

Références

Thèse ou Livre ou chapitre de livre

- [E1] J. Pousin. *Analyse numérique de problèmes de thermo-hydraulique liés la convection naturelle ou mixte*. PhD thesis, Université Pierre et Marie Curie, 1983.
 - [E2] J. Pousin. Modélisation et analyse numérique de couches limites réactives d'air. *EPFL*, 1993.
 - [E3] J. Pousin F. Butin, M. Picq. *Mathématiques 2^{ème} année de classes préparatoires intégrées*. ellipse, 2013.
 - [E4] P. Clarysse ; D. Friboulet. *Multi-modality Cardiac Imaging : Prossesing and analysis rédaction de 2 chapitres*, volume ISBN : 978-1-84821-235-0 of *Digital signal and image processing series*. Wiley-IEST, 2015.
 - [E5] P. Clarysse ; D. Friboulet. *Traitement et analyse d'images cardiaques rédaction de 2 chapitres*. Traité Information et Science du Vivant. Hermes-Lavoisier, ISBN : 9782746246843 2014.
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Revue internationale avec comité de lecture

- [A6] P. Lesaint and J. Pousin. Existence and approximation results for thermal boundary layer equations of reactive flows. *SIAM Jour. on Num. Anaysis*, 28 :1030–1046, 1991.
- [A7] P. Lesaint and J. Pousin. Errors estimates for a nonlinear degenerate parabolic problem. *Mathematics of computation*, 59(200) :339–358, 1992.
- [A8] L. Pouly and J. Pousin. A spray combustion problem. *Math. Model. Meth. in Applied Sciences*, 2 :237–249, 1994.
- [A9] J. Pousin and J. Rappaz. Consistency, stability, a priori and a posteriori errors for petrov-galerkin methods applied to nonlinear problems. *Numeriche Mathematik*, 69 :213–231, 1994.
- [A10] L. Pouly and J. Pousin. Modelling and analysis of a problem of combustion of a spray of droplets. *ZAMM*, 75(8) :583–597, 1995.
- [A11] F. Sanchez P. Moszkowicz J. Pousin and R.Barna. Lixiviation de solides poreux : Modèèle de transfert de matière couplant dissolution et diffusion. *le Génie des Procédés Complexes*, 9(42) :412–418, 1995.
- [A12] P. Moszkowicz J. Pousin and F. Sanchez. Diffusion and dissolution in reactive porous medium : Mathematical modelling. *jour. of computational and applied mathematics*, 66 :377–389, 1996.
- [A13] E. Maisse and J. Pousin. Diffusion and dissolution/precipitation in a reactive porous medium. *Jour. of Computational and Applied Mathematics*, 82 :279–290,, 1997.
- [A14] L. Pouly and J. Pousin. Adaptive finite element for semi-linear convection diffusion problems. *Advances Computational Mathematics*, 7 :2353–259, 1997.
- [A15] J. Pousin and T. Sassi. Domain decomposition with nonmatching grids and mixed formulation in spaces $w^{1,p} w^{1,q}$. *ZAMM*, 77(9) :639–644, 1997.
- [A16] N. Brossard M. Croset S. Normand J. Lecerf M. Laville J. Pousin J.L. Tayot and M. Lagarde. Human plasma albumin transports docosahexaenoic acid in two lipid forms to blood cells : in vivo characterisation using ¹³C tracer isotopes. *Journal of Lipids*, 38(8) :1571–1582, 1997.
- [A17] J. Pousin and A. Roukbi. Identification of diffusion coefficient for a semi linear hyperbolic-parabolic problem with jumping non linear terms. *Computational Geosciences*, 2 :241–258, 1998.
- [A18] D. Lemaitre Delaunay C. Pachiaudi M. Laville J. Pousin M. Armstrong and M. Lagarde. Blood compartmental metabolism of transports docosahexaenoic acid (dha) in humans after ingestion of a single dose of ¹³Cdha in phosphatidylcholine. *Journal of Lipids research*, 40(10), 1999.
- [A19] R. Aboulaich S. Afilal and J. Pousin. Sur un modèle de pollution en milieu poreux. *Math-Recherche et Applications*, 2 :108–120, 2000.
- [A20] J. Pousin. Infinitely fast kinetics for dissolution and diffusion in open reactive systems. *Nonlinear Analysis Theory and Applications*, 39 :261–279, 2000.
- [A21] J. Pousin and T. Sassi. Domain decomposition with nonmatching grids. *Est-West journal of numerical analysis*, 8 :243–256, 2000.
- [A22] J. Pousin and T. Sassi. A psteriori error for nonconforming petrov-galerkin method applied to nonlinear problems. *International Journal of Applied Mathematics*, 2(3) :399–409, 2000.
- [A23] A. Aboulaich S. Boujena and J. Pousin. A numerical analysis of resin transfert molding. *Maroccan Journal of Condenced Matter*, 4 :100–104, 2001.
- [A24] A. Aboulaich S. Boujena and J. Pousin. A mathematical model for resin transfert molding. *Annales Mathematiques Blaise Pascal*, 8 :59–70, 2002.

- [A25] A. Aboulaich S. Boujena and J. Pousin. A numerical analysis of resin transfert molding. *Maroccan Journal of Condensed Matter*, 5(1), 2004.
- [A26] B. Faugeras and J. Pousin. Variational asymptotic derivation of an elastic model arising from the problem of 3d automatic segmentation of cardiac images. *Analysis and Applications*, 2(4) :1–33, 2004.
- [A27] F. Sanchez J. Pousin, P. Moszkowicz. Diffusion and dissolution : modelling of the leaching of lime and lead in a porous medium. *Transactions of the Wessex Institute Online Collection*, 2004.
- [A28] E. Maisse and J. Pousin. Finite element approximation of mass transfer in a porous medium with non equilibrium phase change. *J. of Numerical Mathematics*, 2(4) :207–231, 2004.
- [A29] A. Maazouz A. Mikelic J. Pousin and E. Zeltz. Fluid injection model without surface tension for resins in thin molds. *Jour. of Computational and Applied Mathematics*, (164-165) :517–528, 2004.
- [A30] P. Pebay J. Pousin and H. N. Najm. A non-split strategy for low mach number flows. *International Journal for Multiscale Computational Engineering*, 2(3) :445–460, 2004.
- [A31] O. Besson and J. Pousin. Hele-shaw approximation for resin transfer molding. *ZAMM*, 85(4) :227–241, 2005.
- [A32] J. Pousin and T. Sassi. Error estimates and domain decomposition with non matching grids. *Advances in Computational Mathematics*, 23(3) :241–263, 2005.
- [A33] M. Cabrera T. Clopeau A. Mikelic and J. Pousin. Approximation de la lubrification pour l'étalement d'une goutte en présence d'évaporation : application aux biopuces. *La Houille Blanche*, 2 :92–99, 2006.
- [A34] B. Faugeras J. Pousin and F. Fontvielle. An efficient numerical scheme for precise time integration of a diffusion-dissolution/precipitation chemical system. *Math. of Comp*, 75 :209–222, 2006.
- [A35] O. Besson and J. Pousin. Solution for linear conservation laws with velocity field in l^∞ . *Archive of Ration. Mech. and Ana.*, 186(1) :159–175, 2007.
- [A36] Mouhib O. Chereji B. Marquis-Favre W. Thomasset D. Pousin J. Picq M. Procedure for the bond graph construction of an optimal control problem. *Int. J. Tomogr. Stat.*, 5(W07) :56–61, 2007.
- [A37] F. Fontvielle G. Panassenko and J. Pousin. F.e.m. implementation for the asymptotic partial decomposition. *Applicable Analysis*, 86 :519 – 536, 2007. issue 5.
- [A38] M. Picq J. Pousin and Y. Rouchdy. A linear 3d elastic segmentation model for vector fields. application to the heart segmentation in mri. *Journal of Mathematical Imaging and Vision*, 27(3) :241–255, 2007.
- [A39] Y. Rouchdy J. Pousin J. Schaerer and P. Clarysse. A nonlinear elastic deformable template for soft structure segmentation. application to heart segmentation in mri. *Jour. of Inverse Problems*, 23(3) :1017–1035, 2007.
- [A40] T. Serradj A. Bouhedja J. Pousin O. Slimanini and K. M. Behim. Equipment selection by numerical resolution of the hessian matrix and topsis algorithm. *Asean Journal of Information and Technology*, 6(1) :81–88, 2007.
- [A41] M. Picq J. Pousin. Resolution of the transport equation subject to constraint. *Journal of Computational and Applied Mathematics*, 218(2) :364–375, 2008.
- [A42] W. Marquis-Favre O. Mouhib B. Chereji D. Thomasset J. Pousin and M. Picq. Bond graph formulation of an optimal control problem for linear time-invariant systems reference. *Journal of the Franklin Institute*, 345(4) :349–373, 2008.
- [A43] Pousin J. Singular perturbations for heart image segmentation tracking. *Mathematical Modelling of Natural Phenomena*, 5(1) :185–195, 2009.
- [A44] Clarysse P. Delhay B. Picq M. Pousin J. Optimal extended optical flow subject to a statistical constraint. *Journal of Computational and Applied Mathematics*, 234 :1291–1302, 2010.
- [A45] Diallo O. Kone Y. Pousin J. Dynamics and thresholds of a simple epidemiological model : example of hiv/aids in mali. *International Journal of Mathematics and Mathematical Sciences*, doi :10.1155/2010/638021, 2010.
- [A46] P. Clarysse J. Schaerer C Casta J. Pousin. A dynamic elastic model for segmentation and tracking of the heart in mr image sequences. *Medical Image Analysis*, 14 :738–749, 2010.
- [A47] Boujena S. Chiboub A. and Pousin J. Transport equation reduction for a mathematical model in plant growth. *Mathematical Modelling of Natural Phenomena*, 6(02) :160–172, 2011.
- [A48] O. Besson and J. Pousin. Solving a linear conservation law subject to initial and final conditions. *Jour. of Inverse Problems*, 27(11 doi :10.1088/0266-5611/27/11/115007), 2011.
- [A49] M. Alassane. O. Diallo. and J. Pousin. Individual behavior and epidemiological model. *Journal of Applied Mathematics and Bioinformatics*, 1(2), 2011.
- [A50] Clarysse P. Picq M. Pousin J. Optimal extended optical flow and statistical constraints : A result of convergence. *Journal of Computational and Applied Mathematics*, 235 :1840–1848, 2011.
- [A51] S. Boujena A. Chiboub and J. Pousin. A numerical scheme for the transport of nutrients and hormones in plant growth. *Afrika Matematika*, DOI 10.1007/s13370-012-0129-z, 2012.

- [A52] J. Pousin and K. Slimani. Asymptotic domain decomposition and a posteriori estimates for a semi linear problem. *British Journal of Mathematics and computer Sciences pp. 226-241*, DOI : 10.9734/BJMCS/2012/1632, 2012.
- [A53] M. Belhout J. Pousin and Y. Renard. Singular perturbation with a reduced approximation order in space for the transport equation. *International Mathematical Forum*, 7(27) :1309 1315, 2012.
- [A54] O. Diallo Y. Kone J. Pousin. A model of spatial spread of an infection with applications to hiv/aids in mali. *Applied Mathematics*, 3 :1877–1881, 2012.
- [A55] G. Buscaglia J. Pousin and K. Slimani. A posteriori estimate and asymptotic partial domain decomposition. *Applicable Analysis*, 92 : 2573-2589 dx.doi.org/10.1080/00036811.2012.746965, 2013.
- [A56] F. Dabaghi A. Petrov J. Pousin and Y. Renard. Convergence of mass redistribution method for the wave equation with a unilateral constraint at the boundary. *M2AN*, 4 pp. 1144-1169, 2014.
- [A57] K. Benmansour and J. Pousin. Singular perturbations for a problem of cardiac images tracking. *Asymptotic Analysis*, 92(1) :161–185, 2015.
- [A58] Mahamadou Alassane Amadou Mahamane Ouatni Diallo and Jerome Pousin. Mathematical model of hiv-1 circulating recombinants forms in mali. *Journal of Modelling and Simulation*, 3(04) :137–145, 2015.
- [A59] C. Beitone K. Bianchi P. Bouges R. Stoica V. Tuyisenge L. Cassagnes F. Chausse P. Clarysse G. Clerfond P. Croisille C. Merlin J. Pousin C. Tilmant A. Vacavant and L. Sarry. Multimodal quantification and validation of 3d regional myocardial function. *IRBM*, 2015.
- [A60] F. Dabaghi A. Petrov J. Pousin and Y. Renard. A robust finite element redistribution approach for elastodynamic contact problems. *APNUM*, 103 :48–71, 2016.
- [A61] M. Favre J. Pousin and Y. Renard. A fictitious domain method for frictionless contact problems in elasticity using nitsche’s method. *en révision SMAI-JCM*, 2016.
- [A62] F. Chouly M. Fabre P. Hild J. Pousin and Y. Renard. Residual-based a posteriori error estimation for contact problems approximated by nitsche’s method. *En révision IMA* 2015.

CRAS

- [B63] J. Pousin. Un résultat d’existence et d’unicité pour le problèmes bidimensionnel de neuman-kelvin. *Comptes Rendus à l’Académie des Sciences de Paris, série I*, 301 :947–953, 1985.
- [B64] J. Pousin and J. Rappaz. Consistance, stabilité, erreurs a priori et a posteriori pour des problèmes non linéaires. *Comptes Rendus à l’Académie des Sciences de Paris, série I*, 312 :699–703, 1991.
- [B65] P. Azerad and J. Pousin. Inégalité de poincaré courbe pour le traitement variationnel de l’équation de transport. *Comptes Rendus à l’Académie des Sciences de Paris, série I*, 322 :721–727, 1996.
- [B66] J. Pousin A. Roukbi R. Gourdon P. Legoff and P. Moszkowicz. Evaporation d’une substance organique dans un milieu poreux. *Comptes rendus de l’Académie des Sciences de Paris, série II b* :371–377, 1999.
- [B67] O. Diallo J. Pousin and T. Sassi. Estimateur d’erreur a posteriori et formulation variationnelle de l’équation du transport. *C.R.A.S. de Paris t;329 série I*, pages 1021–1026, 1999.
- [B68] F. Fontvielle G. Panasenko and J. Pousin. Asymptotic decomposition of a singular perturbation problem with unbounded energy. *C.R.A.S. de Paris série II*, 330 :1–6, 2002.

Congrès internationaux avec actes et comité de lecture

- [C69] J. Pousin M. Verriere and M. Lenoir. Study of the application of the localized finite element method for the resolution of the 2-d neuman-kelvin problem. In *First Int. Workshop on Water Waves and Floating Bodies*, pages 137–144, Boston MIT, 1986. MIT.
- [C70] E. Boillat and J. Pousin. Numerical investigation of the 2-d reactive boundary layer equations. In R. Gruber J. Perriaux, editor, *Fifth Int. Symp. on Numerical Methods in Engineering*, pages 530–536, EPFL Lausanne, 1989. Elsevier.
- [C71] E. Boillat and J. Pousin. Numerical computations of the 2-d reactive and stationary boundary layer. In INRIA R. Glowinski, editor, *Computing Methods in Applied Sciences and Engineering*, pages 309–319. Nova Sciences, 1992.
- [C72] L. Pouly and J. Pousin. Modelling and numerical investigations of a droplets combustion problem. In *First European Conference on Numerical Methods in Engineering*, pages 851–856. Elsevier North Holland, 1992.
- [C73] L. Pouly and J. Pousin. Modelling and analysis of a problem of combustion of a spray of droplets. In J.P. Zolésio, editor, *IFIP Boundary control and boundary variation*, Lecture notes in control and information sciences, pages 333–356. Springer-Verlag, 1994.

- [C74] E. Maise P. Moszkowicz J. Pousin and F. Sanchez. Diffusion and dissolution/precipitation in a reactive porous medium : modelling and numerical simulations. In A. Bourgeat C. Carasso S. Lukaus and A. Mikelic, editors, . *Int. Conf. on Mathematical Modelling of Flow Through Porous Media*, pages 440–450, St Etienne France, 1995. World Scientific.
- [C75] P. Moszkowicz J. Pousin and F. Sanchez. Diffusion and dissolution : modelling of the leaching of lime and lead in a porous medium. In . *Third Int. Conf. Moving boundaries*, pages 221–229. Computational Mechanics Publications Southampton, Boston, 1995.
- [C76] P. Azerad P. Perrochet and J. Pousin. Space-time integrated least-square : a simple, stable and precise finite element scheme to solve advection equations as they were elliptic. In M. Chipot and I. Shafir, editors, *Progress in Partial Differential Equations : the Metz surveys 4*, 345, pages 240–252. Pitman Longman Research Notes in Mathematics, 1996.
- [C77] J. Pousin and T. Sassi. Adaptive finite element and domain decomposition with nonmatching grids. In *ECCO-MAS 96*. J. Willey Sons, 1996.
- [C78] J. Pousin. Inf-sup conditions for elliptic operator in the spaces $w^{1,p}$; $w^{1,q}$ approximated with lagrange finite element. In J.P. Zolésio G. Da Prato, editor, , *partial differential equation methods in control and shape analysis*, Lecture notes in pure and applied mathematics, pages 259–273. M. Dekker, 1997.
- [C79] S. Afilal R. Aboulaich and J. Pousin. Identifying the pollutant concentration in liquid phase by analyzing the gaseous phase. In *CIMASI'98 Deuxième Conférence Internationale sur les Mathématiques Appliquées et les Sciences de l'Ingénieur*, Actes tome 2, pages 604–609, Université Hassan II Casablanca Maroco, 1998.
- [C80] R. Aboulaich S. Boujena and J. Pousin. Etude mathématique d'un modèle simple pour un procédé r.t.m. In *CIMASI'98 Deuxième Conférence Internationale sur les Mathématiques Appliquées et les Sciences de l'Ingénieur*, Actes tome 1, pages 184–188, Université Hassan II Casablanca Maroco, 1998.
- [C81] J. Pousin and T. Sassi. A posteriori error estimates with non matching grids. In Dimitor Kolev Editor, editor, *Eigth International Colloquium on Differential Equations*, Plovdiv Bulgaria, 1998. Academic Publication.
- [C82] P. Moszkowicz J. Pousin and F. Sanchez. Diffusion and dissolution in reactive porous medium : Mathematical modelling. In J. M. Crolet, editor, . *Computational methods for transfer of solutes in porous media*, . Journées Numériques de Besançon. Wuerz Publishing, 1998.
- [C83] O. Diallo E. Leroy A. Maazouz J. Pousin and M.Raymon. Approche expérimentale et numérique pour la compréhension de la mise en forme de matériaux composites par le procédé rtm. In *10^{ème} journées nationales sur les composites*. ENS Cachan, 2000.
- [C84] O. Diallo J. Pousin and T. Sassi. A posteriori error estimates for the transport equation applied to resin transfert molding problems. In M. Deville R. Owens, editor, *16th IMACS world congress Proceeding*, Lausanne Switzerland, 2000.
- [C85] Pebay P. Baker T.J. Pousin J. Dynamic meshing for finite element based segmentation of cardiac imagery. In Mang H.A. Rammerstorfer F.G. Eberhardsteiner J, editor, *Proceedings of the Fifth World Congress on Computational Mechanics (WCCM V)*. Vienna University of Technology, Austria, ISBN 3-9501554-0-6, Vienna, Austria, July 7-12 2002.
- [C86] A. Maazouz A. Mikelic J. Pousin and E. Zeltz. Fluid injection model without surface tension for resins in thin molds. In *Tenth Interna. Congress on Computational and Applied Mathematics 2002*, Leuven, 2002. Leuven University.
- [C87] P. Pebaye J. Pousin and H. N. Najm. Half explicite methods the next generation of low mach number time-integrators. In *SciCADE 03 NTNU*, Trondhiem University, july 2003.
- [C88] J. Pousin P. P. Pebay O. Diallo and M. Picq. Solving the transport equation subject to an affine constraint. In P. Neittaanmaki T.Rossi K. Majava O. Pironneau, editor, *European Congress on Computational Methods in Applied Sciences and Engineering ECCOMAS*, Jyvaskyla Finland, 2004.
- [C89] M.Cabrera T. Clopeau A. Mikelic and J. Pousin. Approximation de la lubrification pour l'étalement de gouttes en présence d'évaporation. In S. H. F., editor, *Microfluidique 2004*, Toulouse France, Décembre 2004.
- [C90] F. Fontvielle G. Panasenko and J. Pousin. Asymptotic domain decomposition and finite element. In *20 th Congress on Computational and Applied Mathematics 2004.*, 2004.
- [C91] Y. Rouchdy J. Pousin. Segmentation of the heart ventricules from mri using a 3d non-linear elastic model. ESAIM PROCEEDINGS, 2005. To be published.
- [C92] M.Cabrera T. Clopeau A. Mikelic and J. Pousin. Viscous drops spreading with evaporation and applications. In A. Di Bucchianico R.M.M. Mattheij M.A. Peletier, editor, *Progress in Industrial Mathematics at ECMI 2004*, Mathematics in Industry, pages 320–324. Springer verlag, 2005.
- [C93] F. Fontvielle G. Panasenko and J. Pousin. Asymptotic domain decomposition. In *16th Int. Conf. on Domain Decomp. Meth.*, Courant Institute New York, 2005.

- [C94] J. Pousin and E. Zeltz. Injection vapor model in a porous medium accounting for a weak condensation. progress in industrial mathematics at ecmi 2004. springer verlag 2005 p. . In A. Di Bucchianico R.M.M. Mattheij M.A. Peletier, editor, *Progress in Industrial Mathematics at ECMI 2004*, Mathematics in Industry, pages 278–282. Springer verlag, 2005.
- [C95] J. Schaerer Y. Rouchdy P. Clarysse B. Hibab P. Croisille J Pousin and I.E. Magnin. Simultaneous segmentation of th left and right heart ventricles in 3d cine mr images of small animals. In *Computers in Cardiology 2005*, pages 231–234. . IEEE publications, 2005.
- [C96] J. Pousin Y. Rouchdy M. Picq J. Schaerer and P. Clarysse . Constraint 3d elastic model for cardiac mri. In *Computers in Cardiology 2005*, pages 785–788. . IEEE publications, 2005.
- [C97] J. Pousin. An efficient numerical scheme for precise time integration for dissolution/precipitation chemical system. In *Oberwolfach Reports EMS 2006*. European Mathematical society, 2006.
- [C98] O. Mouhib B. Chereji W. Marquis-Favre D. Tomasset J. Pousin and M. Picq. - an optimal control problem : bond graph representation and solver implementation. In *5th MATHMOD*, Vienna, 2006.
- [C99] O. Mouhib B. Chereji W. Marquis-Favre D. Tomasset J. Pousin and M. Picq. Procedure for the bond graph construction of an optimal control problem. control application of optimisation. In *IFAC 2006 Paris*, ENS Cachan, 2006.
- [C100] M. Picq and J. Pousin. Variational reduction for the transport equation and plants growth. In *Proceedings of the Conference Modelling of the Heterogeneous Materials with Applications in Constructions and Biological Engineering*. Czech Technical University Prague, 2007.
- [C101] Y. Rouchdy, J. Pousin, J. Schaerer, and P. Clarysse. A hyperelastic deformable template for cardiac segmentation in mri. In F. B. Sachse G. Seemann, editor, *Functional Imaging and Modeling of the Heart*, volume Lecture Notes in Computational Sciences 4466, pages 443–452. Springer Verlag, 2007.
- [C102] J. Schaerer, P. Clarysse, and J. Pousin. A new dynamic elastic model for cardiac images analysis. In *Proceedings of the Annual International Conference of the IEEE EMBS*, 2007.
- [C103] M. Picq P. Clarysse B. Delhaye and J. Pousin. Tracking the heart motion from dynamic cardiac imaging using optimal transport subject to a probabilistic constraint. In *In 13th International Congress on Computational and Applied Mathematics, Gent, Belgium.*, 2008.
- [C104] J. Pousin. Kantorovich-wasserstein distance for identifying the dynamic of some compartmental models in biology. In *AIP Conference Proceedings Volume 1048*. Springer Verlag, 2008.
- [C105] J. Schaerer, P. Clarysse, and J. Pousin. A new perturbation approach for image segmentation tracking. In *In 5th IEEE International Symposium on Biomedical Imaging : From Nano to Macro, ISBI'2008, Paris, France.*, 2008.
- [C106] Casta C. Clarysse P. Schaerer J. and Pousin J. Evaluation of the dynamic elastic template model for the segmentation of the heart in mri sequences. In GZ Yang et all, editor, *MICCAI Conference Proceedings 2009*, 2009.
- [C107] Picq M. Pousin J. and Clarysse P. Optimal extended optical flow and statistical constraint. In J. Vigo Aguiar, editor, *Proceedings of the 2009 International Conference on Computational and Mathematical Methods in Sciences and Engineering*, 2009.
- [C108] Picq M. Pousin J. and Clarysse P. Optimal extended optical flow and statistical constraint. In *6th International Symposium on Image and Signal Processing and Analysis ISPA 2009*. IEEE, 2009.
- [C109] S. Boujena A. Chiboub and J. Pousin. Variational reduction for the transport equation in a multiple branching plants growth model. In *Math. Model. Nat. Phenom. Vol. 5, No. 7, pp. 11-15*, 2010.
- [C110] C. Casta P. Clarysse J. Pousin J. Schaerer P. Croisille and Yue-Min Zhu. Incorporating low-level constraints for the retrieval of personalised heart models from dynamic mri. In *MICCAI*. IEEE, 2010.
- [C111] Christopher Casta Patrick Clarysse Jerome Pousin Joel Schaerer Pierre Croisille and Yue-Min Zhu. Incorporating low-level constraints for the retrieval of personalised heart models from dynamic mri. In *STA-COM'10/CESC'10, First international conference on Statistical atlases and computational models of the heart, and international conference on Cardiac electrophysiological simulation challenge*. Springer-Verlag, 2010.
- [C112] Olivier Besson and Jerome Pousin. Solving a linear conservation law subject to initial and final conditions. In *ICIAM 2011 Vancouver, BC Canada*, 2011.
- [C113] A. Bouhedja and J. Pousin. Nouvelle approche pour déterminer les poids des critères : La méthode de la variation totale. In *12 Congrès annuel de la société française de recherche opérationnelle et d'aide à la décision*. ROADF 2011 Ecole des Mines de Saint Etienne, 2011.
- [C114] Christopher Casta Patrick Clarysse Jerome Pousin Pierre Croisille and Yue-Min Zhu. riving dynamic cardiac model adaptation with mr-tagging displacement information. In *Conference on Functional Imaging and Modeling of the Heart*. Springer-Verlag, 2011.

- [C115] K. Benmansour and J. Pousin. Equation du transport, formulation au sens des moindres carrés espace-temps et principe du maximum. In *3^{ème} Conférence Internationale de la Société Marocaine de Mathématiques Appliquées*, 2012.
- [C116] F. Dabaghi A. Petrov J. Pousin and Y. Renard. Some mathematical and numerical results for a wave equation with unilateral constraints at the boundary. In *Euromech 514 : New trends in Contact Mechanics*, 2012.
- [C117] Yue-Min Zhu R. Stoica J. Pousin C. Casta P. Croisille and P. Clarysse. Integrating fiber orientation constraint into a spatio-temporal fem model for heart borders and motion tracking in dynamic mri. In *MICCAI 2012 Workshop STATCOM-CESC*, Nice France, 2012. Springer.
- [C118] A. Azzayani S. Boujena and J. Pousin. Un modèle d'élasticité 2d tenant compte de l'orientation du déplacement. In *Tendances des Applications Mathématiques en Tunisie Algérie Maroc*, 2013.
- [C119] S. Boujena M. El Guermah O. Gouasnouane and J. Pousin. An improved nonlinear model for image restoration. In *Numerical Analysis and Scientific Computation with Applications*, 2013.
- [C120] J. Pousin M. Fabre and Y. Renard. Fictitious domain and niche's method applied to contact problems in elasticity. In *International Conference on Extended Finite Element Methods - XFEM 2013*, 2013.
- [C121] F. Dabaghi A. Petrov J. Pousin and Y. Renard. Some mathematical and numerical results for a wave equation with unilateral constraints at the boundary. In *ICCCM2013*, 2013.
- [C122] J. Pousin. A posteriori estimates and adaptive partial domain decomposition. In *Enumath*, 2013.
- [C123] K. Benmansour L. Piffet J. Pousin. Principe du maximum discret pour une solution au sens des moindres carrés espace-temps pour l'équation de transport avec des éléments finis. In *Journées d'Analyse Numérique et d'Optimisation*, 2013.
- [C124] K. Benmansour L. Piffet J. Pousin and F. Abi Ayed. Solution au sens des moindres carrés pour l'équation du transport et principe du maximum. In *Tendances des Applications Mathématiques en Tunisie Algérie Maroc*, 2013.
- [C125] J. Pousin M. Fabre and Y. Renard. Fictitious domain and niche's method applied to contact problems in elasticity. In *XI congress on Computational Mechanics - WCCM XI*, 2014.
- [C126] O. Besson M. Picq and J. Pousin. Computing a mass transport problem with a least squares method. In *Optimal Transportation Theory and Applications*. London Mathematical Society Lecture Note Series 413, pp. 203-215, 2014.
- [C127] F. Dabaghi A. Petrov J. Pousin and Y. Renard. Numerical study of convergence of the mass redistribution method for elastodynamic contact problems. In *5th European Conference on Computational Mechanics ECCM V*, 2014.
- [C128] J. Pousin R. Stoica, P. Clarysse and J. Ohayon. Identification of injured myocardium in the ischemic process from the mechanical fiber tonicity. In *RITS*, 2015.
- [C129] O. Gouasnouane S. Boujena, M. El Guermah and J. Pousin. Image restauration and segmentation by nonlinear diffusion. In *4^{ème} Conférence Internationale de La Société Marocaine des Mathématiques Appliquées*, 2015.
- [C130] F. Chouly M. Fabre P. Hild J. Pousin and Y. Renard. Residual-based a posteriori error estimation for contact problems approximated by nitsche's method. In *Workshop on Geometrically Unfitted Finite Element Methods, UCL, London*, 2016.

Articles de vulgarisation scientifique

- [D131] P. Clarysse and J. Pousin. Méthodes mathématiques pour l'analyse d'images médicales. *ALS Magazine - Académie Lorraine des Sciences*, (3) :28-34, 2012.

Articles soumis ou en préparation

- [E132] K. Benmansour E. Bretin L. Piffet and J. Pousin. Discrete maximum principle and penalized total variation for a space-time integrated least squares formulation of the transport equation in finite element. Soumis 2015.
- [E133] F. Dabaghi P. Krejci A. Petrov J. Pousin and Y. Renard. Efficiency of a weighted mass redistribution method for an elastodynamic problem with unilateral constraints. *JCAM*, Soumis 2015.
- [E134] P. Croisille I. Mekkaoui K. Moulin J. Pousin and M. Viallon. A mathematical model and an efficient simulation framework for dmri in the presence of motion : Application to cardiac dmri for quantification of motion and strain effects on the diffusion signal. *Inverse problems*, Soumis 2015.