

# Publications of Umberto Perego

Updated April 6, 2018

## Publications in International Journals

- [1] S. Meduri, M. Cremonesi, U. Perego, O. Bettinotti, A. Kurkchubasche, and V. Oancea. “A partitioned fully explicit Lagrangian finite element method for highly nonlinear fluid–structure interaction problems”. *International Journal for Numerical Methods in Engineering* 113.1 (2018), pp. 43–64.
- [2] F. Confalonieri, A. Ghisi, and U. Perego. “Blade cutting of thin walled structures by explicit dynamics finite elements”. *Meccanica* 53.6 (2018), pp. 1271–1289.
- [3] F. Confalonieri and U. Perego. “Simulation of fracture and delamination in layered shells due to blade cutting”. *Journal of the Serbian Society for Computational Mechanics* 11.2 (2017), pp. 139–151.
- [4] M. Cremonesi, S. Meduri, U. Perego, and A. Frangi. “An explicit Lagrangian finite element method for free-surface weakly compressible flows”. *Computational Particle Mechanics* 4.3 (2017), pp. 357–369.
- [5] M. Cremonesi, F. Ferri, and U. Perego. “A basal slip model for Lagrangian finite element simulations of 3D landslides”. *International Journal for Numerical and Analytical Methods in Geomechanics* 41.1 (2017), pp. 30–53.
- [6] M. Colombo, M. Domaneschi, A. Ghisi, S. Griffini, G. Novati, U. Perego, L. Petrini, and P. Valgoi. “Stress verifications of large concrete existing dams: comparison of two seismic Italian codes”. *International Journal of Earthquake Engineering* 34.1 (2017), pp. 61–81.
- [7] O. Bettinotti, O. Allix, U. Perego, V. Oancea, and B. Malherbe. “Simulation of delamination under impact using a global-local method in explicit dynamics”. *Finite Elements in Analysis and Design* 125 (2017), pp. 1–13.
- [8] M. Domaneschi, U. Perego, E. Borgqvist, and R. Borsari. “An industry-oriented strategy for the finite element simulation of paperboard creasing and folding”. *Packaging Technology and Science* 30.6 (2017), pp. 269–294.
- [9] F. Confalonieri, A. Ghisi, and U. Perego. “8-Node solid-shell elements selective mass scaling for explicit dynamic analysis of layered thin-walled structures”. *Computational Mechanics* 56.4 (2015), pp. 585–599.
- [10] A. Bartezzaghi, M. Cremonesi, N. Parolini, and U. Perego. “An explicit dynamics GPU structural solver for thin shell finite elements”. *Computers & Structures* 154 (July 2015), pp. 29–40.
- [11] G. Cocchetti, M. Pagani, and U. Perego. “Selective mass scaling for distorted solid-shell elements in explicit dynamics: optimal scaling factor and stable time step estimate”. *International Journal for Numerical Methods in Engineering* 101.9 (Mar. 2015), pp. 700–731.
- [12] M. Pagani and U. Perego. “Explicit dynamics simulation of blade cutting of thin elastoplastic shells using directional cohesive elements in solid-shell finite element models”. *Computer Methods in Applied Mechanics and Engineering* 285 (Mar. 2015), pp. 515–541.

- [13] O. Bettinotti, O. Allix, U. Perego, V. Oancea, and B. Malherbe. “A fast weakly intrusive multiscale method in explicit dynamics”. *International Journal for Numerical Methods in Engineering* 100.8 (Nov. 2014), pp. 577–595.
- [14] M. Pagani, S. Reese, and U. Perego. “Computationally efficient explicit nonlinear analyses using reduced integration-based solid-shell finite elements”. *Computer Methods in Applied Mechanics and Engineering* 268 (2014), 141–159.
- [15] G. Cocchetti, M. Pagani, and U. Perego. “Selective mass scaling and critical time-step estimate for explicit dynamics analyses with solid-shell elements”. *Computers & Structures* 127 (2013), pp. 39–52.
- [16] M. Pagani, S. Reese, and U. Perego. “Explicit Simulation of Forming Processes Using a Novel Solid-Shell Concept Based on Reduced Integration”. *Key Engineering Materials* 504-506 (Feb. 2012), pp. 425–430.
- [17] C. Comi and U. Perego. “Computational modeling of damage in concrete dams due to alkali-aggregate reaction”. *ECCOMAS Newsletter* 12/2012 (Dec. 2012), pp. 13–17.
- [18] A. Giampieri and U. Perego. “An interface finite element for the simulation of localized membrane-bending deformation in shells”. *Computer Methods in Applied Mechanics and Engineering* 200.29–32 (2011), pp. 2378–2396.
- [19] A. Giampieri, U. Perego, and R. Borsari. “A constitutive model for the mechanical response of the folding of creased paperboard”. *International Journal of Solids and Structures* 48.16–17 (2011), pp. 2275–2287.
- [20] M. Cremonesi, A. Frangi, and U. Perego. “A Lagrangian finite element approach for the simulation of water-waves induced by landslides”. *Computers & Structures* 89.11-12 (2011), pp. 1086–1093.
- [21] G. Cocchetti, C. Comi, and U. Perego. “Strength assessment of adhesively bonded tile claddings”. *International Journal of Solids and Structures* 48.13 (2011), pp. 2048–2059.
- [22] C. Comi and U. Perego. “Anisotropic Damage Model for Concrete Affected by Alkali-Aggregate Reaction”. *International Journal of Damage Mechanics* 20.4 (2011), pp. 598–617.
- [23] G. Cocchetti, C. Comi, and U. Perego. “Cohesive crack approach to debonding analysis”. *Cadernos de Engenharia de Estruturas* 12.57 (2010), pp. 67–80.
- [24] M. Cremonesi, L. Ferrara, A. Frangi, and U. Perego. “Simulation of the flow of fresh cement suspensions by a Lagrangian finite element approach”. *Journal of Non-Newtonian Fluid Mechanics* 165.23-24 (2010), pp. 1555–1563.
- [25] A. Frangi, M. Pagani, U. Perego, and R. Borsari. “Directional Cohesive Elements for the Simulation of Blade Cutting of Thin Shells”. *Computer Modeling in Engineering & Sciences* 57.3 (2010), pp. 205–224.
- [26] M. Cremonesi, A. Frangi, and U. Perego. “A Lagrangian finite element approach for the analysis of fluid–structure interaction problems”. *Int. J. Numer. Meth. Engng.* 84.5 (2010), pp. 610–630.
- [27] C. Comi, R. Fedele, and U. Perego. “A chemo-thermo-damage model for the analysis of concrete dams affected by alkali-silica reaction”. *Mechanics of Materials* 41.3 (Mar. 2009), pp. 210–230.

- [28] C. Comi, S. Mariani, and U. Perego. “An extended FE strategy for transition from continuum damage to mode I cohesive crack propagation”. *International Journal for Numerical and Analytical Methods in Geomechanics* 31.2 (2007), pp. 213–238.
- [29] C. Comi, S. Mariani, M. Negri, and U. Perego. “A one-dimensional variational formulation for quasibrittle fracture”. *Journal of Mechanics of Materials and Structures* 1.8 (2006), pp. 1323–1343.
- [30] C. Comi and U. Perego. “Criteria for mesh refinement in nonlocal damage finite element analyses”. *European Journal of Mechanics A/Solids* 23 (2004), pp. 615–632.
- [31] G. Cocchetti and U. Perego. “A rigorous bound on error in backward-difference elastoplastic time-integration”. *Computer Methods in Applied Mechanics and Engineering* 192 (2003), pp. 4909–4927.
- [32] S. Mariani and U. Perego. “Extended finite element method for quasi-brittle fracture”. *International Journal for Numerical Methods in Engineering* 58 (2003), pp. 103–126.
- [33] C. Comi and U. Perego. “Numerical aspects of nonlocal damage analyses”. *European Journal of Finite Elements* 10 (2001), pp. 227–242.
- [34] C. Comi and U. Perego. “Fracture energy based bi-dissipative damage model for concrete”. *International Journal of Solids and Structures* 38 (2001), pp. 6427–6454.
- [35] P. Ladevèze and U. Perego. “Duality preserving discretization of the large time increment methods”. *Computer Methods in Applied Mechanics and Engineering* 189 (2000), pp. 205–232.
- [36] U. Perego. “A variationally consistent generalized variable formulation for enhanced strain finite elements”. *Communication in Numerical Methods in Engineering* 16 (2000), pp. 151–163.
- [37] K. Cichocki and U. Perego. “Rectangular plates subjected to blast loading: The comparison between experimental results, numerical analysis and simplified analytical approach”. *Journal De Physique. IV : JP* 7.3 (1997), pp. 761–766.
- [38] C. Comi and U. Perego. “A generalized variable formulation for gradient dependent softening plasticity”. *International Journal for Numerical Methods in Engineering* 39 (1996), pp. 3731–3755.
- [39] C. Comi and U. Perego. “A unified approach for variationally consistent finite elements in elastoplasticity”. *Computer Methods in Applied Mechanics and Engineering* 121 (1995), pp. 323–344.
- [40] G. Maier, C. Comi, A. Corigliano, and U. Perego. “Discussion on the paper ”A variational theory for finite-step elasto-plastic problems””. *International Journal of Solids and Structures* 32.10 (1995), pp. 1477–1478.
- [41] G. Maier, S. Miccoli, G. Novati, and U. Perego. “Symmetric Galerkin boundary element method in plasticity and gradient plasticity”. *Computational Mechanics* 17 (1995), pp. 115–129.
- [42] K. Cichocki, G. Maier, and U. Perego. “Analysis of damages due to underwater explosions on a hybrid structure”. *International Journal for Engineering Analysis and Design* 1 (1994), pp. 341–361.

- [43] A. Corigliano and U. Perego. “Generalized mid-point finite element dynamic analysis of elastoplastic systems”. *International Journal for Numerical Methods in Engineering* 36 (1993), pp. 361–383.
- [44] G. Maier, L. G. Pan, and U. Perego. “Geometric effects on shakedown and ratchetting of axisymmetric cylindrical shells subjected to variable thermal loading”. *Engineering Structures* 15.6 (1993), pp. 453–466.
- [45] C. Comi, G. Maier, and U. Perego. “Generalized variable finite element modelling and extremum theorems in stepwise holonomic elastoplasticity with internal variables”. *Computer Methods in Applied Mechanics and Engineering* 96 (1992), pp. 213–237.
- [46] G. Maier and U. Perego. “Effects of softening in elastic-plastic structural dynamics”. *International Journal for Numerical Methods in Engineering* 34 (1992), pp. 319–347.
- [47] C. Comi and U. Perego. “A variationally consistent generalized variable formulation of the elastoplastic rate problem”. *Rend.Acc.Naz.Lincei* S9 (1991), pp. 177–190.
- [48] A. Corigliano and U. Perego. “Unconditionally stable mid-point time-integration in elastic-plastic dynamics”. *Rend.Acc.Naz.Lincei* 9.1 (1990), pp. 367–376.
- [49] G. Borino, U. Perego, and P. S. Symonds. “An energy approach to anomalous damped elastic-plastic response to short pulse loading”. *Journal of Applied Mechanics* 56 (1989), pp. 430–438.
- [50] U. Perego, G. Borino, and P. S. Symonds. “The role of damping in anomalous response to short pulse loading”. *Journal of Engineering Mechanics* 115 (1989), pp. 2782–2788.
- [51] A. Nappi and U. Perego. “Boundary element analysis by linearized nonlinear-elastic material models: an application to no-tension systems”. *Engineering Structures* 10 (1988), pp. 146–156.
- [52] U. Perego. “Metodo della differenza all’indietro e determinazione dei moduli tangenti per analisi evolutive elastoplastiche a passi finiti”. *Rend.Acc.Naz.Lincei* 82 (1988), pp. 75–89.
- [53] U. Perego. “Explicit backward difference operators and consistent predictors for linear hardening elastic-plastic constitutive laws”. *Solid Mechanics Archives* 13 (1988), pp. 65–102.
- [54] P. S. Symonds, G. Borino, and U. Perego. “Discussion: “Chaotic Motion of an Elastic-Plastic Beam” (Poddar, B., Moon, F. C., and Mukherjee, S., 1988, ASME J. Appl. Mech., 55, pp. 185-189”. *Journal of Applied Mechanics* 55 (1988), pp. 745–746.
- [55] A. Nappi and U. Perego. “Boundary element analysis of no-tension systems by assuming an associated flow rule”. *Microsoftware for Engineers* 3 (1987), pp. 12–21.
- [56] A. Nappi and U. Perego. “Solution of large eigenproblems on a microcomputer”. *Advances in Engineering Software* 7.1 (1985), pp. 15–20.

## Guest Editor of Special Issues of International Journals

- [1] O. Allix, U. Perego, and P. Wriggers. “Foreword”. *Computational Mechanics* 42.2 (July 2008), pp. 145–146.
- [2] G. Novati, L. Corradi, and U. Perego. “Preface to the Special Issue for the 70th birthday of Professor Giulio Maier”. *Meccanica* 36 (2001).

## Books

- [1] F. Dell’Isola, G. Maier, U. Perego, U. Andreaus, R. Esposito, and S. Forest. *The complete works of Gabrio Piola: Volume I*. New York: Springer, 2014.
- [2] B. Schrefler and U. Perego, eds. *Proceedings of the 8th World Congress on Computational Mechanics and 5th European Congress on Computational Methods in Applied Sciences and Engineering*. Venice, 30 June–4 July, 2008: CIMNE-Barcelona, 2008.
- [3] G. Maier, C. Comi, A. Corigliano, U. Perego, and H. Hübel. *Bounds and estimates on inelastic deformations: a study of their practical usefulness*. European Commission - Nuclear Science and Technology, 1996.

## Publications in Edited Books

- [1] C. Comi and U. Perego. “On the capability of finite elements models to predict plastic collapse”. In: *Recent developments in computational and applied mechanics*. Ed. by B. D. Reddy. Barcelona: CIMNE, 1997, pp. 77–86.
- [2] C. Comi, G. Maier, and U. Perego. “On finite element elastoplastic analysis based on generalized variables”. In: *New Advances in Computational Structural Mechanics*. Ed. by P. Ladevèze and O. C. Zienkiewicz. Giens, France, 1992, pp. 39–50.
- [3] U. Perego. “Introduzione all’analisi per elementi finiti in campo elastoplastico”. In: *Analisi per elementi finiti: modellazione strutturale e controllo dei risultati*. Ed. by B. Schrefler and A. A. Cannarozzi. Berlin: Springer, 1991, pp. 123–161.
- [4] G. Maier, G. Novati, and U. Perego. “Plastic analysis by boundary elements”. In: *Finite Element and Boundary Element Techniques, from Mathematical and Engineering Point of View*. Ed. by E. Stein and W. L. Wendland. Berlin: Springer, 1988, pp. 213–272.
- [5] P. S. Symonds, U. Perego, G. Borino, and F. Genna. “Anomalous Elastic-plastic Response to Short Pulse Loading - An Outline of Recent Progress”. In: *Omaggio a Giulio Ceradini*. Rome, 1988, pp. 641–668.

## Dissertations

- [1] U. Perego. “Sull’analisi elastoplastica per elementi di contorno”. PhD thesis. Politecnico di Milano, 1987.

## Papers Presented at Conferences

- [1] S. Meduri, M. Cremonesi, and U. Perego. “A fully explicit fluid-structure interaction approach based on PFEM and FEM”. In: *PARTICLES 2017 - 5th International Conference on Particle-Based Methods - Fundamentals and Applications, 26 – 28 September 2017, Hannover*. Ed. by P. Wriggers, M. Bischoff, E. Onate, D. Owen, and T. Zohdi. Cimne, Barcelona, 2017, pp. 195–202.
- [2] F. Confalonieri and U. Perego. “A mixed-mode cohesive model for delamination with isotropic damage and internal friction”. In: *VI ECCOMAS Thematic Conference on the Mechanical Response of Composites, September 20–22, 2017, Eindhoven*. Ed. by J. Remmers and A. Turon. Eindhoven University of Technology, Eindhoven, 2017, pp. 82–93.
- [3] F. Confalonieri and U. Perego. “A thermodynamically consistent cohesive damage model for the simulation of mixed-mode delamination”. In: *COMPLAS XIV - XIV International Conference on Computational Plasticity. Fundamentals and Applications, 5–7 September 2017*. Ed. by E. Onate, D. Owen, D. Peric, and M. Chiumenti. Cimne, Barcelona, 2017, pp. 151–162.
- [4] S. Meduri, M. Cremonesi, and U. Perego. “A fully explicit fluid-structure interaction approach based on the PFEM”. In: *Coupled Problems in Science and Engineering VII, 12–14 June 2017, Rhodes Island, Greece*. Ed. by M. Papadrakakis, E. Onate, and B. Schrefler. Cimne, Barcelona, 2017, pp. 299–306.
- [5] F. Confalonieri and U. Perego. “Mixed-Mode cohesive model with tensile frictional interaction for the simulation of delamination”. In: *XXIII Congresso - Associazione Italiana di Meccanica Teorica e Applicata - Salerno, 4–7 September 2017*. Ed. by L. Ascione, V. Berardi, L. Feo, F. Fraternali, and A. Tralli. Centro Servizi d’Ateneo, Università di Salerno, Italy, 2017, pp. 1–2.
- [6] S. Meduri, M. Cremonesi, and U. Perego. “An explicit PFEM-FEM Coupling for Lagrangian Fluid-Structure Interaction Problems”. In: *XXIII Congresso - Associazione Italiana di Meccanica Teorica e Applicata - Salerno, 4–7 September 2017*. Ed. by L. Ascione, V. Berardi, L. Feo, F. Fraternali, and A. Tralli. Centro Servizi d’Ateneo, Università di Salerno, 2017, p. 1.
- [7] F. Confalonieri and U. Perego. “A smooth cohesive law for mixed-mode delamination”. In: *ECCOMAS Young Investigators Conference 2017, Milan, September 13–17, 2017*. Ed. by M. Cremonesi. Politecnico di Milano, Milan, Italy, 2017, pp. 1–2.

- [8] S. Meduri, M. Cremonesi, U. Perego, O. Bettinotti, A. Kurkchubasche, and A. Oancea. “A staggered fully explicit lagrangian Finite Element Method for Fluid-Structure-Interaction problems”. In: *ECCOMAS Young Investigators Conference 2017, Milan, September 13–17, 2017*. Ed. by M. Cremonesi. Politecnico di Milano, Milan, Italy, 2017, pp. 1–2.
- [9] F. Confalonieri and U. Perego. “Cohesive modelling of delamination growth under mixed-mode loading conditions”. In: *FDM2017 - 16th International Conference on Fracture and Damage Mechanics, 18–20 July, 2017, Florence, Italy*. Ed. by P. Mariano, S. Baragetti, K. Casavola, C. Pappalettere, and F. Aliabadi. Trans Tech Publications Inc., Switzerland, 2017, p. 1.
- [10] F. Confalonieri and U. Perego. “A new mixed-mode cohesive delamination model with internal friction”. In: *CFRAC 2017 - Fifth International Conference on Computational Modeling of Fracture and Failure of Materials and Structures, 14–16 June 2017, Nantes*. Ed. by N. Moes, X. Oliver, M. Jirasek, and O. Allix. Ecole Centrale de Nantes, Nantes, 2017, pp. 251–252.
- [11] F. Confalonieri and U. Perego. “Cohesive modeling of mixed mode delamination in paperboard laminates”. In: *Euromech Colloquium 592, 7–9 June 2017, KTH Royal Institute of Technology, Stockholm*. Ed. by S. Ostlund, U. Perego, and R. Peerlings. KTH Royal Institute of Technology, Stockholm, Sweden, 2017, pp. 74–75.
- [12] F. Confalonieri and U. Perego. “Cohesive modelling of mixed-mode delamination with internal friction”. In: *IAMMC2017 - Interaction of Applied Mathematics and Mechanics Conference, 9–11 May 2017, Paris*. Ed. by M. Wickowski and T. Burczynski. Centre Scientifique de l’Académie Polonaise des Sciences à Paris, 2017, pp. 1–2.
- [13] M. Cremonesi and U. Perego. “A Lagrangian Finite Element approach to the numerical simulation of 3D large-scale landslides”. In: *FEF 2017 - IACM 19th International Conference on Finite Elements in Flow Problems, 5–7 April, 2017, Rome, Italy*. Ed. by A. Corsini, S. Perotto, G. Rozza, and H. Van Brummelen. Cimne, Barcelona, Spain, 2017, p. 1.
- [14] F. Confalonieri, A. Ghisi, J. Mirzapour, and U. Perego. “Directional cohesive elements for blade cutting simulations of layered shells”. In: *Regularised models of brittle fracture*. Ed. by C. Maurini, M. Maziere, and L. Placidi. University Pierre et Marie Curie, 2016, p. 1.
- [15] F. Confalonieri, A. Ghisi, J. Mirzapour, and U. Perego. “Explicit dynamics simulation of blade cutting of layered shells”. In: *New Challenges in Computational Mechanics*. Ed. by O. Allix and F. Chinesta. LMT (ENS Cachan / CNRS / Université Paris-Saclay), 2016, p. 1.
- [16] M. Cremonesi, F. Ferri, and U. Perego. “Un approccio Lagrangiano ad elementi finiti per la simulazione di frane alla grande scala”. In: *XXI Italian Conference on Computational Mechanics, VIII Italian Meeting of AIMETA Materials Group*. Ed. by M. Paggi and A. Bacigalupo. IMT School for Advanced Studies Lucca, 2016, p. 1.

- [17] F. Confalonieri, J. Mirzapour, A. Ghisi, and U. Perego. “Simulazione di fenomeni di taglio e delaminazione in strutture a guscio sottile mono- e multi-strato”. In: *XXI Italian Conference on Computational Mechanics, VIII Italian Meeting of AIMETA Materials Group*. Ed. by M. Paggi and A. Bacigalupo. IMT School for Advanced Studies Lucca, 2016, p. 1.
- [18] F. Confalonieri, A. Ghisi, and U. Perego. “Finite element simulation of crack propagation and delamination in layered shells due to blade cutting”. In: *VII European Congress on Computational Methods in Applied Sciences and Engineering, ECCOMAS 2016*. Ed. by M. Papadrakakis, V. Papadopoulos, G. Stefanou, and V. Plevris. Institute of Structural Analysis and Antiseismic Research School of Civil Engineering National Technical University of Athens (NTUA), 2016, pp. 295–308.
- [19] M. Cremonesi, F. Ferri, and U. Perego. “Lagrangian PFEM approach to the numerical simulation of 3D large scale landslides impinging in water reservoirs”. In: *VII European Congress on Computational Methods in Applied Sciences and Engineering, ECCOMAS 2016*. Ed. by M. Papadrakakis, V. Papadopoulos, G. Stefanou, and V. Plevris. Institute of Structural Analysis and Antiseismic Research School of Civil Engineering National Technical University of Athens (NTUA), 2016, pp. 608–618.
- [20] F. Confalonieri, A. Ghisi, and U. Perego. “Simulation of Fracture and Cutting Processes in Thin-walled Multi-layer Shell Structures”. In: *9th European Solid Mechanics Conference, ESMC 2015*. Ed. by J. LLorca. IMDEA Materials Institute, Carlos III University, Madrid, 2015, pp. 1–2.
- [21] F. Confalonieri, A. Ghisi, and U. Perego. “Explicit simulation of blade cutting and through-the-thickness fracture in multi-layer, thin-walled structures”. In: *IV International Conference on Computational Modeling of Fracture and Failure of Materials and Structures, CFRAC 2015*. Ed. by O. Allix, N. Moës, J. Oliver, and M. Jirsek. LMT-Cachan (ENS Cachan, CNRS, Universit Paris Saclay), 2015, pp. 1–2.
- [22] M. Cremonesi, F. Ferri, and U. Perego. “Un approccio Lagrangiano ad elementi finiti per la simulazione di frane a grande scala”. In: *XII Congress of the Italian Association of Theoretical and Applied Mechanics, AIMETA 2015*. Ed. by L. Gambarotta and A. Morro. Università degli Studi di Genova, 2015, p. 1.
- [23] A. Bartezzaghi, M. Cremonesi, N. Parolini, and U. Perego. “Un solutore strutturale esplicito su GPU per elementi finiti di guscio”. In: *XII Congress of the Italian Association of Theoretical and Applied Mechanics, AIMETA 2015*. Ed. by L. Gambarotta and A. Morro. Università degli Studi di Genova, 2015, p. 1.
- [24] F. Confalonieri, A. Ghisi, and U. Perego. “Simulazione di fenomeni di taglio e frattura in strutture sottili multistrato”. In: *XII Congress of the Italian Association of Theoretical and Applied Mechanics, AIMETA 2015*. Ed. by L. Gambarotta and A. Morro. Università degli Studi di Genova, 2015, p. 1.
- [25] F. Confalonieri, A. Ghisi, and U. Perego. “Selective mass scaling for multi-layer solid-shell discretization of thin-walled structures”. In: *3rd ECCOMAS Young Investigators Conference (YIC2015)*. Ed. by S. Elgeti and J. Simon. Aachen Institute for Advanced Study in Computational Engineering Science, 2015, pp. 1–4.



- [26] O. Bettinotti, O. Allix, U. Perego, V. Oancea, and B. Malherbe. “A weakly-intrusive multi-scale substitution method in explicit dynamics”. In: *3rd ECCOMAS Young Investigators Conference (YIC2015)*. Ed. by S. Elgeti and J. Simon. Aachen Institute for Advanced Study in Computational Engineering Science, 2015, p. 1.
- [27] M. Cremonesi, F. Ferri, and U. Perego. “3D numerical simulation of large scale landslides using a Lagrangian PFEM approach”. In: *IV International Conference on Particle-Based Methods (PARTICLES 2015)*. Ed. by E. Onate, M. Bischoff, D. Owen, P. Wriggers, and T. Zohdi. International Center for Numerical Methods in Engineering, 2015, p. 1.
- [28] A. Ghisi, F. Confalonieri, and U. Perego. “Blade cutting simulation with crack propagation through thin-walled structures via solid-shell finite elements in explicit dynamics”. In: *PANACM 2015 - 1st Pan-American Congress on Computational Mechanics, in conjunction with the 11th Argentine Congress on Computational Mechanics, MECOM 2015*. 2015, pp. 304–313.
- [29] M. Cremonesi, F. Ferri, and U. Perego. “A Lagrangian finite element approach for the numerical simulation of landslide runouts”. In: *XX Italian Conference on Computational Mechanics, VII Italian Meeting of AIMETA Materials Group*. Ed. by E. Sacco and S. Marfia. Cassino, 2014, pp. 1–2.
- [30] F. Confalonieri, U. Perego, and A. Ghisi. “Selective mass scaling for thin structures discretized with multi-layered, solid-shell elements”. In: *XX Italian Conference on Computational Mechanics, VII Italian Meeting of AIMETA Materials Group*. Ed. by E. Sacco and S. Marfia. Cassino, 2014, pp. 1–2.
- [31] U. Perego, G. Cocchetti, and M. Pagani. “Selective mass scaling for solid-shell elements in explicit dynamics analyses”. In: *11th World Congress on Computational Mechanics (WCCM XI), 5th European Conference on Computational Mechanics (ECCM V), 6th European Conference on Computational Fluid Dynamics (ECFD VI), Invited Semi-Plenary Lecture*. Ed. by E. Onate, X. Oliver, and A. Huerta. Barcelona, 2014, pp. 1–2.
- [32] M. Cremonesi and U. Perego. “Numerical simulation of landslide-reservoir interaction using a PFEM approach”. In: *Proceedings of Particle-Based Methods III Fundamentals and Applications*. Stuttgart, 2013, pp. 408–417.
- [33] M. Cremonesi and U. Perego. “Un approccio Lagrangiano ad elementi finiti per la simulazione dell’interazione frana bacino”. In: *XXI Aimeta National Conference*. Ed. by G. Lacidogna and A. Carpinteri. Turin, 2013, pp. 1–9.
- [34] M. Pagani and U. Perego. “Sviluppo di un approccio ad elementi finiti per la simulazione del taglio di strutture sottili”. In: *XXI Aimeta National Conference*. Ed. by G. Lacidogna and A. Carpinteri. Turin, 2013, pp. 1–10.
- [35] M. Pagani and U. Perego. “Crack Propagation in Thin Shells by Explicit Dynamics Solid-Shell Models”. In: *COMPLAS XII – XII International Conference on Computational Plasticity, Invited Keynote Lecture*. Ed. by D. P. E. Onate D.R.J. Owen and B. Suarez. Barcelona, 2013, pp. 388–399.
- [36] M. Pagani and U. Perego. “Explicit dynamics modeling of blade cutting of thin shells”. In: *CMM20 – 20th International Conference on Computer Methods in Mechanics, Invited Plenary Lecture*. Ed. by T. G. T. Lodygowski J. Rakowski and W. Sumelka. Poznan, 2013, PL11–PL12.

- [37] M. Cremonesi, C. di Prisco, and U. Perego. “A PFEM approach to the simulation of landslide generated water waves”. In: *Coupled Problems 2013 – Computational Methods for Coupled Problems in Science and Engineering V, Invited Keynote Lecture*. Ed. by S. Idelsohn, M. Papadrakakis, and B. Schrefler. Ibiza, 2013, pp. 1–7 CD.
- [38] M. Pagani and U. Perego. “Finite Element Simulations of Cutting Processes of Thin-Walled Structures”. In: *CFRAC 2013 – 3rd International Conference on Computational Modeling of Fracture and Failure of Materials and Structures, Invited Plenary Lecture*. Ed. by N. M. M. Jirasek O. Allix and J. Oliver. Prague, 2013, pp. 21–22.
- [39] G. Cocchetti, M. Pagani, and U. Perego. “Solid-shell finite element models for explicit simulations of crack propagation in thin structures”. In: *ECCOMAS 2012*. Vienna, 2012, pp. 1–10 CD.
- [40] M. Pagani and U. Perego. “Explicit dynamics simulations of elastoplastic and brittle failure of thin shell structures”. In: *ICTAM 2012*. Beijing, 2012, pp. 1–2 CD.
- [41] C. Guerini and U. Perego. “Un metodo multi-scala basato su un codice di calcolo commerciale agli elementi finiti”. In: *XIX Italian Conference on Computational Mechanics*. Rossano Calabro, 2012, pp. 1–4 CD.
- [42] M. Pagani, G. Cocchetti, and U. Perego. “Analisi dinamiche esplicite con elementi di guscio solid-like”. In: *XIX Italian Conference on Computational Mechanics*. Rossano Calabro, 2012, pp. 1–4 CD.
- [43] M. Pagani, U. Perego, and S. Reese. “Explicit simulations with reduced integration solid-shell elements: stabilization and selective mass scaling”. In: *WCCM 2012 – 10th World Congress on Computational Mechanics*. San Paolo, 2012, pp. 1–13 CD.
- [44] M. Pagani and U. Perego. “An explicit dynamics approach to the simulation of crack propagation in thin shells using reduced integration solid-shell elements”. In: *WCCM 2012 – 10th World Congress on Computational Mechanics*. San Paolo, 2012, pp. 1–11 CD.
- [45] M. Pagani and U. Perego. “Shell and solid-shell finite element models for the simulation of blade cutting of thin sheets”. In: *IASS-IACM 2012 - 7th International Conference on Computational Mechanics for Spatial Structures, Keynote Lecture*. Sarajevo, Apr. 2012, pp. 297–298.
- [46] M. Pagani and U. Perego. “Elementi “coesivi direzionali” per la modellazione del taglio di strutture sottili”. In: *XX Aimeta National Conference, 12-15 September 2011*. Ed. by F. Ubertini, E. Viola, S. de Miranda, and G. Castellazzi. Bologna, Italy, 2011, pp. 1–9 CD.
- [47] M. Pagani and U. Perego. “Shell Finite Element Models for Sheet Cutting Simulations”. In: *TCCM 2011–Trends and Challenges in Computational Mechanics, 12-14 September 2011*. Padua, Italy, 2011, pp. 1–2 CD.
- [48] M. Pagani and U. Perego. “Crack propagation in shells due to impact against sharp objects”. In: *COMPLAS 2011, XI International Conference on Computational Plasticity, 7-9 September 2011*. Ed. by E. Oñate, D. Owen, D. Peric, and B. Surez. Barcelona, 2011, pp. 454–465 CD.

- [49] M. Pagani and U. Perego. “A finite element approach to blade cutting of thin sheets”. In: *CFRAC 2011 – International Conference on Computational Modeling of Fracture and Failure of Materials and Structures, 6-8 June 2011 Barcelona, Spain*. Barcelona, 2011, pp. 1–1 CD.
- [50] M. Cremonesi, A. Frangi, and U. Perego. “A Lagrangian finite element method for non-Newtonian free-surface fluid flows and fluid-structure interaction problems”. In: *Colloque National en Calcul des Structures CSMA 2011, 9–13 May, 2011*. Giens, France, 2011, pp. 1–8 CD.
- [51] A. Giampieri and U. Perego. “An interface element for the modelling of localized deformations in curved shells”. In: *XVIII Italian Conference on Computational Mechanics, 22-24/09/2010*. Siracusa, 2010, pp. 1–4 CD.
- [52] A. Frangi, M. Pagani, and U. Perego. “Cohesive fracture simulation of shell cutting”. In: *XVIII Italian Conference on Computational Mechanics, 22-24/09/2010*. Siracusa, 2010, pp. 1–4 CD.
- [53] M. Cremonesi, A. Frangi, and U. Perego. “Advances in lagrangian simulation of free-surface fluid flows and fluid-structure interaction problems”. In: *XVIII Italian Conference on Computational Mechanics, 22-24/09/2010*. Siracusa, 2010, pp. 1–4 CD.
- [54] A. Frangi, M. Pagani, and U. Perego. “Simulation of blade cutting of thin shells by ”directional” cohesive interface elements”. In: *WCCM/APCOM 2010, Invited Keynote Lecture, Minisymposium on Numerical Techniques for the Modelling of Material Failure in Solids*. Sidney, July 19-23, 2010, p. 1 CD.
- [55] U. Perego, A. Frangi, A. Giampieri, and M. Pagani. “Shell Interface Finite Elements for the Simulation of Folding and Cutting of Composite Laminates”. In: *ECCM 2010 – IV European Conference on Computational Mechanics, Invited Semi-Plenary Lecture*. Paris, France, May 16-21, 2010, pp. 1–2 CD.
- [56] U. Perego. “Computational models for the simulation of the forming process of carton packages”. In: *2nd South East European Conference on Computational Mechanics (SEECM), Invited Semi-Plenary Lecture*. Rhodes, 22-24 June, 2009, pp. 1–7 CD.
- [57] C. Comi and U. Perego. “A damage model for long term degradation in concrete dams”. In: *LTBD09-2nd Int. Conf. on Long Term Behavior of Concrete Dams*. Graz (Au), 12-13 October, 2009, pp. 1–7 CD.
- [58] M. Cremonesi, A. Frangi, and U. Perego. “A Lagrangian particle finite element method for fluid-structure interaction problems”. In: *International Conference on Particle-Based Methods, PARTICLES 2009*. Ed. by E. Onate and D. Owen. Barcelona, 2009, pp. 1–4 CD.
- [59] C. Comi and U. Perego. “A two-phase model for chemo-damage induced anisotropy in concrete”. In: *XIX Aimeta National Conference*. Ancona, September 14-17, 2009, pp. 1–9 CD.
- [60] M. Cremonesi, A. Frangi, and U. Perego. “Fluid-structure interaction solved by a Lagrangian finite element method”. In: *XIX Aimeta National Conference*. Ancona, September 14-17, 2009, pp. 1–10 CD.

- [61] U. Perego and A. Giampieri. “An interface element to model the mechanical response of crease lines for carton-based packaging”. In: *XIX Aimeta National Conference*. Ancona, September 14-17, 2009, pp. 1–10 CD.
- [62] A. Ferrara, A. Giampieri, and U. Perego. “Un elemento di interfaccia per la modellazione delle linee di cordonatura in laminati sottili”. In: *XVII Italian Conference on Computational Mechanics*. Alghero, 2008, pp. 1–4 CD.
- [63] M. Cremonesi, A. Frangi, and U. Perego. “Approccio Lagrangiano ad elementi finiti per la simulazione di problemi di interazione fluido-struttura”. In: *XVII Italian Conference on Computational Mechanics*. Alghero, 2008, pp. 1–4 CD.
- [64] M. Cremonesi, A. Frangi, and U. Perego. “A Lagrangian finite element approach to the simulation of fluid-structure interaction problems”. In: *XVIII Aimeta National Conference*. Brescia, Italy, 2007.
- [65] C. Comi, R. Fedele, and U. Perego. “Modelling concrete degradation in dams due to alkali-aggregate reaction”. In: *9th US National Conference on Computational Mechanics*. San Francisco, 2007.
- [66] C. Comi, R. Fedele, and U. Perego. “Thermo-mechanical modeling of alkali-silica reaction damage in concrete”. In: *Modelling of Heterogeneous Materials with Applications in Construction and Biomedical Engineering*. Prague, 2007.
- [67] G. Cocchetti, C. Comi, and U. Perego. “A simplified assessment of bonding strength in tiled flooring”. In: *XVIII Aimeta National Conference*. Brescia, Italy, 2007.
- [68] A. Frangi, A. Giampieri, and U. Perego. “Un codice di calcolo ad elementi finiti per la simulazione del comportamento meccanico di confezioni in laminato per prodotti alimentari”. In: *XVI Italian Conference on Computational Mechanics*. Bologna, 2006, pp. 1–4 CD.
- [69] C. Comi, R. Fedele, and U. Perego. “Damage-based simulation of AAR mechanical effects in concrete dams”. In: *WCCM VII – 7th World Conference on Computational Mechanics*. Los Angeles, 2006.
- [70] C. Comi, R. Fedele, and U. Perego. “Un modello chemo-elastico a danneggiamento per il degrado del calcestruzzo da reazione alcali-aggregati”. In: *XVI Italian Conference on Computational Mechanics*. Bologna, 2006, pp. 1–4 CD.
- [71] C. Comi, S. Mariani, and U. Perego. “Cohesive crack propagation in damaging concrete structures discretized by extended finite elements”. In: *11th International Conference on Fracture*. Turin, 2005, pp. 1–6 CD.
- [72] C. Comi, S. Mariani, M. Negri, and U. Perego. “A variational approach to cohesive-damaging crack propagation in a bar”. In: *11th International Conference on Fracture*. Turin, 2005, pp. 1–6 CD.
- [73] A. Ghisi, G. Maier, and U. Perego. “Sul calcolo delle masse aggiunte nell’interazione diga-bacino”. In: *XV Italian Conference on Computational Mechanics*. Genova, 2004, pp. 1–4 CD.
- [74] C. Comi, S. Mariani, and U. Perego. “An extended finite element strategy for the analysis of crack growth in damaging concrete structures”. In: *ECCOMAS 2004 – European Congress on Computational Methods in Applied Sciences and Engineering*, Jyvaskyla, 2004, pp. 1–4 CD.

- [75] C. Comi, S. Mariani, M. Negri, and U. Perego. “Una formulazione variazionale per la frattura coesiva di una barra in trazione”. In: *XV Italian Conference on Computational Mechanics*. Genova, 2004, pp. 1–4 CD.
- [76] M. Colombi, A. Frangi, and U. Perego. “Simulazione di propagazione di frattura in gusci sottili”. In: *XV Italian Conference on Computational Mechanics*. Genova, 2004, pp. 1–4 CD.
- [77] C. Comi, S. Mariani, and U. Perego. “Un approccio integrato continuo-discreto per l’analisi di strutture quasi-fragili”. In: *XVI AIMETA National Conference*. Ferrara, 2003, pp. 1–10 CD.
- [78] G. Cocchetti and U. Perego. “Una stima dell’errore per l’integrazione temporale di tipo ‘backward-difference’ in plasticità computazionale”. In: *XVI AIMETA National Conference*. Ferrara, 2003, pp. 1–10 CD.
- [79] G. Cocchetti and U. Perego. “Adaptive time-discretization strategy for backward-difference computational plasticity”. In: *ADMOS International Conference on Modelling and Simulation*. Goteborg, 2003, pp. 1–11 CD.
- [80] A. Corigliano and U. Perego. “Numerical Evaluation of Residual Stresses in High Speed Train Wheels”. In: *Rolling Contact Fatigue*. Brescia, 2002, pp. 1–8 CD.
- [81] C. Comi, S. Mariani, and U. Perego. “From localized damage to discrete cohesive crack propagation in nonlocal continua”. In: *WCCM V – 5th World Conference on Computational Mechanics*. Vienna, 2002, pp. 1–14 CD.
- [82] C. Comi, S. Mariani, and U. Perego. “On the transition from continuum nonlocal damage to quasi-brittle discrete crack models”. In: *III Joint Conference of Italian Group of Computational Mechanics and Ibero-Latin Association of Computational Methods in Engineering*. Giulianova, 2002, pp. 1–10 CD.
- [83] G. Cocchetti and U. Perego. “Estimation of time-step integration error for elastoplastic models”. In: *WCCM V – 5th World Conference on Computational Mechanics*. Vienna, 2002, pp. 1–9 CD.
- [84] G. Cocchetti and U. Perego. “Adaptive backward-difference time-stepping procedure for finite element hardening elastoplasticity”. In: *III Joint Conference of Italian Group of Computational Mechanics and Ibero-Latin Association of Computational Methods in Engineering*. Giulianova, 2002, pp. 1–7 CD.
- [85] S. Mariani and U. Perego. “A PU-FE approach to quasi-brittle fracture”. In: *XV AIMETA National Conference*. Taormina, 2001, pp. 1–10 CD.
- [86] C. Comi and U. Perego. “Symmetric and non-symmetric nonlocal damage formulations: an assessments of merits”. In: *ECCM-2001*. Cracow, 2001, pp. 1–19 CD.
- [87] U. Perego and A. Frangi. “A symmetric Galerkin BEM for elastoplastic problems with a Large Time Increment iterative strategy”. In: *IABEM 2000 - Symposium of the International Association for Boundary Element Methods*. Brescia, 2000, pp. 173–177.
- [88] C. Comi and U. Perego. “Formulazione simmetrica di modelli non-locali a danno”. In: *XIII Italian Conference on Computational Mechanics*. Brescia, 2000, pp. 391–404.

- [89] C. Comi and U. Perego. “A bi-dissapative damage model for concrete with applications to dam engineering”. In: *ECCOMAS 2000*. Barcelona, 2000, pp. 1–16 CD.
- [90] C. Comi and U. Perego. “Regularized structural analysis of damage propagation in concrete dams”. In: *XXI CILAMCE*. Rio de Janeiro, 2000, pp. 1–18 CD.
- [91] U. Perego and A. Frangi. “Una tecnica a ”Grande passo” per analisi elastoplastiche ad elementi di contorno”. In: *XII Italian Conference on Computational Mechanics*. Napoli, 1999, pp. 107–110.
- [92] U. Perego and A. Frangi. “A large time increment method for symmetric Galerkin boundary elements”. In: *XX CILAMCE*. Sao Paolo, Brazil, 1999, pp. 223.1–223.18.
- [93] P. Ladevèze, H. Bavestrello, and U. Perego. “Discretized large time increment methods for plasticity and viscoplasticity problems”. In: *ECCM – European Conference on Computational Mechanics*. Munich, Germany, 1999, pp. 1–20 CD.
- [94] C. Comi and U. Perego. “Regularizzazione ad energia di frattura per l’analisi del danneggiamento nel calcestruzzo”. In: *XII Italian Conference on Computational Mechanics*. Napoli, 1999, pp. 49–53.
- [95] C. Comi and U. Perego. “Modellazione del danneggiamento in trazione-compressione di materiali lapidei”. In: *XIV AIMETA National Conference*. Como, 1999, pp. 199.1–199.10.
- [96] U. Perego. “Valutazione ad elementi finiti del carico di collasso di strutture elastoplastiche”. In: *XI Italian Conference on Computational Mechanics*. Trento, 1998, pp. 129–132.
- [97] U. Perego, G. Maier, and A. Corigliano. “Abaqus applications for research at the Department of Structural Engineering of the Politecnico of Milan”. In: *Abaqus User’s Conference, Key-note lecture*. Milan, 1997, pp. 57–72.
- [98] C. Comi and U. Perego. “On visco-damage models for concrete at high strain rates”. In: *Computational Plasticity V*. Ed. by E. Oate, E. Hinton, and D. R. J. Owen. Vol. 2. Barcelona, 1997, pp. 1551–1555.
- [99] R. Meroni and U. Perego. “A simplified method for the analysis of rectangular plates subjected to impulsive loading”. In: *Joint Conference of Italian Group of Computational Mechanics and Ibero-Latin Association of Computational Methods in Engineering*. Padua, 1996, pp. 1–6 CD.
- [100] C. Comi and U. Perego. “A regularization technique for elastoplastic softening analyses based on generalized variables”. In: *Computational Plasticity IV*. Ed. by D. R. J. Owen, E. Oate, and E. Hinton. Vol. 1. Barcelona, 1995, pp. 535–546.
- [101] C. Comi and U. Perego. “Un elemento finito per analisi elastoplastiche in presenza di instabilita’ di materiale”. In: *XII AIMETA National Conference*. Napoli, 1995, pp. 7–12.
- [102] K. Cichocki, G. Maier, and U. Perego. “On numerical simulations of explosions on sealines”. In: *9th Dymat Technical Conference*. Monaco, 1995, 10pp.
- [103] G. Maier, A. Corigliano, and U. Perego. “On some effects of constitutive instabilities in structural analysis”. In: *7th MECAMAT*. Poitiers, France, 1994, 17pp.

- [104] C. Comi and U. Perego. “Una formulazione variazionale per elementi finiti in elastoplasticità”. In: *VIII Italian Conference on Computational Mechanics*. Torino, 1994, 6pp.
- [105] G. Bolzoni, S. Cuscunà, and U. Perego. “Physical and mathematical modelling of pipeline behaviour in landslide areas”. In: *9th PRC/EPRG Biennial Technical Meeting on Line Pipe Research*. Houston, 1993, pp. 5/1–5/17.
- [106] A. Corigliano and U. Perego. “Convergent and unconditionally stable finite-step dynamic implicit analysis of elastoplastic structures”. In: *New Advances in Computational Structural Mechanics*. Ed. by P. Ladevèze and O. C. Zienkiewicz. Giens, France, 1991, pp. 577–584.
- [107] G. Borino and U. Perego. “Implicit dynamic elastoplastic analysis by mode superposition”. In: *International Conference on Computational Engineering Science*. Ed. by S. N. Atluri, D. E. Beskos, R. Jones, and G. Yagawa. Melbourne, 1991, pp. 141–144.
- [108] G. Maier and U. Perego. “Effects of local softening behaviour on the dynamical response of elastic plastic-structures”. In: *WCCM II – II World Conference on Computational Mechanics*. Stuttgart, Germany, 1990.
- [109] C. Comi, G. Maier, and U. Perego. “Modelli per elementi finiti e proprietà estremali del problema ”olonomo nel passo” in elastoplasticità a variabili interne”. In: *X AIMETA National Conference*. Pisa, 1990, pp. 81–86.
- [110] G. Fossa, A. Nappi, and U. Perego. “Su di un metodo di simmetrizzazione nell’analisi elastoplastica per elementi di contorno”. In: *VIII AIMETA National Conference*. Torino, 1986, pp. 589–595.