Publications and communications

Book chapters

[1] Patrice Laure, Luisa Silva, and Michel Vincent. Modelling short fibre polymer reinforcements for composites. In Edited by P. Boisse, editor, *Composite reinforcements for optimum performance*, pages Part 4 – Characterising and Modelling Reinforcements in Composites, Pages 619–650. Woodhead Publishing Limited, 2011.

[2] Thierry Coupez, Hugues Digonnet, Elie Hachem, Patrice Laure, Luisa Silva, and Rudy Valette. Multidomain Finite Element Computations: Application to Multiphasic Problems. In David J Benson by M'hamed Souli, editor, *Arbitrary Lagrangian Eulerian and Fluid-Structure Interaction: Numerical Simulation*, pages 221–289. Wiley, 2010.

[3] Luisa Silva, Jean-François Agassant, and Thierry Coupez. Three-dimensional injection molding simulation. In Avram I Isayev by Musa R. Kamal and Shi-Jung Liu, editors, *Injection molding, technology and fundamentals*, pages Pages 599–651 – Chapter 15. Carl Hanser Verlag, 2009.

[4] Thierry Coupez, Hugues Digonnet, Patrice Laure, Luisa Silva, and Rudy Valette. Calculs {é}l{é}ments finis multidomaines : applications aux probl{è}mes multi-phasiques. In Mhamed Souli Jean-François Sigrist, editor, *Interaction fluide-structure: mod{é}lisation et simulation num{é}rique*, Trait{é} M{é}canique et ing{é}nierie des mat{é}riaux. S{é}rie Mat{é}riaux et m{é}tallurgie, pages Pages 166–205 – Chapitre 3. Hermes science publications : Lavoisier, 2009.

[5] Houssem Miled, Luisa Silva, Jean-François Agassant, and Thierry Coupez. Numerical Simulation of Fiber Orientation and Resulting Thermo-Elastic Behavior in Reinforced Thermo-Plastics. In Silvestre T Pinho Joris J C Remmers Pedro P. Camanho Carlos G. Dávila, editor, *Mechanical Response of Composites*, Computational Methods in Applied Sciences : volum 10, pages Pages 293–313. Springer, 2008.

Journal articles

[6] Thierry Coupez, Luisa Silva, and Elie Hachem. Implicit boundary and adaptive anisotropic meshing. In *New Challenges in Grid Generation and Adaptivity for Scientific Computing*, pages 1–18. Springer International Publishing, 2015.

[7] Luisa Silva, Jia-Xin Zhao, Hugues Digonnet, and Thierry Coupez. Flow simulations on 3d segmented images using reinitialization and anisotropic mesh adaptation. In *Computational Modeling of Objects Presented in Images. Fundamentals, Methods, and Applications*, pages 339–350. Springer International Publishing, 2014.

[8] Karim Hitti, Marc Bernacki, Thierry Coupez, and Luisa Silva. Elastic foam compression in a finite element (FE) context. *European Journal of Computational Mechanics*, 2013.

[9] Karim Hitti, Patrice Laure, Thierry Coupez, Luisa Silva, and Marc Bernacki. Precise generation of complex statistical Representative Volume Elements (RVEs) in a finite element context. *Computational Materials Science*, 61:224–238, 2012.

[10] Luisa Silva, Rudy Valette, Patrice Laure, and Thierry Coupez. A new three-dimensional mixed finite element for direct numerical simulation of compressible viscoelastic flows with moving free surfaces. *International Journal of Material Forming*, 5(1):55–72, 2012.

[11] Houssem Miled, Luisa Silva, Thierry Coupez, and Jean-François Agassant. Injection Molding of Fibre Reinforced Thermoplastics: Integration of Fibre Orientation and Mechanical Properties Computations. *International Polymer Processing*, 27(5):547–556, November 2012.

[12] Laurence Ville, Luisa Silva, and Thierry Coupez. Convected level set method for the numerical simulation of fluid buckling. *International Journal for Numerical Methods in Fluids*, 66(3):324–344, 2011.

[13] Luisa Silva, Rudy Valette, Patrice Laure, and Thierry Coupez. A new three-dimensional mixed finite element for direct numerical simulation of compressible viscoelastic flows with moving free surfaces. *International Journal of Material Forming*, 5(1):55–72, February 2011.

[14] Pamela Mondalek, Luisa Silva, and Michel Bellet. A Numerical Model for Powder Densification by SPS Technique. *Advanced Engineering Materials*, 13(7):587–593, July 2011.

[15] Luisa Silva, Grégory Puaux, Michel Vincent, and Patrice Laure. A monolithic finite element approach to compute permeability at microscopic and mesoscopic scales in LCM processes. *International Journal of Material Forming*, 3:619–612, 2010.

[16] Andri Andriyana, Noelle Billon, and Luisa Silva. Mechanical response of a short fiber-reinforced thermoplastic: Experimental investigation and continuum mechanical modeling. *European Journal of Mechanics A/Solids*, 29(6):1065–1077, 2010.

[17] Andri Andriyana, Noelle Billon, and Luisa Silva. Viscoelastic Characterization of Short Fibres Reinforced Thermoplastic in Tension and Shearing; Applied Mechanics and Materials. *Applied Mechanics and Materials*, 24-25:419–423, 2010.

[18] Emmanuel Foudrinier, Cécile Venet, and Luisa Silva. 3D computation of reactive moulding processes. *International Journal of Material Forming*, 1:735–738, 2008.

[19] Severine Boyer, Luisa Silva, Mounia Gicquel, Samuel Devisme, and Jean-Marc Chenot, Jean-Loup Haudin. How to determine the parameters of polymer crystallization for modelling the injection molding process? *International Journal of Material Forming*, 1:599–602, 2008.

[20] Hugues Digonnet, Olivier Basset, Luisa Silva, and Thierry Coupez. Calcul parallèle appliqué aux écoulements de fluides complexes. *European Journal of Computational Mechanics*, 16:703–722, 2007.

[21] Jean-Marc Haudin, Julia Smirnova, Luisa Silva, Bernard Monasse, and Jean-Loup Chenot. Modelling of structure development during polymer processing. *Polymer Science*, 50(5):538–549, 2007.

[22] Jérôme Bikard, Julien Bruchon, Thierry Coupez, and Luisa Silva. Numerical simulation of 3D polyurethane expansion during manufacturing process. *International Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 309:49–63, 2007.

[23] Julia Smirnova, Luisa Silva, Bernard Monasse, Jean-Marc Haudin, and Jean-Loup; Chenot. Identification of the crystallization kinetic parameters by Genetic Algorithm Inverse Method. Part I : crystallization in isothermal and non-isothermal conditions. *Engineering Computations*, 24(5), 2007.

[24] Rudy Valette, Julien Bruchon, Hugues Digonnet, Patrice Laure, Mathilde Leboeuf, Luisa Silva, Bruno Vergnes, and Thierry Coupez. Méthodes d'interaction fluide-structure pour la simulation multi-échelles des procédés de mélange. *Mécanique et Industries*, 8(2), 2007.

[25] Patrice Laure, Grégory Beaume, Olivier Basset, Luisa Silva, and Thierry Coupez. Numerical methods for solid particles in particulate flow simulations. *European Journal of Computational Mechanics*, 16:365–383, 2007.

[26] Julia Smirnova, Luisa Silva, Bernard Monasse, Jean-Marc Haudin, and Jean-Loup Chenot. Modelling of crystallization in injection molding. A 3D approach with a differential formulation of the kinetic law. *International Journal of Forming Processes*, 8:219–239, 2005.

[27] Luisa Silva, Cyril Gruau, Jean-François Agassant, Thierry Coupez, and Jocelyn Mauffrey. Advanced Finite Element 3D Injection Molding. *International Polymer Processing*, 3:265–273, 2005.

[28] Julia Smirnova, Luisa Silva, Bernard Monasse, Jean-Marc Haudin, and Jean-Loup Chenot. Structure Development in Injection Molding. A 3D Simulation with a Differential Formulation of the Kinetic Equations. *International Polymer Processing*, 2:178–185, 2005.

Submitted/in preparation

[29] Luisa Silva, Thierry Coupez, Hugues Digonnet, and Patrice Laure. 3D numerical simulation of thermal exchanges in composites. In Edited by N. Boyard, editor, *Thermal processes in composites - TCOP*. ISTE-Wiley, 2015.

[30] Luisa Silva. Polymer Injection Molding: 3D Modeling. In Edited by S. Hashmi, editor, *Encyclopedia of Materials: Science and Technology*. Elsevier, 2015.

[31] Luisa Silva, Hugues Digonnet, Jia-Xin Zhao, and Thierry Coupez. Computations on urban environments using anisotropic adaptation and implicit functions. *Journal of Computational Physics*, 2015.

[32] Jia-Xin Zhao, Thierry Coupez, Etienne Decencière, and Luisa Silva. Multiphase mesh generation from 3d image by anisotropic mesh adaptation and redistancing equation. *Journal of Computational Physics*, 2015.

[33] Hugues Digonnet, Thierry Coupez, Patrice Laure, and Luisa Silva. Massively parallel mesh adaptation. *International Journal of High Performance Computing Applications*, 2015.

[34] Luisa Silva, Thierry Coupez, and Hugues Digonnet. Massively parallel flow computations using anisotropic adaptive meshing and multigrid solvers. *International Journal of Advances in Engineering Software*, 2015.

[35] Minh-Quan Thai, Fabrice Schmidt, Gilles Dusserre, Arthur Cantarel, and Luisa Silva. 3d bem-based models to simulate free surface flow at microscale in lcm processes. *Polymer Composites*, 2015.

[36] Patrice Laure, Edith Peuvrel-Disdier, Rudy Valette, and Luisa Silva. Direct numerical computation of fiber orientation in a shear flow for non-newtonian fluids. *Composites Part A*, 2015.

International conferences

Invited and keynotes

[37] Houssem Miled, Luisa Silva, Thierry Coupez et Jean-François Agassant : Injection moulding of fibre reinforced thermoplastics: integration of fibre orientation and mechanical properties computations. *In Polymer Processing Society 27*, Marrakech, 2011.

[38] Luisa Silva, Grégory Puaux, Michel Vincent et Patrice Laure : A monolithic finite element approach to compute permeability at microscopic and mesoscopic scales in LCM processes. *In ESAFORM 13*, Brescia, 2010.

[39] Séverine Boyer, Luisa Silva, Mounia Gicquel, Samuel Devisme et Jean-Marc Chenot, Jean-Loup Haudin : The determination of the relevant parameters of polymer crystallization for process modelling. *In Polymer Processing Society 24*, Salerno, 2008.

[40] Julia Smirnova, Luisa Silva, Bernard Monasse, Jean-Marc Haudin et Jean-Loup Chenot : Modeling of anisothermal dynamic crystallization in injection molding. *In ESAFORM 8*, Cluj-Napoca, 2005.

[41] Luisa Silva, Cyril Gruau, Jean-François Agassant, Thierry Coupez et Andrès Rodriguez Villa : Advanced finite element modelling for 3D injection moulding. *In Polymer Processing Society 20*, Akron, 2004.

[42] Julia Smirnova, Luisa Silva, Bernard Monasse, Jean-Marc Haudin et Jean-Loup Chenot : Modelling of cristallization in injection moulding. A 3D approach with a general formulation of the kinetic law. *In ESAFORM 7*, Trondheim, 2004.

[43] Luisa Silva, Rudy Valette et Thierry Coupez : Viscoelastic compressible modeling of 3D filling and post-filling of complex industrial parts. *In ESAFORM 6*, Salerno, 2003.

Oral

[44] Luis Fernando Salazar Betancourt, Patrice Laure, Luisa Silva, and Mustafa Sager. Numerical implementation of a rheology model for fiber-reinforced composite and viscous layer approach for friction study. In *Key Engineering Materials*, volume 651, pages 848–854, 2015.

[45] Thierry Coupez, Luisa Silva, and Hugues Digonnet. Massively parallel mesh adaptation for multiphase flows. In *27th International Conference on Parallel Computational Fluid Dynamics, ParCFD 2015*, 2015.

[46] Hugues Digonnet, Thierry Coupez, and Luisa Silva. Using full tier0 supercomputers for fem computations with adaptive meshing. In *The Fourth International Conference on Parallel, Distributed, Grid and Cloud Computing for Engineering, ParENG 2015*, 2015.

[47] Jérôme Claracq, Guillaume François, Laurence Ville, and Luisa Silva. Advanced simulation of pu mould filling. In *ICMCSF: International Conference on Mechanics of Complex Solids and Fluids, ICMCSF 2015*, 2015.

[48] Luisa Silva, Hugues Digonnet, and Thierry Coupez. Flow computations on urban environments using anisotropic adaptation and implicit functions. In *7th International Conference on Adaptive Modeling and Simulation, ADMOS 2015*. International Center for Numerical Methods in Engineering, 2015.

[49] Hugues Digonnet, Luisa Silva, and Thierry Coupez. Prace project results : Performing calculations on full tier0 supercomputers with mesh adaptation and fem very large linear systems. In *7th International Conference on Adaptive Modeling and Simulation, ADMOS 2015*. International Center for Numerical Methods in Engineering, 2015.

[50] Jia-Xin Zhao, Thierry Coupez, and Luisa Silva. Numerical simulation on multiphase microstructures obtained from 3d imaging. In *7th International Conference on Adaptive Modeling and Simulation, ADMOS 2015*. International Center for Numerical Methods in Engineering, 2015.

[51] Thierry Coupez, Luisa Silva, and Hugues Digonnet. Adaptive anisotropic meshing and implicit boundary for general multiphase computation. In *FEF 2015*, 2015.

[52] L Silva, JX Zhao, P Laure, and T Coupez. Direct generation of finite element meshes of composite micro and mesostructure from 3d imaging: Application to flow computation. In *FPCM-12*, 2014.

[53] P Laure, L Silva, R Valette, and E Peuvrel-Disdier. Direct numerical orientation of fiber in shear flow for complex fluids. In *FPCM-12*, 2014.

[54] C Sarkis[1], L Silva, and Ch-A Gandin. 2d and 3d thermal dendritic solidification modeling using the phase-field method and automatic adaptive meshing. 2014.

[55] Guillaume François, Laurence Ville, Luisa Silva, and Michel Vincent. Multi criteria adaptive meshing for polymers processing in rem3d®. In *Key Engineering Materials*, volume 554, pages 1649–1657, 2013.

[56] Hugues Digonnet, Luisa Silva, and Thierry Coupez. Massively parallel computation on anisotropic meshes. In *6th International Conference on Adaptive Modeling and Simulation, ADMOS 2013*, pages Pages–199. International Center for Numerical Methods in Engineering, 2013.

[57] Jean-François Zaragoci, Luisa Silva, Michel Bellet, and Charles-André Gandin. Numerical tensile test on a mushy zone sample. *IOP Conference Series: Materials Science and Engineering*, 33(1):012054, 2012.

[58] Vu-Thu Pham, Luisa Silva, Hugues Digonnet, Christelle Combeaud, Noelle Billon, and Thierry Coupez. Modelling viscoelastic behaviour of polymer by a mixed velocity, displacement formulationŮnumerical and experimental results. In *THE 14TH INTERNATIONAL ESAFORM CONFERENCE ON MATERIAL FORMING: ESAFORM 2011*, volume 1353, pages 785–790. AIP Publishing, 2011.

[59] Nadine KOSSEIFI, Elie HACHEM, Luisa SILVA, Elisabeth MASSONI, and Thierry COUPEZ. 3d numerical solution for quenching process using an adaptative multiphase flows. *20ème Congrès Français de Mécanique, 28 août/2 sept. 2011-25044 Besançon, France (FR)*, 2011.

[60] Patrice Laure, Grégory Puaux, Luisa Silva, and Michel Vincent. Permeability computation on a rev with an immersed finite element method. In *THE 14TH INTERNATIONAL ESAFORM CONFERENCE ON MATERIAL FORMING: ESAFORM 2011*, volume 1353, pages 978–983. AIP Publishing, 2011.

[61] Karim HITTI, Thierry COUPEZ, Luisa SILVA, and Marc BERNACKI. Generation of cellular representative elementary volumes (revs) in a finite element (fe) context-application to foam compression. *20ème Congrès Français de Mécanique, 28 août/2 sept. 2011-25044 Besançon, France (FR)*, 2011.

[62] Nadine Kosseifi, Elie Hachem, Luisa Silva, Elisabeth Massoni, and Thierry Coupez. Numerical simulation of quenching process using an adaptative levelset method. In *The fourth conference on Computational Methods for Coupled Problems in Science and Engineering (Coupled 2011)*. International Center for Numerical Methods in Engineering (CIMNE), 2011.

[63] Thierry Coupez, Hugues Digonnet, Marc Bernacki, Elie Hachem, and Luisa Silva. Adaptation de maillage anisotrope: théorie et applications. In *10e colloque national en calcul des structures*, pages 2–p, 2011.

[64] Paméla Mondalek, Luisa Silva, and Michel Bellet. Modeťlisation numeťrique des pheťnome'nes de chauffage et de densification durant le proceťdeť de frittage flash. In *10e colloque national en calcul des structures*, pages 8–p, 2011.

[65] Pamela Mondalek, Luisa Silva, Lise Durand, and Michel Bellet. Numerical modelling of thermal-electrical phenomena in spark plasmasintering. *NUMIFORM 2010*, pages 697–704, 2010.

[66] Michel Bellet, Pamela Mondalek, and Luisa Silva. Numerical modelling of sps process. In *Steel Research International*, volume 81, pages Pages–1340, 2010.

[67] Grégory Puaux, Luisa Silva, Patrice Laure, and Michel Vincent. Calcul de la perméabilité à l'échelle du ver d'un milieu fibreux non saturé par une approche éléments finis monolithique. In *CFM'09-XIXème Congrès Français de mécanique*, pages 6–pages. CFM, 2009.

[68] Youssef Mesri, Walid Zerguine, Hugues Digonnet, Luisa Silva, and Thierry Coupez. Dynamic parallel adaption for three dimensional unstructured meshes: Application to interface tracking. In *Proceedings of the 17th International Meshing Roundtable*, pages 195–212. Springer, 2008.

[69] Hugues Digonnet, Luisa Silva, and Thierry Coupez. Cimlib: a fully parallel application for numerical simulations based on components assembly. In *MATERIALS PROCESSING AND DESIGN; Modeling, Simulation and Applications; NUMIFORM'07; Proceedings of the 9th International Conference on Numerical Methods in Industrial Forming Processes*, volume 908, pages 269–274. AIP Publishing, 2007.

[70] P Laure, L Silva, T Coupez, and F Toussaint. Numerical modelling of concrete flow with rigid fibers. *10 th Esaform Conference on Material Forming: Part A (AIP Conference Proceedings Volume 907)*, 907:1390–1395, 2007.

[71] Hugues Digonnet, Marc Bernacki, Luisa Silva, and Thierry Coupez. Adaptation de maillage en parallèle, application à la simulation de la mise en forme des matériaux. *18ème Congrès Français de Mécanique (Grenoble 2007)*, 2007.

[72] Rudy Valette, Julien Bruchon, Hugues Digonnet, Patrice Laure, Mathilde Leboeuf, Luisa Silva, Bruno Vergnes, and Thierry Coupez. Techniques d'interaction fluide-structure et théories cinétiques pour la simulation des procédés de mélange des polymères. *18ème Congrès Français de Mécanique (Grenoble 2007)*, 2007.

[73] Omar MAHDAOUI, Jean-François AGASSANT, P Laure, R Valette, and L Silva. Etude numérique de la coextrusion de polyester. *18ème Congrès Français de Mécanique (Grenoble 2007)*, 2007.

[74] Walid Zerguine, Luisa Silva, Thierry Coupez, Hugues Digonnet, and Andrès Rodriguez-Villa. Capture d'interface et application au procédé d'injection assistée eau. *18ème Congrès Français de Mécanique (Grenoble 2007)*, 2007.

[75] L Silva, W Zerguine, A Rodriguez-Villa, and T Coupez. 3d simulation of water assisted injection molding: Multiphase model and interface capturing. 2007.

[76] Luisa Silva, Houssem Miled, Patrice Laure, and Thierry Coupez. Injection molding simulation: Taking into account the process history to predict the anisotropy in the end-use properties. In *Materials Processing and Design, Modeling, Simulation and Applications, NUMIFORM'07: 9th International Conference on Numerical Methods in Industrial Forming Processes*, volume 908, pages Pages–355, 2007.

[77] Luisa Silva, Rodolf Lanrivain, Walid Zerguine, Andres Rodriguez-Villa, and Thierry Coupez. Two-phase model of liquid-liquid interactions with interface capturing: Application to water assisted injection molding. In *Materials Processing and Design, Modeling, Simulation and Applications, NUMIFORM'07: 9th International Conference on Numerical Methods in Industrial Forming Processes*, volume 908, pages Pages–361, 2007.

[78] Patrice Laure, Luisa Silva, Thierry Coupez, and Fabrice Toussaint. Simulations numériques de l'écoulement de béton chargé de fibres. In *18ème Congrès Français de Mécanique Grenoble-CFM 2007*, pages 6–pages, 2007.

[79] Omar Mahdaoui, Jean-François Agassant, Patrice Laure, Rudy Valette, and Luisa Silva. Numerical simulation of polyester coextrusion: Influence of the thermal parameters and the die geometry on interfacial instabilities. In *Aip Conference Proceedings*, volume 907, pages Pages–873. American Institute of Physics, 2007.

[80] R Lanrivain, L Silva, and T Coupez. A two-phase numerical modelling of the liquid solid transition in polymer processing. In *III European Conference on Computational Mechanics*, pages 95–95. Springer, 2006.

[81] Thierry Coupez, Hugues Digonnet, Andres Rodriguez-Villa, Walid Zerguine, and Luisa Silva. Multifluid flows, interface capturing and application to the simulation of the water assisted injection molding process. In *22nd Annual Meeting of the Polymer Processing Society (PPS-22)*, pages 2–pages, 2006.

[82] A Redjeb, L Silva, P Laure, M Vincent, and T Coupez. Numerical simulation of fibre orientation in injection molding process. *Proceedings of the Polym. Proc. Soc*, 21, 2005.

[83] P Laure, G Beaume, O Basset, L Silva, and T Coupez. Les méthodes numériques pour les écoulements de fluides chargés. *1er colloque du GDR interactions fluidestructure*, 2005.

[84] L Silva and T Coupez. A unified model of the filling and post-filling stages in 3d injection moulding simulation. *Polymer Processing Society*, 18, 2002.

[85] JP Nunes, JF Silva, L Silva, AT Marques, and PJ Novo. The development of a dry coating process to produce glass reinforced thermoplastic matrix towpreg. *Proceedings of 9th European Conference on Composite Materials-ECCM*, 9, 2000.

National conferences

Invited and keynotes

[86] Luisa Silva. Les apports de la simulation en mise en forme de polymères, pour une meilleure prédiction des propriétés induites. In *7eme Rencontre Innovation Plasturgie en Auvergne*, Puy-en-Velay, 2015.

[87] Luisa Silva. Tendances et méthodes numériques pour la simulation en mise en forme de polymères, pour une meilleure prédiction des propriétés induites. In *Colloque SFIP Les nouveaux défis de la plasturgie: de la formulation aux propriétés*, Sophia-Antipolis, 2012.

[88] Pamela Mondalek, Luisa Silva, and Michel Bellet. Simulation numérique du couplage électrique-thermique-mécanique du procédé du frittage flash. In *Matériaux 2010*, Nantes, 2010.

[89] Luisa Silva and Andrès Rodriguez Villa. Rem3D: applications de l'injection 3D dans le secteur automobile. In *Colloque SFIP Carrosserie et plastiques*, Sophia-Antipolis, 2004.

Oral

[90] Tanguy Laurencin, Laurent Orgéas, Pierre Dumont, Sabine Rolland du Roscoat, Steven Le Corre, Patrice Laure, and Luisa Silva. Micro-tomographie dédié à lŠobservation 3d in-situ de la rhéologie de composites polymères renforcés par des fibres courtes. In *19emes Journées Nationales des Composites*, Lyon, 2015.

[91] Luisa Silva, Jia-Xin Zhao, Patrice Laure, Hugues Digonnet, and Thierry Coupez. Génération automatique de maillages de micro et mesostructures à partir dŠimagerie 3d. applications à la simulation massivement parallèle dŠécoulements dans les matériaux composites. In *2emes Journées Matériaux Numériques*, Beauval, 2015.

[92] Nadine Kosseifi, Elie Hachem, Luisa Silva, and Thierry Coupez. 3D numerical solution for quenching process using an adaptative multiphase flows. In *20eme Congrès Français de Mécanique*, Besançon, 2011.

[93] Karim Hitti, Patrice Laure, Thierry Coupez, Luisa Silva, and Marc Bernacki. Generation of cellular Representative Elementary Volumes (REVs) in a finite element (FE) context - Application to foam Compression. In *20eme Congrès Français de Mécanique*, Besançon, 2011.

[94] Thierry Coupez, Hugues Digonnet, Marc Bernacki, Elie Hachem, and Luisa Silva. Adaptation de maillage anisotrope : théorie et applications. In *10e colloque national en calcul des structures, CSMA 2011*, Presqu'île de Giens, 2011.

[95] Nadine Kosseifi, Elie Hachem, Luisa Silva, Séverine Boyer, Elisabeth Massoni, and Thierry Coupez. Numerical simulation of boiling during the quenching process. In *10e colloque national en calcul des structures, CSMA 2011*, Presqu'île de Giens, 2011.

[96] Vu-Thu Pham, Luisa Silva, Hugues Digonnet, Christelle Combeaud, Noelle Billon, and Thierry Coupez. Formulation Mixte Vitesse Déplacement pour Viscoélasticité. Confrontation Expérimentale et Numérique. In *10e colloque national en calcul des structures, CSMA 2011*, Presqu'île de Giens, 2011.

[97] Pamela Mondalek, Luisa Silva, and Michel Bellet. Simulation numérique du couplage électrique-thermique-mécanique du procédé du frittage flash. In *10e colloque national en calcul des structures, CSMA 2011*, Presqu'île de Giens, 2011.

[98] Grégory Puaux, Luisa Silva, Patrice Laure, and Michel Vincent. Calcul de la perméabilité à l'échelle du VER d'un milieu fibreux par une approche éléments finis monolithique. In *19eme Congrès Français de Mécanique*, Marseille, 2009.

[99] Andri Andriyana, Luisa Silva, and Noelle Billon. Comportement mécanique d'un thermoplastique chargé de fibres courtes. Études expérimentales et modélisation. In *DEPOS 22*, La Colle sur Loup, 2009.

[100] Grégory Puaux, Patrice Laure, Luisa Silva, and Michel Vincent. Calcul de la perméabilité d'un milieu fibreux à l'échelle microscopique. In *44eme Colloque du Groupement Français de Rhéologie*, Strasbourg, 2009.

[101] Séverine Boyer, Luisa Silva, Jean-Loup Chenot, and Jean-Marc Haudin. Caracterisation expérimentale et modélisation de la cristallisation du polypropylene. Application dans les procédés d'injection. In *35eme Journées d'Etudes des Polymères*, La Colle sur Loup, 2007.

[102] Rudy Valette, Julien Bruchon, Hugues Digonnet, Patrice Laure, Mathilde Leboeuf, Luisa Silva, Bruno Vergnes, and Thierry Coupez. Techniques d'interaction fluide-structure et théories cinétiques pour la simulation des procédés de mélange des polymères. In *18ème Congrès Français de Mécanique*, Grenoble, 2007.

[103] Hugues Digonnet, Marc Bernacki, Luisa Silva, and Thierry Coupez. Adaptation de maillage en parallèle, application à la simulation de la mise en forme des matériaux. In *18ème Congrès Français de Mécanique*, Grenoble, 2007.

[104] Walid Zerguine, Luisa Silva, Thierry Coupez, Hugues Digonnet, and Andrès Rodriguez-Villa. Capture d'interface et application au procédé d'injection assistée eau. In *18ème Congrès Français de Mécanique*, Grenoble, 2007.

[105] Omar Mahdaoui, Patrice Agassant, Jean-François Laure, Rudy Valette, and Luisa Silva. Etude numérique de la coextrusion de polyester : Effet de la régulation thermique et de la géométrie de la filière sur la stabilisation des instabilités interfaciales. In *18ème Congrès Français de Mécanique*, Grenoble, 2007.

[106] Patrice Laure, Luisa Silva, Thierry Coupez, and Fabrice Toussaint. Simulations numériques de l'écoulement de béton chargé de fibres. In *18ème Congrès Français de Mécanique*, Grenoble, 2007.

[107] Abla Redjeb, Patrice Laure, Luisa Silva, Michel Vincent, and Thierry Coupez. Simulations numériques de l'orientation de fibres en injection de thermoplastique renforcé. In *17ème Congrès Français de Mécanique*, Troyes, 2005.

[108] Hugues Digonnet, Olivier Basset, Thierry Coupez, and Luisa Silva. Calcul parallèle appliqué aux écoulements de fluides complexes;. In *17ème Congrès Français de Mécanique*, Troyes, 2005.

[109] Luisa Silva, Mathieu Barré, Hugues Digonnet, Cyril Gruau, and Thierry Coupez. Avancement et perspectives dans la simulation numérique tridimensionelle de l'injection de polymères. In *16ème Congrès Français de Mécanique*, Nice, 2003.

[110] Joao Francisco Silva, Joao Paulo Nunes, Luisa Silva, Antonio Pouzada, and Antonio Torres Marques. Fabrico de Towpregs. In *MATCOMP 99 III Congreso Nacional de Materiales Compuestos*, Benalmadena, 1999.