

Publications dans des revues internationales avec comité de lecture :

- 1) Peng Du, Lu Cheng, Zi-jian Tang, A. Ouahsine, Haibao Hu and **Y. Hoarau**, (2022), « Ship maneuvering prediction based on virtual captive model test and system dynamics approaches », *Journal of Hydrodynamics*, pp. 1-18, **Q1**, IF : 2.59, référencé par ISI et Scopus, <https://doi.org/10.1007/s42241-022-0029-0>
- 2) Shang-Gui Cai, Abdellatif Ouahsine and Yannick Hoarau (2022), « Moving immersed boundary method for fluid–solid interaction », *Physics of Fluids*, Vol. 34, Article Number 053307, **Q1**, IF : 3.521, référencé par ISI et Scopus, <https://doi.org/10.1063/5.0088302>
- 3) Flavien Denis, Robert Hruschka, Myriam Bastide, Berthold Sauerwein, Yannick Hoarau and Robert Mose (2022), « Experimental Investigation of Thermal Ablation by Melting in a Hypersonic Shock Tunnel », *Journal of Spacecraft and Rockets*, pp. 1-6, **Q1**, IF : 1.361, <https://doi.org/10.2514/1.A35271>
- 4) Peng Du, A. Ouahsine, P. Sergent, **Y. Hoarau**, Haibao Hu (2021), « Investigation on resistance, squat and ship-generated waves of inland convoy passing bridge piers in confined waterway », *Journal of Marine Science and Engineering, Ocean Engineering*, Vol. 9 (10), Article Number 1125, **Q2**, IF : 2.458, référencé par ISI et Scopus, <https://doi.org/10.3390/jmse9101125>
- 5) A. Marouf, Y. Bmegaptche Tekap, N. Simiriotis, J.-B. Tô, J.-F. Rouchon, **Y. Hoarau**, M. Braza (2021), « Numerical investigation of frequency-amplitude effects of dynamic morphing for a high-lift configuration at high Reynolds number », *International Journal of Numerical Methods for Heat & Fluid Flow*, Vol. 31 No. 2, pp. 599-617, **Q2**, IF : 2.144, référencé par ISI et Scopus, <https://doi.org/10.1108/HFF-07-2019-0559>
- 6) D. K. Garg, C. A. Serra, **Y. Hoarau**, D. Parida, M. Bouquey, R. Muller (2020), « Numerical investigations of perfectly mixed condition at the inlet of free radical polymerization tubular microreactors of different geometries », *Macromolecular Theory and Simulations*, Article Number 202000030, **Q1**, IF : 1.839, référencé par ISI et Scopus, <https://doi.org/10.1002/mats.202000030>
- 7) D. K. Garg, C. A. Serra, **Y. Hoarau**, D. Parida, M. Bouquey, R. Muller (2020), « Numerical investigations of different tubular microreactor geometries for the synthesis of polymers under unmixed feed condition », *Macromolecular Theory and Simulations*, Article Number 2000008, **Q1**, IF : 1.839, référencé par ISI et Scopus, <https://doi.org/10.1002/mats.202000008>
- 8) N. Simiriotis, G. Jodin, A. Marouf, P. Elyakime, **Y. Hoarau**, J. Hunt, J.-F. Rouchon and M. Braza (2019), « Morphing of a supercritical wing by means of trailing edge deformation and vibration at high Reynolds numbers: experimental and numerical investigation », *J. of Fluids and Structures*, Vol. 91, Article Number 102676, **Q1**, IF : 2.874, référencé par ISI et Scopus, <https://doi.org/10.1016/j.jfluidstructs.2019.06.016>
- 9) J.-B. Tô, N. Simiriotis, A. Marouf, D. Szubert, I. Asproulis, D. Zilli, **Y. Hoarau**, J. Hunt and M. Braza (2019), « Effects of vibrating and deformed trailing edge of a morphing supercritical airfoil in transonic regime by numerical simulation at high Reynolds number », *J. of Fluids and Structures*, Vol. 91, Article Number 102595, **Q1**, IF : 2.874, référencé par ISI et Scopus, <https://doi.org/10.1016/j.jfluidstructs.2019.02.011>
- 10) V. Shinde, E. Longatte, F. Baj, Y. Hoarau, M. Braza (2019), « Galerkin-free model reduction for fluid-structure interaction using proper orthogonal decomposition », *J. of Computational Physics*, Vol. 396, pp. 579-595, référencé par ISI et Scopus, **Q1**, IF : 2.845, <https://doi.org/10.1016/j.jcp.2019.06.073>
- 11) E. Goncalves, **Y. Hoarau**, D. Zeidan (2019), « Simulation of shock-induced bubble collapse using a four-equation model », *Shock Waves*, Vol. 29 (1), pp. 221-234, **Q1**, IF : 1.504, référencé par ISI et Scopus, <https://doi.org/10.1007/s00193-018-0809-1>
- 12) M. Twardoch, Y. Messai, B. Vilenko, **Y. Hoarau**, D.E. Mekki, O. Felix, P. Turek, J. Weiss, G. Decher and D. Martel (2018), « Development of an Electron Paramagnetic Resonance methodology for studying the photo-generation of reactive species in semiconductor nano-particle assembled films », *Molecular Physics*, Vol. 116 (12), pp. 1558-1564, **Q2**, IF : 1.704, référencé par ISI et Scopus, <https://doi.org/10.1080/00268976.2018.1433882>, (Modélisation numérique)

- 13) P. Lavoie, E. Laurendeau, D. Pena and Y. Hoarau (2018), « Comparison of Thermodynamic Models for Ice Accretion Simulations for Aircraft Wings », *International Journal of Numerical Methods for Heat & Fluid Flow*, Vol. 28 (5), pp. 1004-1030, Q2, IF : 2.144, référencé par ISI et Scopus, <https://doi.org/10.1108/HFF-08-2016-0297>
- 14) S.-G. Cai, A. Ouahsine, J. Favier and Y. Hoarau (2017), « Moving immersed boundary method », *International Journal for Numerical Methods in Fluids*, vol. 85(5), pp. 288-323, Q1, IF : 1.673, référencé par ISI et Scopus, <http://dx.doi.org/10.1002/flid.4382>
- 15) P. Kundu, V. Kumar, Y. Hoarau, I.M. Mishra (2016), « Numerical simulation and analysis of fluid flow hydrodynamics through a structured array of circular cylinders forming porous medium », *Applied Mathematical Modelling*, vol. 40, pp. 9848-9871, Q1, IF : 2.94, référencé par ISI et Scopus, <http://dx.doi.org/10.1016/j.apm.2016.06.043>
- 16) D. Pena, Y. Hoarau, É. Laurendeau (2016), « A Single Step Ice Accretion Model Using Level-Set Method », *Journal of Fluids and Structures*, vol. 65, pp. 278-294, Q1, IF : 2.874, référencé par ISI et Scopus, <http://dx.doi.org/10.1016/j.jfluidstructs.2016.06.001>
- 17) V. Shinde, E. Longatte, F. Baj, M. Braza, Y. Hoarau (2016), « A Galerkin-free model reduction approach for the Navier–Stokes equations », *J. of Computational Physics*, vol. 309, pp. 148-163, référencé par ISI et Scopus, Q1, IF : 3.186, <http://dx.doi.org/10.1016/j.jcp.2015.12.051>
- 18) M. Elhimer, G. Harran, Y. Hoarau, S. Cazin, M. Marchal, M. Braza (2016), « Coherent and turbulent processes in the bistable regime around a tandem of cylinders including reattached flow dynamics by means of high-speed PIV », *Journal of Fluids and Structures*, vol. 60, pp. 62-79, Q1, IF : 2.874, référencé par ISI et Scopus, <http://dx.doi.org/10.1016/j.jfluidstructs.2015.10.008>
- 19) D. Szubert, I. Asproulias, F. Grossi, R. Duvigneau, Y. Hoarau, M. Braza (2016), « Numerical study of the turbulent transonic interaction and transition location effect involving optimisation around a supercritical aerofoil », *European J. of Mechanics B/Fluids*, vol. 55 (2), pp. 380-393, Q2, IF : 2.086, référencé par ISI et Scopus, <http://dx.doi.org/10.1016/j.euromechflu.2015.09.007>
- 20) D. Pena, E. Laurendeau and Y. Hoarau (2016), « Development of a Three-Dimensional Icing Simulation Code in the NSMB Flow Solver », *Int. J. of Engineering Systems Modelling and Simulation*, vol. 8(2), pp. 86-98, Q4, référencé par ISI et Scopus, <https://doi.org/10.1504/IJESMS.2016.075544>
- 21) D. Szubert, F. Grossi, A. Jimenez-Garcia, Y. Hoarau, J. Hunt, M. Braza (2015), « Shock-vortex shear-layer interaction in the transonic flow around a supercritical airfoil at high Reynolds number in buffet conditions », *Journal of Fluids and Structures*, Vol. 55, pp 276-302, Q1, IF : 2.874, référencé par ISI et Scopus, <http://dx.doi.org/10.1016/j.jfluidstructs.2015.03.005>
- 22) D.K. Garg, C.A. Serra, Y. Hoarau, D. Parida, M. Bouquey, R. Muller (2015), « New Transformation Proposed for Improving CFD Simulation of Free Radical Polymerization Reactions in Microreactors », *Microfluidics and Nanofluidics*, Vol. 18(5-6), pp. 1287-1297, Q2, IF : 2.384, référencé par ISI et Scopus, <http://dx.doi.org/10.1007/s10404-014-1527-3> (modélisation numérique, écoulement réactif)
- 23) C.A. Serra, D.K. Garg, D. Parida, Y. Hoarau, R. Muller, M. Bouquey (2014), « Analytical Solution of Free Radical Polymerization: Applications- Implementing Non-isothermal Effect », *Macromolecules*, Vol. 47(24), 8514-8523, Q1, IF : 5.914, référencé par ISI et Scopus, <http://dx.doi.org/10.1021/ma501964h> (modélisation numérique, écoulement réactif)
- 24) D.K. Garg, C.A. Serra, Y. Hoarau, D. Parida, M. Bouquey, R. Muller (2014), « Analytical Solution of Free Radical Polymerization: Applications- Implementing Gel Effect Using CCS Model », *Macromolecules*, Vol. 47(23), pp. 8178-8189, Q1, IF : 5.914, référencé par ISI et Scopus, <http://dx.doi.org/10.1021/ma501251j> (modélisation numérique, écoulement réactif)
- 25) D.K. Garg, C.A. Serra, Y. Hoarau, D. Parida, M. Bouquey, R. Muller (2014), « Analytical Solution of Free Radical Polymerization: Applications- Implementing Gel effect using AK Model », *Macromolecules*, Vol. 47(21), 7370-7377, Q1, IF : 5.914, référencé par ISI et Scopus <http://dx.doi.org/10.1021/ma501413m> (modélisation numérique, écoulement réactif)
- 26) F. Grossi, M. Braza and Y. Hoarau (2014), « Prediction of Transonic Buffet by Delayed Detached-Eddy Simulation », *AIAA Journal*, Vol. 52, No. 10, pp. 2300-2312, Q1, IF : 1.926, référencé par ISI et Scopus, <https://doi.org/10.2514/1.J052873>

- 27) D.K. Garg, C.A. Serra, **Y. Hoarau**, D. Parida, M. Bouquey, R. Muller (2014), « Analytical Solution of Free Radical Polymerization: Derivation and Validation », *Macromolecules*, Vol. 47(14), pp. 4567-4586, **Q1**, IF : 5.914, référencé par ISI et Scopus, <http://dx.doi.org/10.1021/ma500480z> (modélisation numérique, écoulement réactif)
- 28) D. Parida, C.A. Serra, D.K. Garg, F. Bally, **Y. Hoarau**, R. Muller, M. Bouquey (2014), « Coil flow inversion as a route to control polymerization in microreactors », *Macromolecules*, Vol. 47(10), pp. 3282-3287, **Q1**, IF : 5.914, référencé par ISI et Scopus, <http://dx.doi.org/10.1021/ma5001628> (modélisation numérique, écoulement réactif)
- 29) D. Parida, C.A. Serra, D.K. Garg, **Y. Hoarau**, M. Bouquey, R. Muller (2014), « Flow inversion: an effective means to scale-up controlled radical polymerization in tubular microreactors », *Macromol. React. Eng.*, Vol. 8(8), pp. 597-603, **Q2**, IF : 1.567, référencé par ISI et Scopus, <http://dx.doi.org/10.1002/mren.201400002> (modélisation numérique, écoulement réactif)
- 30) D. Parida, C.A. Serra, R. Ibarra, D.K. Garg, **Y. Hoarau**, M. Bouquey and R. Muller (2014), « Atom Transfer Radical Polymerization in continuous-microflow: effect of process parameters », *J. Flow Chem.*, Vol 4(2), pp. 92-96, **Q1**, IF : 1.62, référencé par ISI et Scopus, <http://dx.doi.org/10.1556/JFC-D-14-00003> (modélisation numérique, écoulement réactif)
- 31) V. Shinde, T. Marcel, **Y. Hoarau**, T. Deloze, G. Harran, F. Baj, J. Cardolaccia, J.P. Magnaud, E. Longatte, M. Braza (2014), « Numerical simulation of the fluid–structure interaction in a tube array under cross flow at moderate and high Reynolds number », *Journal of Fluids and Structures*, Vol 47, pp. 99-113, **Q1**, IF:2.874, référencé par ISI et Scopus, <http://dx.doi.org/10.1016/j.jfluidstructs.2014.02.013>
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- 33) D. Parida, C.A. Serra, F. Bally, D.K. Garg, **Y. Hoarau** (2012), « Intensifying the ATRP synthesis of statistical copolymers by continuous micromixing flow techniques », *Green Processing and Synthesis*, Vol 1 (6), pp. 525-532, **Q3**, IF : 1.117, référencé par Scopus, <http://dx.doi.org/10.1515/gps-2012-0062> (modélisation numérique, écoulement réactif)
- 34) T. Deloze, **Y. Hoarau**, J. Dusek (2012), « Transition scenario of a sphere freely falling in a vertical tube », *J. Fluid Mechanics*, Vol 711, pp. 40-60, **Q1**, IF : 2.893, référencé par ISI et Scopus, <http://dx.doi.org/10.1017/jfm.2012.362>
- 35) F. Bally, D. Kumar Garg, C. A. Serra, **Y. Hoarau**, N. Anto, C. Brochon, D. Parida, T. Vandamme, G. Hadziioannou (2012), « Improved size-tunable preparation of polymeric nanoparticles by microfluidic nanoprecipitation », *Polymer*, Vol 53(22), pp 5045-5051, **Q1**, IF : 3.636, référencé par ISI et Scopus, <http://dx.doi.org/10.1016/j.polymer.2012.08.039> (modélisation numérique, écoulement micro-fluidique)
- 36) M. Mridha Mandal, C. Serra, **Y. Hoarau**, K.D.P. Nigam (2011), « Numerical modeling of polystyrene synthesis in coiled flow inverter », *Microfluidics and Nanofluidics*, Vol 10, pp. 415–423, **Q2**, IF : 2.384, référencé par ISI et Scopus, <https://doi.org/10.1007/s10404-010-0679-z> (modélisation numérique, écoulement réactif)
- 37) T. Deloze, **Y. Hoarau**, J. Dusek (2010), « Chimera method applied to the simulation of a freely falling cylinder in a channel », *European Journal of Computational Mechanics*, Vol 19/5-7, pp.575-590, **Q3**, référencé par Scopus, <https://doi.org/10.3166/ejcm.19.575-590>
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- 39) R. El Akoury, M. Braza, R. Perrin, G. Harran, **Y. Hoarau** (2008), « The three-dimensional transition in the flow around a rotating cylinder », *J. Fluid Mechanics*, Vol 607, pp. 1-11, **Q1**, IF : 2.893, référencé par ISI et Scopus, <https://doi.org/10.1017/S0022112008001390>
- 40) S. Bourdet, M. Braza, **Y. Hoarau**, R. El Akoury, A. Ashraf, G. Harran, P. Chassaing, H. Djeridi (2007), « Prediction and physical analysis of unsteady flows around a pitching airfoil with the

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- 42) M. Braza, R. Perrin, Y. Hoarau (2006), « Turbulence Properties in the cylinder wake at high Reynolds number », *Journal of Fluids and Structures*, Vol 22, pp. 757-771, Q1, IF : 2.874, référencé par ISI et Scopus, <https://doi.org/10.1016/j.jfluidstructs.2006.04.021>
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- 44) R. Perrin, M. Braza, E. Cid, S. Cazin, F. Moradei, A. Barthet, A. Sevrain, Y. Hoarau (2006), « Near-Wake Turbulence Properties in the High Reynolds Number Incompressible Flow Around a Circular Cylinder Measured by Two- and Three-Component PIV », *J. Flow Turbulence and Combustion*, Vol 7, pp. 185-204, Q1, IF : 2.207, référencé par ISI et Scopus, <https://doi.org/10.1007/s10494-006-9043-5>
- 45) Y. Hoarau, D. Faghani, M. Braza, R. Perrin, D. Anne-Archard, D. Ruiz (2003), « Direct Numerical Simulation of the three-dimensional transition to turbulence in the incompressible flow around a wing », *J. Flow Turbulence and Combustion*, Vol 71, pp. 119-132, Q1, IF : 2.207, référencé par ISI et Scopus, <https://doi.org/10.1023/B:APPL.0000014932.28421.9e>
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- 1) Peng Du, Abdellatif Ouahsine, Yannick Hoarau (2018), « Solid body motion prediction using a unit quaternion-based solver with actuator disk », *Comptes Rendus Mécanique*, Vol. 346 (12), pp. 1136-1152, Q2, IF : 1.316, référencé par ISI et Scopus, <https://doi.org/10.1016/j.crme.2018.08.010>
- 2) SA. A. Patlazhan, I. V. Kravchenko, R. Muller, Y. Hoarau, Y. Rémond and Al. Al. Berlin (2017), « Bifurcation of a Newtonian-fluid flow in a planar channel with sudden contraction and expansion », - *Doklady Physics*, Vol. 62, issue 3, pp. 145-148, Q3, IF : 0.558, référencé par ISI et Scopus, <http://dx.doi.org/10.1134/S1028335817030089>
- 3) S.-G. Cai, A. Ouahsine, J. Favier and Y. Hoarau (2017), « Interaction fluide-structure par la méthode de frontière immergée implicite / Implicit immersed boundary method for fluid-structure interaction », *La houille blanche*, vol. 1, Février 2017, pp. 33-36, Q3, IF : 0.274, référencé par ISI et Scopus, <http://dx.doi.org/10.1051/lhb/2017005>

Livre de proceedings:

Marianna Braza, Yannick Hoarau, Yu Zhou, Anthony, D. Lucey, Lixi Huang, Georgios E. Stavroulakis (2021), « Fluid-Structure-Sound Interactions and Control », Proceedings of the 5th Symposium on Fluid-Structure-Sound Interactions and Control, FSSIC 2019, Part of the Lecture Notes in Mechanical Engineering book series (LNME), Springer (ISBN 978-981-33-4960-5), <https://doi.org/10.1007/978-981-33-4960-5>

Yannick Hoarau, Shia-Hui Peng, Dieter Schwamborn, Alistair Revell and Charles Mockett (2020), « Progress in Hybrid RANS-LES Modelling », Papers Contributed to the 7th Symposium on Hybrid RANS-LES Methods, 17-19 September, 2018, Berlin, Germany, Part of the Notes on Numerical

Fluid Mechanics and Multidisciplinary Design book series (NNFM, volume 143), Springer (ISBN 978-3-030-27606-5), <http://dx.doi.org/10.1007/978-3-030-27607-2>

Yannick Hoarau, Shia-Hui Peng, Dieter Schwamborn and Alistair Revell (2018), « Progress in Hybrid RANS-LES Modelling », Papers Contributed to the 6th Symposium on Hybrid RANS-LES Methods, 26-28 September 2016, Strasbourg, France, Part of the Notes on Numerical Fluid Mechanics and Multidisciplinary Design book series (NNFM, volume 137), Springer (ISBN 978-3-319-70030-4), <http://dx.doi.org/10.1007/978-3-319-70031-1>

Chapitre de livre :

Serra C.A., D. Parida, F. Bally, D.K. Garg, **Y. Hoarau** and V. Hessel (2013) "Micro-Chemical Plants" in « Encyclopedia of Polymer Science and Technology », Wiley-VCH, Weinheim (Germany) (ISBN: 9780471440260), <https://doi.org/10.1002/0471440264.pst612>

Communications dans des congrès internationaux à comité de lecture et actes publiés :

- 1) Eric Goncalves da Silva and **Yannick Hoarau** (2022), « Mass transfer modelling for compressible two-phase flows », The 17th International Symposium on Numerical Analysis of Fluid Flows, Heat and Mass Transfer - Numerical Fluids Symposium 2022, ICNAAM 2022, 19-25 September 2022, Heraklion, Crete, Greece
- 2) J.B. Vos, A. Gehri, H. Truong, A. Marouf and **Y. Hoarau** (2022), « Using active flow control to improve the aerodynamic performance of the next generation civil tilt rotor aircraft », 33rd Congress of the International Council of the Aeronautical Sciences (ICAS 2022), 4–9 September 2022, Stockholm, Sweden
- 3) Dinh Hung Truong, Abderahmane Marouf, Agathe Chouippe, **Yannick Hoarau**, Jan B. Vos, Dominique Charbonnier and Alain Gehri (2022), « Flow analysis around a VTOL aircraft near stall conditions and application of Active Flow Control to enhance the aerodynamic performances at real flight conditions », AIAA Aviation 2022, June 27 – July 1, Chicago, USA, AIAA Paper 2022-3238, <https://doi.org/10.2514/6.2022-3238>
- 4) Abderahmane Marouf, Agathe Chouippe, Hung Dinh Truong, **Yannick Hoarau**, Dominique Charbonnier, Alain Gehri and Jan B. Vos (2022), « Effects of Zero Net Mass Flux devices on a Next-Generation Tiltrotor airplane in subsonic regime by numerical simulation at high Reynolds number », 9th European Conference for Aerospace Sciences, EUCASS-3AF 2022, 27 juin-01 juillet 2022 , Lille France
- 5) Abderahmane Marouf, Dinh Hung Truong, **Yannick Hoarau**, Alain Gehri, Dominique Charbonnier, Jan B. Vos and Marianna Braza (2022), « CFD simulations of active flow control devices applied on a cambered flap », AIAA SCITECH 2022 Forum, January 3-7, 2022, San Diego, CA & Virtual, AIAA Paper 2022-1545, <https://doi.org/10.2514/6.2022-1545>
- 6) Abderahmane Marouf, Agathe Chouippe, Jan B. Vos, Dominique Charbonnier, Alain Gehri, Marianna Braza and **Yannick Hoarau** (2021), « Unsteady CFD simulations for Active Flow Control », AIAA Aviation 2021 Forum, August 2-6, 2021 VIRTUAL EVENT, AIAA Paper 2021-2854, <https://doi.org/10.2514/6.2021-2854>
- 7) Marouf A., Simiriotis N., Tekap Y.B., Tô JB., Braza M. and **Hoarau Y.** (2021), « Predictive Numerical Study of Cambered Morphing A320 High-Lift Configuration Based on Electro-Mechanical Actuators », In: Braza M., Hoarau Y., Zhou Y., Lucey A.D., Huang L., Stavroulakis G.E. (eds) Fluid-Structure-Sound Interactions and Control. FSSIC 2019. Lecture Notes in Mechanical Engineering, pp 317-322. Springer, Singapore. https://doi.org/10.1007/978-981-33-4960-5_47
- 8) Tô JB., Bhardwaj N., Simiriotis N., Marouf A., **Hoarau Y.**, Hunt J. C. R. and Braza M. (2021) « Manipulation of a Shock-Wave/Boundary-Layer Interaction in the Transonic Regime Around a Supercritical Morphing Wing », In: Braza M., Hoarau Y., Zhou Y., Lucey A.D., Huang L.,

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