeiner Art von Hochhäusern", Beton-und Stahlbetonbau, n. 9 (1971), 213-219.
2. "Vierseitig gelagerte Rechteckplatten mit veränderlicher Dicke unter Gleichlast und hydrostatischer Belastung", Beton und Stahlbetonbau n. 9 (1975), 223-229.
3. "A case study of the surface subsidence of the Polesine area" (with R.W. Lewis, and V.A. Norris), I. J. Num. Anal. Meth. Geom., Vol. 1 (1977), 377-386.
4. "A stability investigation of cable suspended pipelines" (with L. Contri), I.J.Num.Methods in Engineering, Vol. 11 (1977), 521-531.
5. "Geometrically non-linear analysis. Correlation between two finite element notations" (with R. Wood), I.J.Num.Methods in Engineering, Vol. 12 (1978), 635-642.
6. "A fully coupled consolidation model of the subsidence of Venice" (with R.W. Lewis), Water Res. Res., Vol. 14, n. 2 (1978), 223-230.
7. "Besondere Probleme bei der Bemessung von mehrfeldrigen Hängebrücken zur Überführung von Rohrleitungen", Der Stahlbau, n. 1 (1978), 22-29.
8. "Vollkommen eingespannte Rechteckplatten mit linear veränderlicher Dicke unter Gleichlast und hydrostatischer Belastung" (with E. Hinton), Bauingenieur, 53 (1978), 237-241.
9. "Subsidence above volumetric and waterdrive gas reservoirs" (with R. W. Lewis, and C. E. Majorana), I. J. of Numerical Methods in Fluids, Vol. 1, n. 2, (1981), 101-115.
10. "A 3D geometrically non-linear analysis of pipelaying in an ocean environment" (with S. Odorizzi), Journal of Pressure Vessel Technology, Vol. 103, (1981), 201-205.
11. "A total lagrangian geometrically non-linear analysis of combined beam and cable structures" (with S. Odorizzi, and R. D. Wood), Computer and Structures, 17, 1, (1983), 115-127.
12. "Partitioned solution procedure for geothermal reservoir analysis", Communications in Appl. Num. Methods, 1, (1985), 53-56.
13. "Electromagnetic and mechanical design of RFX magnetizing winding" (with M. Guarnieri, C. Modena, and A. Stella), Fusion Technology, 8, 1 (1985), 856-861.
14. "A coupled finite element model for the consolidation of non-isothermal elastoplastic porous media (with R. W. Lewis, and C.E. Majorana), J. Transport in porous media, 1, (1986), 155-178.
15. "Mapped infinite elements in soil consolidation" (with L. Simoni), I.J.Nume.Methods in Engineering, 24 (1987), 513-527.
16. "Nonisothermal consolidation of unbounded porous media using mapped infinite elements" (with L. Simoni), Communications in Appl. Num. Methods, 3 (1987), 445-452.
17. "A geometrically non linear finite element analysis of wrinkled membrane surfaces by a no compression material model" (with P.Contri), Communications in Appl. Num. Methods, 4 (1988), 5-15.
18. "The effects of strand transposition on the stiffness matrix of superconductor core elements" (with R. Gori), I.E.E.E. Transactions on Magnets, 24 (1988), No 2, 1037-1040.
19. "Thermal analysis of a graphite first wall for fusion experiment RFX" (with F. Brunello, F. Gnesotto, and C. Majorana), Communications in Appl. Num. Methods, 4 (1988), 647-656.
20. "Numerical and experimental analysis of the residual stresses in welding processes" (with C.E. Majorana, and G. Navarro), IJ Comp. Appl. in Technology, (1988), 1/2, 96-104.
21. "Aids to research and engineering techniques: modelling, computer science, data banks and expert systems" (with M. Fremont), Materials and Structures, 21, (1988), 139-142.

22. "A fast buckling analysis of statically indeterminate variable section struts" (with R. Gori), *Microcomputers in Civil Engineering*, 4,3 (1988), 275-287.
23. "Finite element modelling of two phase heat and fluid flow in deforming porous media" (with R.W. Lewis, and P.J.Roberts), *Transport in Porous Media*, 4 (1989), 319-334.
24. "Numerical modelling of infinite domains in coupled field problems" (with L. Simoni), *Meccanica*, 24 (1989), 98-106.
25. "A general model for the mechanics of saturated-unsaturated porous materials" (with L. Simoni, and C.E. Majorana), *Materials and Structures*, 131, 22 (1989), 323-334.
26. "A modified beam stiffness matrix for superconductor elements" (with R. Gori), *Fusion Engineering and Design*, 11 (1989), 279-292.
27. "F. E. solution of a vertically averaged model for regional land subsidence" (with L. Simoni), *I.J.Num. Methods in Engineering*, 27 (1989), 215-230.
28. "A partially bonded beam element model for superconducting magnet pancakes" (with R. Gori), *I.J.Num. Methods in Engineering*, 27 (1989), 299-321.
29. "Static and dynamic behaviour of geomaterials- A rational approach to quantitative solutions Part II- Semi-saturated problems" (with O.C. Zienkiewicz, Y.M. Xie, A. Ledesma, and N. Bicanic), *Proc. R. Society, London*, A. 429, 311-321 (1990).
30. "F.E.M. in steady MHD duct flow problems" (with R. Scanduzzi), *I.J.Num. Methods in Engineering*, 30 (1990), 647-659.
31. "A composite beam model for the mechanical analysis of superconducting magnet pancakes" (with R. Gori), *Fusion Engineering and Design*, 13 (1990), 103-123.
32. "Recent advances in numerical modelling of geomaterials", *Meccanica*, Vol. 26, 2/3 (1991), 93-99.
33. "An algorithm for generation of shape functions in Serendipity elements" (with G. Zavarise, and R. Vitaliani), *Engineering Computations*, 8, 19-31 (1991).
34. "A staggered F.E. solution for water and gas flow in deforming porous media" (with L. Simoni), *Commun. Applied Num. Methods*, 7, 213-223, (1991).
35. "Coupling versus uncoupling in soil consolidation" (with R.W. Lewis, and L. Simoni), *Int. J. Num. Anal. Methods in Geomech.* 15, 533-548 (1991).
36. "A numerical model for thermomechanical contact based on microscopic interface laws" (with G. Zavarise, P. Wriggers, and E. Stein), *Mechanics Research Communications*, 19 (3), 173-182 (1992).
37. "Real contact mechanisms and finite element formulation- a thermomechanical coupled approach" (with G. Zavarise, P. Wriggers, and E. Stein), *I.J.Num. Methods in Engineering*, 35, 767-785 (1992).
38. "Authors reply- Coupling versus uncoupling in soil consolidation" (with R.W. Lewis, and L. Simoni), *Int. J. Numer. Analytic. Meth. Geomech.*, 16, 835-837, (1992).
39. "Performance of a Hermitian element for a beam with rotational constraints" (with K. Wisniewski, and E. Turska), *Commun. Numer. Methods Eng.*, 9, 27-34 (1993).
40. "A fully coupled model for water flow and airflow in deformable porous media" (with X.Y. Zhan), *Water Resources Research*, 29, 1, 155-167 (1993).
41. "On convergence conditions of partitioned solution procedures for consolidations problems" (with E. Turska), *Computer Methods in Applied Mech. and Engng.* 106 (1993), 51-63.
42. "A fast error check for structural analysis using the virtual force principle" (with G. Zavarise, R. Gori, and E. Turska), *Int. J. Num. Methods Eng.*, 36, 3223-3237 (1993).
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164. "Multi-physics problems in thermo-hydro-mechanical analysis of partially saturated geomaterials" (with F. Pesavento, L. Sanavia, and D. Gawin), keynote lecture, Proc. NATO Advanced Workshop Multi-physics and Multi-scale Computer Models in Non-linear Analysis and Optimal Design of Engineering Structures Under Extreme Conditions, A. Ibrahimbegovic, B. Brank (eds.), pp.351-382, June 13-17, 2004.
165. "Some aspects on basic theories of strain localization analysis of multiphase porous media regularized constitutive model" (with H.W. Zhang, J.M. Qin, and L.Sanavia), invited lecture, Proc. WCCM VI, Sept. 5-10, 2004, Beijing, on CD.
166. "Mechanical and durability model of high performance concrete as multiphase porous material" (with F. Pesavento, D. Gawin, and C.E. Majorana), Proc. of WCCM VI in conjunction with Apcom '04, pp.10, September 5-10, 2004, Beijing, China.
167. "Effect of LITS on hygro-thermo-chemo-mechanical behaviour of HPC concrete at high temperature" (with F. Pesavento, and D. Gawin), Proc. of The 17th Engineering Mechanics Conference of the American Society of Civil Engineers, pp.10, June 13-16, 2004 – University of Delaware, Newark, DE – U.S.A., 2004.
168. "Mechanical and durability model of high performance concrete subjected to high temperature" (with C.E. Majorana, F. Pesavento, and D. Gawin) keynote lecture, Proc. of 2nd International Conference on "Protection of Structures against Hazards", 2-3 December 2004, Singapore.
169. "FE modelling of concrete subjected to high temperature" (with F. Pesavento, D. Gawin, and C.E. Majorana), keynote lecture, Proc. of Workshop of FIB Task Group 4.3 "Fire Design of Concrete Structures", 2-4 December 2004, Milano, Italy.
170. "Four scale bridging for the nonlinear analysis of composites including continuum to discrete linkage" (with D. Boso, and M. Lefik), plenary lecture from Computational Plasticity/COMPLAS VIII, D.R.J. Owen, E. Onate, and B. Suarez, eds., CIMNE, Barcelona 2005, 51-54.
171. B.A. Schrefler, "Multi-physics approach to model concrete at high temperature" (with F. Pesavento, D. Gawin, and C.E. Majorana), Proc. of 8th Int. Conf. on Computational Plasticity "COMPLAS VIII", D.R.J. Owen, E. Onate and B. Suarez (eds), ISBN: 84-95999-80-3, pp. 189-192, CIMNE, Barcelona, 2005.
172. "Mechanics of multiphase porous media at high temperature: analysis of thermal spalling of concrete" (with D. Gawin, and F. Pesavento), Proc. 6th Int. Congress on Thermal Stresses: 'Thermal Stresses'2005', Vol.1, pp. 309-312, May 26-29, Vienna, Austria, 2005.

173. "Effect of LITS on assessment of the thermal spalling risk for HPC structures at high temperature" (with D. Gawin, and F. Pesavento), Proc. 5th Int. Conf. Analytical Models and New Concepts in Concrete and Masonry Structures, Gliwice - Ustroń (Poland), June 12 -14, 2005.
174. "Multi-physics problems in thermo-hydro-mechanical analysis of partially saturated geomaterials" (with F. Pesavento, L. Sanavia, and D. Gawin), keynote lecture, Proc. NATO Advanced Workshop Multi-physics and Multi-scale Computer Models in Non-linear Analysis and Optimal Design of Engineering Structures under Extreme Conditions, (A. Ibrahimbegovic, B. Brank eds.), pp.351-382, June 13-17, 2004.
175. "A Computational Formulation for Coupled Response of Trabecular Meshwork in Human Eye" (with E.A. Meroi, and M.T. Dorigo), Computational Methods for Coupled Problems in Science and Engineering (eds. M. Papadrakakis, E. Onate, B. Schrefler), p47, CIMNE, Barcelona, 2005, 11pp.
176. "Mechanics of multiphase porous media at high temperature: analysis of thermal spalling of concrete" (with D. Gawin, and F. Pesavento), Proc. 6th Int. Congress on Thermal Stresses: 'Thermal Stresses'2005', Vol.1, pp. 309-312, May 26-29, Vienna, Austria, 2005.
177. B.A. Schrefler, D. Gawin, F. Pesavento, "Modelling of concrete as a multiphase viscous porous material" (with D. Gawin, and F. Pesavento), Proc. of 7th Int. conf. on creep, shrinkage and durability of concrete and concrete structures 'Concreep 7', (G. Pijaudier-Cabot, B. Gerard and P. Acker, eds), ISBN: 1 905209 50 9, pp. 77-82, 2005.
178. "A rational approach for preventing and repairing fire damage in concrete structures" (with C.E. Majorana, D. Gawin, G.M. Giannuzzi, F. Pesavento), keynote lecture, in Concrete Solutions, M.G. Grantham, R. Jaubertie and C. Lanos (eds.), BRE Press, Garston, Watford, ISBN 1-86081-915-X, (Proc. 2nd Int. Conf. Concrete Solutions, St. Malo, France, 27-29 June, 2006), pp. 413-425, 2006.
179. "A multiphase model for concrete: numerical solutions and applications" (with F. Pesavento, D. Gawin), invited lecture, 2nd WSEAS International Conference on Applied and Theoretical Mechanics (MECHANICS '06), Venice, Italy, November 20-22, 2006, Ass. Eds: D. Mijuca, S. Maksimovic), ISSN: 1790-5095, ISSN: 1790-5117, ISBN: 960-8457-56-4, 2006.
180. F. Pesavento, B.A. Schrefler, D. Gawin, "Modelling of coupled multifield problems in concrete by means of porous media mechanics" (with F. Pesavento, and D. Gawin), Fracture Mechanics of Concrete and Concrete Structures, Vol. 1: New Trends in Fracture Mechanics of Concrete (A. Carpinteri, P. Gambarova, G. Ferro, G. Plizzari, eds.), pp. 485-493, ISBN 978-0-415-44065-3, Taylor & Francis, London, 2007 (Proc. 6th Int. Conf. on "Fracture Mechanics of Concrete and Concrete Structures" - 'FRAMCOS-6', Catania, Italy, June 17-22, 2007).
181. "A General Framework for Modelling Long Term Behaviour of Earth and Concrete Dams" (with F. Pesavento, S. Secchi, L. Simoni), Keynote Lecture, LTBD09, 2nd International Conference on Long Term Behaviour of Dams, Graz, Austria, October 12-13, 2009.
182. "Steps towards real time solution of fire in tunnels" (with F. Pesavento, F. Chinesta, and A. Leygue), plenary lecture, Proc. ThermaComp 2011, (X K Li, N Massarotti, P Nithiarasu, eds), Dalian, China, September 5-7, 2011.
183. "Identification of steady state flow in porous media using Artificial Neural Networks" (with M. Lefik and D.P. Boso), paper ESDA2012-82948, ESDA2012, ASME 2012 111th Biennial Conference of Engineering Systems Design and Analysis, Nantes, July 2-4, 2012.
184. "Modelling chemical processes in cement based materials by means of multiphase porous media mechanics" (with F. Pesavento, D. Gawin, M. Koniorczyk), paper ESDA2012-82932, ESDA2012, ASME 2012 111th Biennial Conference of Engineering Systems Design and Analysis, Nantes, July 2-4, 2012.
185. "2D and 3D Numerical Analysis of Fluid Pressure Induced Fracture" (with S. Secchi), Poromechanics V: pp. 2093-2102 ASCE, 2013, doi: 10.1061/9780784412992.247
186. "The three-fluids model for concrete and beyond", Proceedings CONCREEP 10, Mechanics and Physics of Creep, Shrinkage, and Durability of Concrete and Concrete Structures, 2015, 68-77, September 21-13, Vienna, Austria

Oral presentations (from 2004)

1. "To save or destroy Venice?" (with R. Bertani, A. Menin, F. Pesavento, G. Salemi, V. Salomoni), Invited lecture, Seminar FE im Schnee, January 14-18, 2004.
2. "A multiphase model for concrete with application to high temperature and young concrete" (with D. Gawin, and F. Pesavento), invited lecture, 7th National Congress on Mechanics, Chania, Crete, Greece, June 24-26, 2004.
3. "Multiphase models in dam engineering" Problemi strutturali nell'ingegneria delle dighe, Rome, Accademia dei Lincei, February 26-27, 2004.
4. "Cohesive fracture and multifield problems", seminar, CNAM, Paris, Mars 15, 2004.
5. "Concrete at high temperatures" MACSI-net final meeting, Brussels, DG12, May 18, 2004.
6. "Determination of soil constitutive laws through particle mechanics approach" (with A. Nardin), WCCM VI in conjunction with APCOM 04, Beijing, September 5-10, 2004.
7. "A Multiscale Model for Superconducting Strands and Triplets" (with D.P. Boso, and M. Lefik), Seminar, MIUR Centre of Excellence: Science and Applications of Advanced Computing Paradigms Workshop, Padua, October 28-29, 2004.
8. "Training of researchers" KMM-Noe Kick off meeting, Warszawa, November 6, 2004.
9. "Cracking in cohesive materials: a multifield approach" (with S. Secchi, and L. Simoni), Structural Safety Assessment of Dams, NW-IALAD workshop, CISM, Udine, December 14-17, 2004.
10. "Modelling of aging and deterioration phenomena" (with D. Gawin, and F. Pesavento), Structural Safety Assessment of Dams, NW-IALAD workshop, CISM, Udine, December 14-17, 2004.
11. "Multiscale analysis of superconducting coils" (with D.P. Boso, and M. Lefik), 1st KMM NoE Information Workshop, Seeheim, Germany, January 23-25, 2005.
12. "A multifield approach for cracking in plane concrete" (with S. Secchi, and L. Simoni), invited lecture, EUROMECH Colloquium 460 Numerical Modelling of Concrete Cracking, February 21-23, 2005.
13. "Modelling of concrete at high temperatures with application to fire in tunnels" (with A. Bacchetto, D. Gawin, C.E. Majorana, and F. Pesavento), seminar, TNO, Delft, April 18, 2005.
14. "Multiphysics coupling in tunnel fire modelling" (with A. Bacchetto, D. Gawin, C.E. Majorana, F. Pesavento, R. Codina, and J. Principe), seminar, LMT, ENS Cachan, May 12, 2005.
15. "Multiphysics coupling: modelling of fires in tunnels", seminar, Université Marne la Vallée, May 16, 2005.
16. "Coupling strategy between a multiphase model for concrete and a stabilized CFD code to simulate fire effects in tunnels" (with A. Bacchetto, R. Codina, and J. Principe), Coupled Problems 2005, May 25-27, 2005.
17. "Multiscale Modelling for Composites Including Continuum to Discrete Linkage" (with D.P. Boso, and M. Lefik), keynote lecture, Euromech Colloquium 468: Multi-Scale Modelling in the Mechanics of Solids, St. Petersburg (Repino), June 29-July 1, 2005.
18. "Three-Scale bridging for the non linear analysis of composites" (with D.P. Boso, and M. Lefik), plenary lecture, Congress on Numerical Methods in Engineering, Granada, July 4-7, 2005.
19. "Multiscale methods for the thermomechanical analysis of composites" (with D.P. Boso, and M. Lefik), seminar, University of Wales, Cardiff, July 21, 2005.
20. "Superconducting intermetallics: properties and applications" (with D. P. Boso), KMM NoE - First Integration Summer School, Udine, September 12-14, 2005.
21. "Hydraulic fracturing in multiphase geomaterials" Workshop on Modelling Coupled Processes, 19-20 September, Utrecht, the Netherlands.
22. "Hydraulic fracturing in saturated geomaterials" (with S. Secchi, and L. Simoni), Alert School, Aussois, October 10-17, 2005.
23. "Finite element analysis of strain localization in multiphase materials" (with L. Sanavia), Alert-RJCGI-DIGA Graduate School, Aussois, October 13-16, 2005.
24. "New data about surface subsidence above gas reservoirs and CO₂ injection", Alert School, Aussois, October 10-17, 2005.
25. "Simulation von Tunnelbränden", invited lecture, VIATEC, Bolzano, February 8, 2006.

26. "Simulazione di incendi in galleria", invited lecture, Istituto Internazionale di Ricerca, Rome, March 8, 2006.
27. "Concrete at high temperatures", seminar, CEA, Saclay, France. March 29, 2006.
28. "Material modelling by means of molecular dynamics" (with D.P. Boso, C. Gambato, L. Colombo), invited lecture, Lausanne Technet Alliance Spring Forum, Lausanne, April 7-8, 2006.
29. "Four scale bridging in the simulation of superconducting coils", seminar, Université Marne la Vallée, April 27, 2006.
30. "Thermo-Mechanics of Superconducting Coils for Fusion Reactors" (with D.P. Boso, and M. Lefik), invited lecture, Challenges in Computational Mechanics, Cachan, May 10-12, 2006.
31. "Large scale computing in civil and materials engineering", invited lecture, SEDS06, Bertinoro, Italy, May 15, 2006.
32. "Towards prediction of thermal spalling risk by means of porous media mechanics" (with F. Pesavento, D. Gawin), 3rd Conference on Computational Solid and Structural Mechanics ECCM2006, Lisbon 5-8 June, 2006.
33. "Hierarchical Homogenization Including Artificial Neural Networks for the Non Linear Thermo-Mechanical Analysis of Superconducting Coils" with (D.P. Boso, and M. Lefik), plenary lecture, Seventh World Congress on Computational Mechanics (WCCM VII), Los Angeles, California, July 16 - 22, 2006.
34. "Modelling creep and shrinkage of concrete by means of porous media mechanics" (with F. Pesavento, and D. Gawin), 6th European Solid Mechanics Conference ESMC2006, Budapest, Hungary, 28 Aug - 1 Sep 2006.
35. "Problemi pluridisciplinari nell' ingegneria", opening lecture, 2nd annual meeting of the Italian Academy of Sciences (detta dei XL), Lecce, October 3, 2006.
36. "New data about surface subsidence in Ravenna", invited lecture, Conference on Problems of Geo-Engineering, Piacenza, October 7, 2006.
37. "Gekoppelte Mehrfeldprobleme und ihre numerische Lösung", lectio doctoralis, Leibnitz University, Hanover, November 30, 2006.
38. "Multiscale analysis of ITER superconducting coils and tunnel behaviour during fires: two computing intensive multidisciplinary problems" (with D.P. Boso, F. Pesavento, M. Lefik, and R. Codina), invited lecture, 20th ORAP Forum High Performance Computing, Paris, December 13, 2006.
39. "ITER superconducting cable: from filament strain after cool-down to filament strain due to energisation" (with D.P. Boso, and M. Lefik), invited lecture, ITER Nb3Sn Conductor Modeling Workshop, Aix en Provence, January 15-17, 2007.
40. "Fluid pressure induced fracture", invited lecture, Hydrosim Reserch Committee, Fukuoka, Japan, January 31, 2007.
41. "Hydraulic fracturing", seminar, the University of Nagoya, February 2nd, 2007.
42. "Superconducting cable modelling" (with D.P. Boso), Cadarache, ITER meeting, February 22, 2007.
43. "Multidisciplinary problems in engineering and their solution", seminar, Doctoral School, Politecnico di Milano, March 15, 2007.
44. "Hydraulic fracturing", seminari leccesi di meccanica strutturale, University of Lecce, March 16, 2007.
45. "Modelling of fire in tunnel", seminar, ONERA, Paris, April, 18, 2007.
46. "A time-discontinuous Galerkin Formulation for the mechanical behaviour of saturated porous media" (with S. Secchi, and L. Simoni), Int. ECCOMAS Conf. on Coupled Problems, Santa Eulalia, Ibiza, Spain, 21-23 May 2007.
47. "Computational problems in fusion technology" (with D.P. Boso, and M. Lefik), plenary lecture, CMNE / CILAMCE 2007, Congress on Numerical Methods in Engineering, Porto, June 13-15, 2007.
48. "Computational fusion technology: the superconducting coil analysis" (with D.P. Boso, and M. Lefik), plenary lecture, CMM-2007 – Computer Methods in Mechanics, Łódź–Spała, Poland, June 19–22, 2007.
49. "Multidisciplinary problems in civil, environmental and materials engineering", lectio professoralis, Dalian University of Technology, August 15, 2007.

50. "A multidisciplinary approach for the numerical simulation of fire in tunnels" (with F. Pesavento, R. Codina, J. Principe), invited lecture, in Proc. of EUROTUN 2007 "Computational Methods in Tunnelling", Vienna, Austria, August 27-29, 2007.
51. "Use of intermetallics for superconducting coils" (with D.P. Boso, and M. Lefik), KMM NoE - 3rd Summer School, Udine, September 17-19, 2007.
52. "Multiscale thermo-electro-mechanical analysis of superconducting coils for ITER" (with D.P. Boso, and M. Lefik), keynote lecture, Tenth EM Symposium, Lunteren, October 11-12, 2007.
53. "Multidisciplinary problems in computational fusion technology" (with D.P. Boso, and M. Lefik), plenary lecture, COMPLAS 2007, IX International Conference on Computational Plasticity, Barcelona, September 5-7, 2007.
54. "Interdisciplinary problems in engineering", seminar, Chuo University, Tokyo, November 29, 2007.
55. "Stress measures in partially saturated porous media mechanics" seminar (with W. Gray, and F. Pesavento), Chuo University, Tokyo, November 29, 2007.
56. "Integrated model for fire in tunnels" seminar, Chuo University, Tokyo, November 30, 2007.
57. "Thermo-electro-mechanically coupled problems for superconducting coils" (with, D.P. Boso, and M. Lefik), plenary lecture, APCOM'07 in conjunction with EPMESC XI, Kyoto, December 3-6, 2007.
58. "Modeling of cementitious materials by means of a multiphysics approach" (with D. Gawin, and F. Pesavento), ECCOMAS Multidisciplinary Jubilee Symposium, EMJS 2008, Vienna, (Austria), February 18-20, 2008.
59. "Stress measures in partially saturated porous media mechanics" (with F. Pesavento and W.G. Gray), invited lecture, ICTAM 2008, XXII International Congress of Theoretical and Applied Mechanics, Adelaide, Australia, 24-30 August 2008.
60. "Multiphase model for concrete", seminar, Laboratoire Central des Ponts et Chaussées, Paris, Mars 3rd. 2008.
61. "Multiphase model for concrete and industrial applications", opening lecture of the doctoral school Bewertung gekoppelter numerischer Partialmodelle im Konstruktiven Ingenieurbau, Bauhausuniversität Weimar, June 6, 2008.
62. "Stress measures in partially saturated porous media mechanics and applications to concrete modelling", seminar, University of New South Wales, Sydney, September 1st, 2008.
63. "Stress measures in partially saturated soil mechanics", ALERT workshop, Aussois, October 6, 2008.
64. "Coupled problems in environmental engineering and in nuclear fusion technology", invited lecture, EC-ECCOMAS Delegation meeting, DG-12, Bruxelles, December 18, 2008.
65. "Modeling of cementitious materials by means of a multiphysics approach" (with F. Pesavento, and D. Gawin), Keynote Lecture, AFRICOMP'09, 1st African Conference of Computational Mechanics, Sun City, SouthAfrica, January 7-11, 2009.
66. "Integrated simulation of tunnel fires", Seminar, BG Engineering, Lausanne, February 9, 2009.
67. "Simulation of fire resistance and durability of concrete" (with F. Pesavento, and D. Gawin), invited lecture, SEDUREC2009, Safety and Durability of Constructions. Barcelona, February 25-27, 2009.
68. "A multiscale/multiphysics model for concrete" (with F. Pesavento, and D. Gawin), MMCM 2009, Colloquium on Multiscale Methods in Computational Mechanics, Rolduc. The Netherlands, March 11-13, 2009.
69. "Modelling of cementitious materials by means of a multi physics approach", Seminar, EPFL, Lausanne, March 19, 2009.
70. "Large Scale Computation of Civil, Environmental and Material Engineering Problems "Invited Lecture, Colloquia for Scientific Computation, University of Padua, May 11, 2009.
71. "Numerical Modelling of Non-isothermal Calcium Leaching Process in Cementitious Materials" (with F. Pesavento, and D. Gawin), CMM 2009, 18th International Conference on Computational Methods in Mechanics, Zielona Gora, Poland, May 18-21, 2009.
72. "Large Scale Problems in Civil, Environmental and Material Engineering" Seminar, University of Technology, Lodz, Poland, May 22, 2009.

73. "Modelling of Structural Repairwork in Concrete Structures" Seminar, Brenner Motorways, Trento, June 19, 2009.
74. "A Multidisciplinary Approach in the Simulation of Concrete Modelling: Mathematical Model and Industrial Applications" (with F. Pesavento, D. Gawin, C.E. Majorana, and G. Sciumé), Concrete Solutions 2009, 3rd International Conference on Concrete Repair, Padua and Venice, June 29 – July 2nd, 2009.
75. "Artificial Neural Networks to Model the Non-linear Behaviour of Hierarchical Composites" (with D.P. Boso, M.J. Lefik), COMPLAS X, X International Conference on Computational Plasticity, Barcelona, September 2-4, 2009.
76. "A Thermodynamically Consistent Multiscale and Multiphysics Model for Concrete" (with F. Pesavento, D. Gawin, and W.G. Gray), Plenary lecture, COMPLAS X, X International Conference on Computational Plasticity, Barcelona, September 2-4, 2009.
77. "Design and Construction of Scientific Apparatuses at the University of Padua", XXII CTA, Conference on Steel Constructions, Padua, September 28-30, 2009.
78. "A Thermodynamically Consistent Multiscale and Multiphysics Model for Concrete and its Offsprings for Industry" (with F. Pesavento, and D. Gawin), Seminar, Eindhoven University of Technology, October 6, 2009.
79. "Actual Problems in the Study of Soil Dynamics of the Upper Adriatic Sea" (with G. Ricceri, V. Achilli, M. Fabris, L. Laloui), Invited Lecture, Conference on the Nature and Geodynamics of the Lithosphere of the Upper Adriatic Sea, Venice, November 5-6, 2009.
80. "Subsidence above gas reservoirs and CO₂ injection", Seminar, LMS, ENAC, EPFL, Lausanne, November 20, 2009.
81. "Research at CISM", 40th Anniversary of the Foundation of CISM, Udine, December 5, 2009.
82. "A general framework for TCHM modelling of concrete" (with F. Pesavento and D. Gawin), invited lecture, International Workshop on Control of Cracking in R.C. Structures: a major step towards serviceability, Paris, December 1-11, 2009.
83. "Ein thermo-chemo-hydro-mechanisches Betonmodell und seine Anwendungen in der Industrie", Seminar, IMWS, TU Vienna, January 27, 2010.
84. "TCHM modeling of porous media", Seminar, ACES, UT at Austin, March 2nd, 2010.
85. "Chemo-thermo-hydro-mechanical modeling of porous media", Aerospace Engineering Special Seminar, Texas A&M University, College Station, March 9, 2010.
86. "Capillary effects related to compaction of gas reservoirs and CO₂ injection", seminar, Center for Subsurface Modeling, ICES, UT at Austin, March 12, 2010.
87. "Multi-physics modelling of porous media", seminar, Department of NanoMedicine and BioMedical Engineering (nBME), Health Science Center at Houston, The University of Texas, March 19, 2010.
88. "Artificial Neural Networks for Modeling of Material Behaviour", Seminar Department of NanoMedicine and BioMedical Engineering (nBME), Health Science Center at Houston, The University of Texas, March 31, 2010.
89. "Interaction Problems between Different Fields and their Numerical Solution", Lectio Doctoralis, Ecole Normale Supérieure, Cachan, France, April 9, 2010.
90. "Numerical procedures for non linear analysis of composites" (with D. Boso), Invited Lecture, Session E-CAERO, ECCM2010, IV European Conference for Computational Mechanics, Paris, 17-21 May 2010.
91. "Three-dimensional staggered finite element modeling of thermo-hygro-mechanical behaviour in porous media with random properties" (with S. Dal Pont, F. Meftah), ECCM2010, IV European Conference for Computational Mechanics, Paris, 17-21 May 2010.
92. "Recent past, present and future of CISM", 40th Anniversary of CISM foundation, CISM Past and Future of its Mission, Udine, May 15, 2010.
93. "Filament, strand and conductor analyses carried out at Padua" Seminar, Fusion for Energy F4E, Barcelona, June 4, 2010.

94. "Computationally intensive problems in structural, environmental, and fusion engineering" (with D. Boso, F. Pesavento, and L. Sanavia), workshop on Algorithms and Architectures for Computational Science and Engineering AACSE, University of Padua, July 1-2, 2010.
95. "Thermo-chemo-hydro-mechanical modelling of porous media", Seminar, Department of Civil Engineering, Center for Advanced Materials and Structures, National University of Singapore, July 12, 2010.
96. "A multiphase model for concrete: the reference model, possible simplifications and industrial applications" (with F. Pesavento, D. Gawin, A. Bertoldo, S. Dal Pont, F. Meftah, R. Nanhorngue, and G. Sciumè) Semiplenary Lecture WCCM 2010, Sydney, July, 19-23, 2010.
97. "Capillary effects in hydrocarbon exploitation and CO₂ injection", seminar, Department of Civil and Environmental Engineering, University of New South Wales, Sydney, August 5, 2010.
98. "Generalized selfconsistent like method and other procedures for the numerical homogenization of fibrous composites in the coupled thermo-mechanical field" (with D. Boso and M. Lefik), Session Keynote lecture, 37th Solid mechanics Conference SolMech2010, Warsaw, Poland, September 6-10, 2010.
99. "Capillary effects in hydrocarbon exploitation and CO₂ injection and advanced constitutive models", Seminar, Faculty of Civil Engineering, Architecture and Environmental Engineering, Technological University of Lodz, September 9, 2010.
100. "Numerical homogenization of fibrous composites using the generalized self-consistent method", (with D.P. Boso and M.J Lefik), XVIII Convegno Italiano di Meccanica Computazionale, Siracusa, September 22-24, 2010.
101. "Numerical analysis of fluid induced fracture", Seminar, Ecole Centrale de Nantes, February 23, 2011.
102. "Modelling alkali-silica reaction under non-isothermal conditions in partially saturated cementitious materials" (with F. Pesavento, L. Simoni, D. Gawin, and M. Wyrzykowski), Invited Lecture, Mechanics and Physics of Porous Media, A tribute to late Pr. Olivier Coussy, ENPC, Paris, April 18, 2011.
103. "Fire in tunnels: steps towards a real time solution", Seminar, EPFL, ENAC, Lausanne, May 5, 2011.
104. "Mathematical and numerical multiscale modelling" (with D.P. Boso, F. Pesavento, D. Gawin, and M. Lefik), Plenary Lecture, CMM 2011, Warsaw, Poland, May 9-13, 2011.
105. "Steps towards a real time solution of fire in tunnels", Seminar, Faculty of Civil Engineering, Architecture and Environmental Engineering, Technological University of Lodz, May 14, 2011.
106. "Ongoing research activities in structural and material engineering", workshop on Algorithms and Architectures for Computational Science and Engineering AACSE, University of Padua, June 30-July 1, 2011.
107. "General multiphase model for concrete", Seminar, Bauhaus Summer School on Simulation and Model Validation, Weimar, August 16, 2011.
108. "Concrete at early ages and structural repair", Seminar, Bauhaus Summer School on Simulation and Model Validation, Weimar, August 16, 2011.
109. "Mechanics of porous media: from geomaterial to tumor growth modelling", (with G. Sciumè, S.A. Shelton, W.G. Gray, C.T. Miller, F. Pesavento, P. Decuzzi, and M. Ferrari), Plenary Lecture, COMPLAS XI, Barcelona, September 7, 2011.
110. "A multiphase porous media mechanics model for tumor growth modeling", (with G. Sciumè, S.E. Shelton, W.G. Gray, C.T. Miller, M. Ferrari, and P. Decuzzi), Seminar, Research Highlights, The Methodist Hospital Reserch Institute, Houston, December 7, 2011.
111. "A multiphase porous media mechanics approach to tumor growth modeling", (with G. Sciumè, S.E. Shelton, W.G. Gray, C.T. Miller, M. Ferrari, and P. Decuzzi), Seminar, University of Houston, January 13, 2012.
112. "Tumor growth modeling from the perspectives of multiphase porous media mechanics", lecture, The Methodist Hospital research Institute, Houston, January 16, 2012.

113. "Tumor growth modeling from the perspectives of multiphase porous media mechanics", private seminar, KTH, Stockholm, Campus Flemingsberg, School of Technology and Health, Division of Neuronic Engineering, February 9, 2012.
114. "A multiphase porous media mechanics approach to tumor growth modeling", Seminar, EC-Nantes, March 1st, 2012.
115. "Tumor growth modeling from the multiphase porous medium mechanocs perspectives", Lecture, Department of Oncological and Surgical Sciences, University of Padua, March 15, 2012.
116. "Thermodynamically Constrained Averaging Theory: An Application to Tumor Growth modelling" (with G. Sciumè, S.E. Shelton, W.G. Gray, C.T. Miller, F. Hussain, M. Ferrari, P. Decuzzi), Lifetime Achievement Award Lecture, Icces'12, Chania, Crete, May, 1st, 2012.
117. "FEM Class of 42" Thank You Address, FEM 42 Meeting, Barcelona, May 8, 2012.
118. "Modelling chemical processes in cement based materials by means of multiphase porous media medhanics" (with F. Pesavento, D. Gawin, M. Koniorczuk), Lecture, ESDA 2012, ASME 2012 111th biennial Conference of Engineering Systems Design and Analysis, Nantes, July 3, 2012.
119. "Multiphysics modelling of flowslides initiation" (with R. N. Nanhornguè and L Sanavia), Lecture MS02 Mechanics of Natural Disasters, XXIII ICTAM, Beijing, August 21, 2012.
120. "Tumor growth modelling fom the perspective of multiphase poroes media mechanics", (with G. Sciumè, S.E. Shelton, W.G. Gray, C.T. Miller, F. Hussain, M. Ferrari, P. Decuzzi), Lecture, Workshop on Virtual Materials, Peking University, Beijing, August 25, 2012
121. "A tumor growth model based on the thermodynamically constrained averaging theory", (with G. Sciumè, S.E. Shelton, W.G. Gray, C.T. Miller, F. Hussain, M. Ferrari, P. Decuzzi), Semiplenary lecture, ECCOMAS2012, Vienna September 11, 2012.
122. "Numerical and experimental analysis of fluid induced fracture", Seminar, University of Houston, December 6, 2012.
123. "A multiphase model for three dimensional tumor growth: a step towards drug delivery modelling", Seminar, TU Wien, Januray 30, 2013.
124. "A multiscale multiphysics model for prediction of tumor growth", invited lecture, Advances in Computational Mechanics, A Conference celebrating the 70th Birthday of Thomas J.R. Hughes, San Diego, February 27, 2013.
125. "A model for prediction of tumor growth based on three-phase flow in a deforming prous medium", Seminar, LadHyx, Ecole Polytechnique, Paris, Mars 28, 2013.
126. "Fully coupled FE simulation of fire in tunnels: from fire scenario to structural response", (with F. Pesavento, M. Antonello, J. Principe, R. Codina), plenary lecture, EURO:TUN 2013 III Int. Conf. on Computational Methods in Tunneling and Subsurface Engineering, Bochum, April 17, 2013.
127. "Structural effects in case of tunnel fires" invited lecture, Workshop iTUNNEL, GSA, Udine, July 3 and 4, 2013.
128. "2D and 3D numerical and experimental analysis of fluid pressure induced fracture" (with S. Secchi, J.M. Huyghe, E.W. Remij), plenary lecture, Biot2013, Vienna, July 11, 2013.
129. "A model for prediction of tumor growth based on three-phase flow in a deforming prous medium", Seminar, CRO –Center for Oncological Research, Aviano July 17, 2013.
130. "Modeling of interaction phenomena in tumor growth", (with G. Sciumè), plenary lecture, XII COMPLAS, Barcelona, September 5, 2013.
131. "2D and 3D numerical analysis of fluid induced fracture" (with S. Secchi), Lecture, Workshop High Performance Scientific Computing, Strategic Research Project AACSE – Algorithms and Architectures for Computational Science and Engineering, Padova, September 19, 2013.
132. "A multiphase model for the prediction of tumor growth: a step towards drug delivery simulation" plenary lecture, Int. CAE Conference, Pacengo del Garda, October 21, 2013.
133. "A multiphase model for tumor growth: interaction between tumor and host cells" (with G. Sciumè), lecture, Vinci II Workshop on Multiphysics Modelling of Concrete and Heterogeneous Materials, ENS Cachan, October 25, 2013.
134. "Modeling of interaction phenomena in tumor growth", President's Distinguished Lecture Series in Engineering, Science and Medicine-2013, Texas Tech University, Lubbock, November 18, 2013.
135. "Hydraulic fracture modeling and its peculiarities", Seminar, Cullen College of Engineering, Department of Civil and Environmental Engineering, University of Houston, November 26, 2013.
136. "Modeling tumor growth with multiphase porous media mechanics" Seminar, SISSA Trieste, February 5, 2014.

137. "Was hat Physik mit Krebsforschung zu tun?" Dissemination Lecture, Lions Club Meran Host, Meran, April 3, 2014.
138. "Mechanics of Ageing: from Building- to Biological Materials" Plenary Key note, AMS'14, 1st International conference on Ageing of Materials and Structures, Delft, The Netherlands, May 27, 2014.
139. "Beyond Geomaterials", Closing lecture, 6°ALERT – Olek C. Zienkiewicz Course on, seminar Advanced Numerical Modelling in Geomechanics, ETS Caminos, Canales y Puertos, Madrid, June 6, 2014.
140. "Multi-field and multi-scale problems in engineering" seminar, Ecole Nationale Supérieure des Travaux Publics, Yaoundé, Cameroon, July 11, 2014.
141. "Tip advancement and pressure distribution in hydraulic fracturing" (with S. Secchi, P. Rizzato, and J.M.R. Huyghe), lecture, WCCM XI, ECCM V, ECFD VI, Barcelona, July 20-25, 2014.
142. "The role of the solid phase in tumor growth modeling", semi-plenary lecture, WCCM XI, ECCM V, ECFD VI, Barcelona, July 20-25, 2014.
143. "Tip advancement and pressure distribution in hydraulic fracturing" seminar, SISSA, Trieste, September 23, 2014
144. "Interaction between crack tip advancement velocity and fluid velocity in fracturing saturated porous media" seminar, University of Trento, December 16, 2015
145. "Modelling of multi-field fracturing" (with L. Simoni), lecture, Africomp15, Marrakech, January 7, 2015.
146. "Hydraulic fracture", lecture, Mumolade Winterschool, Marie Curie Training Network, Padua, January 20, 2015
147. "Beyond geomaterials", lecture, Mumolade Winterschool, Marie Curie Training Network, Padua, January 20, 2015
148. "The role of the extracellular matrix in tumor growth modeling", seminar, Cullen College of Engineering, Department of Civil and Environmental Engineering, University of Houston, February 11, 2015.
149. "Modelling of fracturing in fluid saturated porous media", President's Distinguished Lecture Series in Engineering, Science and Medicine-2015, Department of Mechanical Engineering, Texas Tech University, Lubbock, February 23, 2015.
150. "Modelling of fracture in fluid saturated porous media" (with P. Rizzato, L. Simoni, S. Secchi, J.M. Huyghe, E. Milanese and J.F. Molinari) invited lecture, Interpore, Padua, May 20, 2015
151. "Pressure and stress fluctuations around the crack tip in fracturing saturated porous media", (with J.M.R. Huyghe, E. Milanese, J.F. Molinari, E. Remij, P. Rizzato, S. Secchi, L. Simoni) invited lecture, ESMC 2015, Madrid, July 9, 2015
152. "Meso- and macro-mechanical analysis of fracturing fluid saturated porous media", seminar, Cullen College of Engineering, Department of Civil and Environmental Engineering, University of Houston, November 5, 2015.
153. "Meso- and macro-mechanical simulation of hydraulic fracturing", President's Distinguished Lecture Series in Engineering, Science and Medicine-2015, Bob L. Herd Department of Petroleum Engineering, Texas Tech University, Lubbock, November 13, 2015.
154. "Meso- and macro-mechanical simulation of fracturing in fluid saturated porous media", Kolloquium über neuere Arbeiten auf dem Gebiete der Mechanik und Strömungslehre an der Technischen Universität Wien, TU Vienna, January 27, 2016.