

# FABIEN EVRARD

Assistant Professor  
Aerospace Engineering  
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## Positions

- 2024 – present **Assistant Professor of Aerospace Engineering**, University of Illinois Urbana-Champaign (US).  
Affiliate Faculty in Computational Science and Engineering (0 % appointment)
- 2022 – 2023 **Marie Skłodowska-Curie Fellow**, Cornell University (US).
- 2021 – 2022 **Junior Group Leader**, Otto-von-Guericke-Universität Magdeburg (DE).
- 2018 – 2021 **Postdoctoral Researcher**, Otto-von-Guericke-Universität Magdeburg (DE).

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## Education

- 2013 – 2018 **PhD in Computational Fluid Dynamics**, Imperial College London (UK).  
Title: Numerical methods for multi-scale interfacial flows [\[link\]](#).
- 2012 – 2013 **M.Res. in Fundamental and Applied Mathematics**, Université de Toulouse III (FR).
- 2009 – 2013 **B.Sc. & M.Sc. in Aerospace Engineering**, Institut Supérieur de l'Aéronautique et de l'Espace (FR).
- 2011 – 2012 **Master in Space and Telecommunications Law**, Université de Paris-Sud XI (FR).

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## Teaching

*University of Illinois Urbana-Champaign*

- Fall 2024 **Computational Fluid Dynamics (AE498-CFD)**, Lecturer.
- Spring 2024 **Computational Aerodynamics (AE410)**, Lecturer.

*Cornell University*

- Fall 2022 **Foundations of Fluid Mechanics (MAE6010)**, Guest lecturer.
- Spring 2022 **Modeling and Simulations of Real World Scientific Problems (ENGRI1510)**, Guest lecturer.

*Otto-von-Guericke-Universität Magdeburg*

- 2021 **Fundamentals of Multiphase Flows (MSc)**, Lecturer.
- 2018 – 2021 **Simulation of Mechanical Processes (BSc and MSc)**, Lecturer and teaching assistant.
- 2018 – 2021 **Mechanical Process Engineering (BSc and MSc)**, Teaching assistant.

*Imperial College London*

- 2015 – 2017 **Mathematics (BSc)**, Teaching assistant.
- 2014 – 2017 **Computational Fluid Dynamics (BSc and MSc)**, Teaching assistant.

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## Invited talks

- ISAE-Supaéro, *Conférence d'Application SXS* (2023)
- Cornell University, *Scientific Computing and Numerics Seminar* (2023)
- Los Alamos National Laboratory, *CCS-2 Seminar* (2023)
- University of Stuttgart, *Numerics Lecture Series* (2023)
- University of Illinois Urbana-Champaign, *Mini-symposium on Multiphase Flows* (2022)
- Cornell University, *Cornell Fluids Seminar* (2020)
- Technical University of Denmark, *fluid·DTU Seminar* (2020)
- ERCOFTAC Autumn Festival, *DaVinci Award Presentation* (2019)

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## Invited session chair

- ILASS-America 2024, Ithaca, USA
- ILASS-America 2023, Albuquerque, USA
- APS-DFD 2022, Indianapolis, USA

ICNMMF4 2022, Venice, Italy  
ILASS-Europe 2019, Paris, France

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## Committees

2024 – present ILASS Computation & Modeling Technical Committee (Lead)  
2024 ICLASS 2024 Conference Scientific Committee

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## Peer-reviewing

*For international journals*

Journal of Computational Physics, International Journal of Multiphase Flow, Flow Turbulence and Combustion, Computers and Fluids, International Journal for Numerical Methods in Fluids, Journal of Computational Particle Mechanics, Journal of Marine Science and Engineering.

*For international conferences*

AIAA SciTech 2025, ICLASS 2024.

*For funding agencies*

German Research Foundation (DFG).

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## Peer-reviewed publications

The following publications are listed in my [ORCID](#) and [Google Scholar](#) profiles (the latter granting me an H-index of 12).

- [J35] A. Cahaly, **F. Evrard**, O. Desjardins, *PLIC-Net: A Machine Learning Approach for 3D Interface Reconstruction in Volume of Fluid Methods*, *International Journal of Multiphase Flow*, vol. 178, 104888 (2024).
- [J34] H. Elmeistikawy, J. Reuter, **F. Evrard**, S. Mostaghim, B. van Wachem, *Deterministic drag modelling for spherical particles in Stokes regime using data-driven approaches*, *International Journal of Multiphase Flow*, vol. 178, 104880 (2024).
- [J33] A. Han, **F. Evrard**, O. Desjardins, *Comparison of methods for curvature estimation from volume fractions*, *International Journal of Multiphase Flow*, vol. 174, 104769 (2024).
- [J32] V. Chéron, **F. Evrard**, B. van Wachem, *Drag, lift and torque correlations for axi-symmetric rod-like non-spherical particles in locally linear shear flows*, *International Journal of Multiphase Flow*, vol. 171, 104692 (2024).
- [J31] M. Hausmann, **F. Evrard**, B. van Wachem, *Wavelet based modeling of subgrid-scales in LES of particle-laden turbulent flows*, *Physical Review Fluids* 8, 104604 (2023).
- [J30] C. Gorges, A. Hodžić, **F. Evrard**, B. van Wachem, C. Velte, F. Denner, *Efficient reduction of vertex clustering using front tracking with surface normal propagation restriction*, *Journal of Computational Physics*, vol. 491, 112406 (2023).
- [J29] M. Hausmann, **F. Evrard**, B. van Wachem, *A large eddy simulation model for two-way coupled particle-laden turbulent flows*, *Physical Review Fluids*, vol. 8, 084301 (2023).
- [J28] **F. Evrard**, R. Chiodi, A. Han, B. van Wachem, O. Desjardins, *First moments of a polyhedron clipped by a paraboloid*, *SIAM Journal on Scientific Computing*, vol. 45, pp. A2250-A2274 (2023).
- [J27] M. Schiødt, A. Hodžić, **F. Evrard**, M. Hausmann, B. van Wachem, C. Velte, *Spectral response between particle and fluid kinetic energy in decaying homogeneous isotropic turbulence*, *Physics of Fluids*, vol. 35, 053333 (2023).
- [J26] V. Chéron, **F. Evrard**, N. El Achkar, B. van Wachem, *A hybrid immersed boundary method for dense particle-laden flows*, *Computers & Fluids*, vol. 259, 105892 (2023).
- [J25] Y. Zhang, A. Hodžić, **F. Evrard**, B. van Wachem, C. Velte, *Phase Proper Orthogonal Decomposition of non-stationary turbulent flow*, *Physics of Fluids*, vol. 35, 045109 (2023).
- [J24] A. Jain, **F. Evrard**, B. van Wachem, *The effect of side-walls on particles mixing in rotating drums*, *Particuology*, vol. 72, 112–121 (2023).
- [J23] M. Hausmann, **F. Evrard**, B. van Wachem, *An efficient model for subgrid-scale velocity enrichment for large eddy simulations of turbulent flows*, *Physics of Fluids*, vol. 34, 11513 (2022).

- [J22] M. Schiødt, A. Hodžić, **F. Evrard**, M. Hausmann, B. van Wachem, C. Velte, *Characterizing Lagrangian particle dynamics in decaying HIT using proper orthogonal decomposition*, *Physics of Fluids*, vol. 34, 063303 (2022).
- [J21] F. Denner, **F. Evrard**, B. van Wachem, *Breaching the capillary time-step constraint using a coupled VOF method with implicit surface tension*, *Journal of Computational Physics*, vol. 459, 111128 (2022).
- [J20] C. Gorges, **F. Evrard**, B. van Wachem, F. Denner, *Reducing volume and shape errors in front tracking by divergence-preserving velocity interpolation and parabolic fit vertex positioning*, *Journal of Computational Physics*, vol. 457, 111072 (2022).
- [J19] C. Zanutto, **F. Evrard**, B. van Wachem, F. Denner, E. Paladino, *Modeling interfacial mass transfer of highly non-ideal mixtures using an algebraic VOF method*, *Chemical Engineering Science*, vol. 251, 117458 (2022).
- [J18] C. Zanutto, E. Paladino, **F. Evrard**, F. Denner, B. van Wachem, *Modelling of interfacial mass transfer based on a single-field formulation and an algebraic VOF method considering non-isothermal systems and large volume changes*, *Chemical Engineering Science*, vol. 247, 116855 (2022).
- [J17] V. de Azevedo, E. Paladino, F. Denner, **F. Evrard**, *Performance evaluation of standard second-order finite volume method for DNS solution of turbulent channel flow*, *Journal of the Brazilian Society of Mechanical Sciences and Engineering*, vol. 43, 513 (2021).
- [J16] F. Denner, **F. Evrard**, B. van Wachem, A. Castrejon-Pita, J. Castrejon-Pita, *Reversal and inversion of capillary jet breakup at large excitation amplitudes*, *Flow, Turbulence and Combustion*, vol. 108, 843–863 (2021).
- [J15] R. Cerqueira, E. Paladino, **F. Evrard**, F. Denner, B. van Wachem, *Multiscale modeling and validation of slug flow with small dispersed bubbles using a coupled VOF-DBM approach*, *International Journal of Multiphase Flow*, vol. 141, 103673 (2021).
- [J14] Z. Ren, S. Liu, B. Tan, F. Denner, **F. Evrard**, B. van Wachem, Z. Zuo, C. Ohl, *Gas release from surface nanobubbles through shear flow*, *Physical Review Fluids*, vol. 6 (4), 043601 (2021).
- [J13] **F. Evrard**, F. Denner, B. van Wachem, *Quantifying the errors of the particle-source-in-cell Euler-Lagrange method*, *International Journal of Multiphase Flow*, vol. 135, 103535 (2021).
- [J12] F. Denner, **F. Evrard**, F. Reuter, S. Gonzalez-Avila, B. van Wachem, C. Ohl, *Predicting laser-induced cavitation near a solid substrate*, *Proceedings in Applied Mathematics and Mechanics*, vol. 20 (1), e202000007 (2021).
- [J11] **F. Evrard**, F. Denner, B. van Wachem, *Euler-Lagrange modelling of dilute particle-laden flows with arbitrary particle-size to mesh-spacing ratio*, *Journal of Computational Physics: X*, vol. 8, 100078 (2020).
- [J10] **F. Evrard**, F. Denner, B. van Wachem, *Height-function curvature estimation with arbitrary order on non-uniform Cartesian grids*, *Journal of Computational Physics: X*, vol. 7, 100060 (2020).
- [J9] F. Denner, **F. Evrard**, B. van Wachem, *Modeling acoustic cavitation using a pressure-based algorithm for polytropic fluids*, *Fluids* 5(2), 69 (2020).
- [J8] F. Denner, **F. Evrard**, B. van Wachem, *Conservative finite-volume framework and pressure-based algorithm for flows of incompressible, ideal-gas and real-gas fluids at all speeds*, *Journal of Computational Physics*, vol. 409, 109348 (2020).
- [J7] B. van Wachem, T. Curran, **F. Evrard**, *Fully correlated stochastic inter-particle collision model for Euler-Lagrange gas-solid flows*, *Flow, Turbulence and Combustion*, vol. 105, 935-963 (2020).
- [J6] **F. Evrard**, F. Denner, B. van Wachem, *A multi-scale approach to simulate atomisation processes*, *International Journal of Multiphase Flow*, vol. 119, 194-216 (2019).
- [J5] **F. Evrard**, F. Denner, B. van Wachem, *Surface reconstruction from discrete indicator functions*, *IEEE Transactions on Visualization and Computer Graphics*, vol. 25 (3), 1629-1635 (2019).
- [J4] M. Azis, **F. Evrard**, B. van Wachem, *An immersed boundary method for incompressible flows in complex domains*, *Journal of Computational Physics*, vol. 378, 770-795 (2018).
- [J3] M. Azis, **F. Evrard**, B. van Wachem, *An immersed boundary method for flows with dense particle suspensions*, *Acta Mechanica*, vol. 230 (2), 485-515 (2018).
- [J2] **F. Evrard**, F. Denner, B. van Wachem, *Estimation of curvature from volume fractions using parabolic reconstruction on two-dimensional unstructured meshes*, *Journal of Computational Physics*, vol. 351, 271-294 (2017).
- [J1] F. Denner, **F. Evrard**, R. Serfaty, B. van Wachem, *Artificial viscosity model to mitigate numerical artefacts at fluid interfaces with surface tension*, *Computers and Fluids*, 143, 59-72 (2017).

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## Peer-reviewed conference proceedings

- [P7] **F. Evrard**, B. van Wachem, O. Desjardins, *Conservative two-phase flow simulations using piecewise-quadratic interface reconstructions*, Proc. of the 34rd Annual Conference on Liquid Atomization and Spray Systems, North and South America (2024).
- [P6] **F. Evrard**, R. Chiodi, B. van Wachem, O. Desjardins, *Simulating interfacial flows: a farewell to planes*, Proc. of the 33rd Annual Conference on Liquid Atomization and Spray Systems, North and South America (2023).
- [P5] J. Reuter, S. Mostaghim, H. Elmeistikawy, **F. Evrard**, B. van Wachem, *Graph Networks as Inductive Bias for Genetic Programming: Symbolic Models for Particle-Laden Flows*, In: Pappa, G., Giacobini, M., Vasicek, Z. (eds) Genetic Programming. EuroGP 2023. Lecture Notes in Computer Science, vol. 13986, 36–51, Springer, Cham. (2023).
- [P4] J. Reuter, M. Cendrollu, **F. Evrard**, S. Mostaghim, B. van Wachem, *Towards improving simulations of flows around spherical particles using genetic programming*, Proc. of the IEEE Congress on Evolutionary Computation (CEC), 18-23 July 2022, Padua, Italy.
- [P3] H. Zille, **F. Evrard**, B. van Wachem, S. Mostaghim, *Unit-aware multi-objective genetic programming for the prediction of the Stokes flow around a sphere*, GECCO '21: Proceedings of the Genetic and Evolutionary Computation Conference Companion, July 2021, 327-328.
- [P2] H. Zille, **F. Evrard**, J. Reuter, S. Mostaghim, B. van Wachem, *Assessment of multi-objective and coevolutionary genetic programming for predicting the stokes flow around a sphere*, Proceedings of the 14 International Conference on Evolutionary and Deterministic Methods For Design, Optimization and Control, June 2021, 171-190.
- [P1] **F. Evrard**, F. Denner, B. van Wachem, *A hybrid Eulerian-Lagrangian approach for simulating liquid sprays*, Proc. of the 29th Conference on Liquid Atomization and Spray Systems (2019).

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## Submitted manuscripts

- [M1] M. Hausmann, V. Chéron, **F. Evrard**, B. van Wachem, *Study and derivation of closures in the volume-filtered framework for particle-laden flows*, arXiv.
- [M2] C. Gorges, **F. Evrard**, R. Chiodi, B. van Wachem, F. Denner, *Sharp front tracking with geometric interface reconstruction*.
- [M3] **F. Evrard**, A. Chandan, R. Cortez, B. van Wachem, *Undisturbed velocity recovery with transient and weak inertia effects in volume-filtered simulations of particle-laden flows*, arXiv.
- [M4] A. Chandan, **F. Evrard**, B. van Wachem, *A semi-analytical transient undisturbed velocity correction scheme for wall-bounded two-way coupled Euler-Lagrange simulations*, arXiv.

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## Conference and seminar presentations

- [C52] A. Chandran, **F. Evrard**, B. van Wachem, *Transient velocity correction in the Euler-Lagrange modeling of particle-laden channel flows*, International Conference on Numerical Methods in Multiphase Flows 5, June 26-28 2024, Reykjavik, Iceland.
- [C51] A. Cahaly, **F. Evrard**, O. Desjardins, *A Machine Learning Approach for 3D Interface Reconstructions in Volume of Fluid Methods*, International Conference on Numerical Methods in Multiphase Flows 5, June 26-28 2024, Reykjavik, Iceland.
- [C50] **F. Evrard**, R. Chiodi, B. van Wachem, O. Desjardins, *On the transport of high-order geometric moments of fluid with high-order accuracy*, International Conference on Numerical Methods in Multiphase Flows 5, June 26-28 2024, Reykjavik, Iceland.
- [C49] **F. Evrard**, B. van Wachem, O. Desjardins, *Conservative two-phase flow simulations using piecewise-quadratic interface reconstructions*, 34rd Annual Conference on Liquid Atomization and Spray Systems (ILASS-America), May 19-22 2024, Ithaca, USA.
- [C48] **F. Evrard**, R. Chiodi, B. van Wachem, O. Desjardins, *Conservative two-phase flow simulation using piecewise-parabolic interface reconstructions*, 76th Annual DFD Meeting of the American Physical Society, 19-21 November 2023, Washington DC, USA.
- [C47] **F. Evrard**, R. Chiodi, B. van Wachem, O. Desjardins, *Piecewise-parabolic interface reconstruction from first moments*, 17th U.S. National Congress on Computational Mechanics, July 23-27 2023, Albuquerque, USA.
- [C46] **F. Evrard**, R. Chiodi, B. van Wachem, O. Desjardins, *Simulating interfacial flows: a farewell to planes*, 33rd Annual Conference on Liquid Atomization and Spray Systems (ILASS-America), May 14-17 2023, Albuquerque, USA.

- [C45] **F. Evrard**, R. Chiodi, B. van Wachem, O. Desjardins, *Simulating three-dimensional two-phase flows subject to surface tension with piecewise parabolic interface reconstruction*, 11th International Conference on Multiphase Flow, 2-7 April 2023, Kobe, Japan.
- [C44] **F. Evrard**, R. Chiodi, B. van Wachem, O. Desjardins, *Geometric volume-of-fluid advection with parabolic interface reconstruction*, 75th Annual DFD Meeting of the American Physical Society, 20-22 November 2022, Indianapolis, USA.
- [C43] B. van Wachem, A. Chandran, F. Denner, **F. Evrard**, *Self-induced velocity disturbance correction in Euler-Lagrange simulations of dense particle-laden flows*, 75th Annual DFD Meeting of the American Physical Society, 20-22 November 2022, Indianapolis, USA.
- [C42] **F. Evrard**, B. van Wachem, O. Desjardins, *Advances in multi-scale multiphase flow modeling: from high-order interface capturing to mesh-independent particle tracking*, Multiphase Flow Mini-Symposium, University of Illinois Urbana-Champaign, 18-19 November 2022, Champaign, USA.
- [C41] **F. Evrard**, R. Chiodi, A. Han, B. van Wachem, O. Desjardins, *Quadratic interface reconstruction from volume fractions on arbitrary polyhedral meshes*, International Conference on Numerical Methods in Multiphase Flows 4, 28-30 September 2022, Venice, Italy.
- [C40] B. van Wachem, V. Chéron, **F. Evrard**, *Discrete element modelling of non-spherical particles in turbulent gas-solid flows*, Conference on Modelling Fluid Flow (CMFF'22), 30 August-2 September 2022, Budapest, Hungary.
- [C39] M. Hausmann, V. Chéron, **F. Evrard**, B. van Wachem, *Subgrid-scale enrichment of particle-laden turbulence by solution of a set of physically derived model equations in Eulerian frame*, EUROMECH Colloquium 625 "Advances in LES of Turbulent Multiphase Flows", 22-24 June 2022, Udine, Italy.
- [C38] V. Chéron, **F. Evrard**, N. El Akchar, B. van Wachem, *A novel immersed boundary method for accurate particle interactions in multiphase flows*, DECHEMA Annual Meeting of the Multiphase Flow and Computational Fluid Dynamics ProcessNet Group, 16-18 March 2022, Leipzig, Germany.
- [C37] **F. Evrard**, F. Denner, B. van Wachem, *Self-induced velocity disturbance correction with consideration of weak-inertia and transient effects in Euler-Lagrange simulations*, 74th Annual DFD Meeting of the American Physical Society, 21-23 November 2021, Phoenix, USA.
- [C36] F. Denner, **F. Evrard**, B. van Wachem, *Breaching the capillary time-step constraint*, 74th Annual DFD Meeting of the American Physical Society, 21-23 November 2021, Phoenix, USA.
- [C35] B. van Wachem, C. Gorges, **F. Evrard**, F. Denner, *Reducing volume and shape errors in front tracking*, 74th Annual DFD Meeting of the American Physical Society, 21-23 November 2021, Phoenix, USA.
- [C34] M. Schiødt, A. Hodžić, **F. Evrard**, C. Velte, *Proper orthogonal decomposition of fluidized particles*, 74th Annual DFD Meeting of the American Physical Society, 21-23 November 2021, Phoenix, USA.
- [C33] V. Chéron, **F. Evrard**, N. El Achkar, B. van Wachem, *A versatile immersed boundary method for multiphase flows*, 74th Annual DFD Meeting of the American Physical Society, 21-23 November 2021, Phoenix, USA.
- [C32] C. Gorges, **F. Evrard**, B. van Wachem, F. Denner, *Stability of surfactant-laden droplets with surface viscosity in shear flow*, 74th Annual DFD Meeting of the American Physical Society, 21-23 November 2021, Phoenix, USA.
- [C31] **F. Evrard**, F. Denner, B. van Wachem, *Regularized Stokeslets as means to recover the undisturbed fluid velocity in two-way coupled simulations of particle-laden flows*, SIAM Annual Meeting, 19-23 July 2021, (Virtual) Spokane, USA.
- [C30] **F. Evrard**, B. van Wachem, *Quantifying the errors of the particle-source-in-cell Euler-Lagrange method*, DECHEMA Annual Meeting of the Multiphase Flow and Computational Fluid Dynamics ProcessNet Group, 9-10 March 2021, (Virtual) Paderborn, Germany.
- [C29] B. van Wachem, **F. Evrard**, *Volume-filtered Euler-Lagrange modelling of dilute particle-laden flows: disposing of particle size and mesh-spacing limitations*, DECHEMA Annual Meeting of the Multiphase Flow and Computational Fluid Dynamics ProcessNet Group, 9-10 March 2021, (Virtual) Paderborn, Germany.
- [C28] A. Han, R. Chiodi, **F. Evrard**, O. Desjardins, *Paraboloid-based models of liquid-gas interfaces from volume fraction data*, 73th Annual DFD Meeting of the American Physical Society, 22-24 November 2020, (Virtual) Chicago, USA.

- [C27] [**Cancelled due to COVID-19**] B. van Wachem, **F. Evrard**, *Euler-Lagrange modelling of particle-laden flows with arbitrary particle-size to mesh-spacing ratio*, DECHEMA Annual Meeting of the Multiphase Flow ProcessNet Group, 16-18 March 2020, Paderborn, Germany.
- [C26] [**Cancelled due to COVID-19**] F. Denner, **F. Evrard**, F. Reuter, S. Gonzalez-Avila, B. van Wachem, C. Ohl, *Predicting laser-induced cavitation near a solid substrate*, 91th Annual Meeting of the International Association of Applied Mathematics and Mechanics, 16-20 March 2020, Kassel, Germany.
- [C25] B. van Wachem, **F. Evrard**, *A direct-forcing immersed boundary method for particulate flows in complex domains*, DECHEMA Annual Meeting of the Computational Fluid Dynamics ProcessNet Group, 10-11 March 2020, Bamberg, Germany.
- [C24] F. Denner, **F. Evrard**, B. van Wachem, *Pressure-based algorithm and thermodynamic closure for compressible gas-liquid flows*, 72th Annual DFD Meeting of the American Physical Society, 24-26 November 2019, Seattle, USA.
- [C23] B. van Wachem, **F. Evrard**, F. Denner, *Two-way coupled Euler-Lagrange simulations with particles and mesh spacing of arbitrary sizes*, 72th Annual DFD Meeting of the American Physical Society, 24-26 November 2019, Seattle, USA.
- [C22] **F. Evrard**, F. Denner, B. van Wachem, *Height-function method for curvature estimation on two- and three-dimensional non-uniform Cartesian grids*, 72th Annual DFD Meeting of the American Physical Society, 24-26 November 2019, Seattle, USA.
- [C21] F. Denner, **F. Evrard**, B. van Wachem, *Predicting bubble collapse: numerical algorithms and thermodynamic closures*, Workshop: Komplexe Aspekte der Kavitation, 12-14 November 2019, Drübeck, Germany.
- [C20] **F. Evrard**, F. Denner, B. van Wachem, *A hybrid Eulerian-Lagrangian Approach for Simulating Liquid Sprays*, ERCOFTAC Autumn Festival, 10-11 October 2019, Magdeburg, Germany.
- [C19] **F. Evrard**, F. Denner, B. van Wachem, *A hybrid Eulerian-Lagrangian approach for simulating liquid sprays*, ILASS-Europe 2019, 29th Conference on Liquid Atomization and Spray Systems, 2-4 September 2019, Paris, France.
- [C18] **F. Evrard**, F. Denner, B. van Wachem, *MultiFlow: A coupled balanced-force framework to solve single- and multi-phase flows at all speeds in arbitrary domains*, PETSc '19 Annual User-Meeting, 5-7 June 2019, Atlanta, USA.
- [C17] B. van Wachem, **F. Evrard**, *Fully correlated stochastics inter-particle collision model for Euler-Lagrange gas-solid flows*, 10th International Conference on Multiphase Flow, 19-24 May 2019, Rio de Janeiro, Brazil.
- [C16] V. Freire, **F. Evrard**, F. Denner, B. van Wachem, E. Paladino, *On the effects of surface tension and film height in near-interface turbulence in a gas-liquid flow*, 10th International Conference on Multiphase Flow, 19-24 May 2019, Rio de Janeiro, Brazil.
- [C15] R. Cerqueira, **F. Evrard**, F. Denner, B. van Wachem, E. Paladino, *Implementation and validation of a CFD model for two-phase gas-liquid flows with different interface length scales*, 10th International Conference on Multiphase Flow, 19-24 May 2019, Rio de Janeiro, Brazil.
- [C14] **F. Evrard**, B. van Wachem, *A direct-forcing immersed boundary method for particulate flows in complex domains*, 10th International Conference on Multiphase Flow, 19-24 May 2019, Rio de Janeiro, Brazil.
- [C13] B. van Wachem, **F. Evrard**, *Consistent Euler-Lagrange approach for particulate flow modelling with arbitrary particle size/mesh resolution ratio*, DECHEMA Annual Meeting of the Computational Fluid Dynamics ProcessNet Group, 19-20 March 2019, Frankfurt, Germany.
- [C12] **F. Evrard**, B. van Wachem, *Consistent Euler-Lagrange approach for particulate flow modelling with arbitrary particle size/mesh resolution ratio*, 90th Annual Meeting of the International Association of Applied Mathematics and Mechanics, 18-22 February 2019, Vienna, Austria.
- [C11] **F. Evrard**, F. Denner, B. van Wachem, *A hybrid approach for multi-scale interfacial flows*, 12th European Fluid Mechanics Conference, 9-13 September 2018, Vienna, Austria.
- [C10] Q. Mouly, **F. Evrard**, F. Denner, B. van Wachem, *Minimizing finite-volume discretization errors on polyhedral meshes*, 70th Annual DFD Meeting of the American Physical Society, 19-21 November 2017, Denver, USA.
- [C9] **F. Evrard**, F. Denner, B. van Wachem, *Estimation of curvature from volume-fractions using parabolic reconstruction on unstructured meshes*, 3rd International Conference on Numerical Methods in Multiphase Flows, 26-29 June 2017, Tokyo, Japan.

- [C8] **F. Evrard**, S. Gallot-Lavallée, F. Denner, B. van Wachem, W. Jones, *Coupled Eulerian-Lagrangian LES-pdf simulation of a combustion system with full resolution of the primary atomisation*, SIAM International Conference on Numerical Combustion, 3-5 April 2017, Orlando, USA.
- [C7] **F. Evrard**, F. Denner, B. van Wachem, *Evaluating curvature for the volume of fluid method via interface reconstruction*, 69th Annual DFD Meeting of the American Physical Society, 20-22 November 2016, Portland, USA.
- [C6] F. Denner, **F. Evrard**, B. van Wachem, A. Castrejon-Pita, J. Castrejon-Pita, *Evolution of the dynamic Rayleigh-Plateau instability on liquid jets*, 69th Annual DFD Meeting of the American Physical Society, 20-22 November 2016, Portland, USA.
- [C5] **F. Evrard**, F. Denner, B. van Wachem, *Curvature evaluation from volume-fractions via interface reconstruction*, Inaugural UK Fluids Conference 2016, 7-9 September 2016, London, United-Kingdom.
- [C4] **F. Evrard**, F. Denner, B. van Wachem, *A refined-grid Volume-of-Fluid method for the simulation of interfacial flows*, Imperial College Center for Doctoral Training - Fluids, Student Symposium, 28 June 2016, London, United-Kingdom.
- [C3] **F. Evrard**, F. Denner, R. Serfaty, B. van Wachem, *A coupled Eulerian-Lagrangian method for spray atomization on unstructured meshes*, 9th International Conference on Multiphase Flow (ICMF 2016), 22-27 May 2016, Florence, Italy.
- [C2] T. Curran, **F. Evrard**, R. Wilson, B. van Wachem, *Modelling of gas-solid flows with non-spherical particles*, 9th International Conference on Multiphase Flow (ICMF 2016), 22-27 May 2016, Florence, Italy.
- [C1] **F. Evrard**, B. van Wachem, F. Denner, *Attenuation of numerical artefacts in the modelling of fluid interfaces*, 68th Annual DFD Meeting of the American Physical Society, 22-24 November 2015, Boston, USA.