# Maria Fernandino

List of Publications by Year
in descending order



| | | | |
|---|---|---|---|
| 79 papers | 905 citations | 516710 16 h-index | 552781 26 g-index |
| 81 all docs | 81 docs citations | 81 times ranked | 672 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Derivation and validation of a binary multi-fluid Eulerian model for fluidized beds. Chemical Engineering Science, 2011, 66, 3605-3616. | 3.8 | 69 |
| 2 | Investigation of the particleâ€“particle drag in a dense binary fluidized bed. Powder Technology, 2012, 224, 311-322. | 4.2 | 53 |
| 3 | Review on pressure drop oscillations in boiling systems. Nuclear Engineering and Design, 2012, 250, 436-447. | 1.7 | 49 |
| 4 | Simulation of transients in natural gas pipelines. Journal of Natural Gas Science and Engineering, 2011, 3, 349-355. | 4.4 | 43 |
| 5 | Numerical Investigation of the Sorption Enhanced Steam Methane Reforming in a Fluidized Bed Reactor. Energy Procedia, 2012, 26, 15-21. | 1.8 | 32 |
| 6 | Large eddy simulation of turbulent open duct flow using a lattice Boltzmann approach. Mathematics and Computers in Simulation, 2009, 79, 1520-1526. | 4.4 | 31 |
| 7 | Multi-fluid modeling of density segregation in a dense binary fluidized bed. Particuology, 2012, 10, 62-71. | 3.6 | 31 |
| 8 | Can flow oscillations during flow boiling deteriorate the heat transfer coefficient?. Applied Physics Letters, 2018, 113, . | 3.3 | 27 |
| 9 | Determination of flow sub-regimes in stratified airâ€“water channel flow using LDV spectra. International Journal of Multiphase Flow, 2006, 32, 436-446. | 3.4 | 26 |
| 10 | Experimental parametric study of the pressure drop characteristic curve in a horizontal boiling channel. Experimental Thermal and Fluid Science, 2014, 52, 318-327. | 2.7 | 25 |
| 11 | Dynamic simulation of Ledinegg instability. Journal of Natural Gas Science and Engineering, 2010, 2, 211-216. | 4.4 | 23 |
| 12 | The least squares spectral element method for the Cahnâ€“Hilliard equation. Applied Mathematical Modelling, 2011, 35, 797-806. | 4.2 | 23 |
| 13 | Numerical analysis of pressure drop oscillations in parallel channels. International Journal of Multiphase Flow, 2013, 56, 15-24. | 3.4 | 23 |
| 14 | Experimental results on boiling heat transfer coefficient, frictional pressure drop and flow patterns for R134a at a saturation temperature of 34ÂÂ°C. International Journal of Refrigeration, 2014, 40, 317-327. | 3.4 | 22 |
| 15 | Water droplet impacting on overheated random Si nanowires. International Journal of Heat and Mass Transfer, 2018, 124, 307-318. | 4.8 | 22 |
| 16 | Can Wicking Control Droplet Cooling?. Langmuir, 2019, 35, 6562-6570. | 3.5 | 17 |
| 17 | Can the heat transfer coefficients for single-phase flow and for convective flow boiling be equivalent?. Applied Physics Letters, 2018, 112, . | 3.3 | 16 |
| 18 | Experimental study on the characteristics of pressure drop oscillations and their interaction with short-period oscillation in a horizontal tube. International Journal of Refrigeration, 2018, 91, 246-253. | 3.4 | 16 |

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|---|---|---|---|
| 19 | On the heat transfer deterioration during condensation of binary mixtures. Applied Physics Letters, 2019, 114, . | 3.3 | 16 |
| 20 | Using Cahnâ€“Hilliard mobility to simulate coalescence dynamics. Computers and Mathematics With Applications, 2010, 59, 2246-2259. | 2.7 | 15 |
| 21 | Modelling of high pressure binary droplet collisions. Computers and Mathematics With Applications, 2011, 61, 3564-3576. | 2.7 | 15 |
| 22 | Experimental study of pressure drop oscillations in parallel horizontal channels. International Journal of Heat and Fluid Flow, 2014, 50, 126-133. | 2.4 | 15 |
| 23 | Numerical study of heat and mass transfer of binary mixtures condensation in mini-channels. International Communications in Heat and Mass Transfer, 2014, 58, 45-53. | 5.6 | 15 |
| 24 | On the occurrence of superimposed density wave oscillations on pressure drop oscillations and the influence of a compressible volume. AIP Advances, 2018, 8, 075022. | 1.3 | 15 |
| 25 | Water-Repellent Surfaces Consisting of Nanowires on Micropyramidal Structures. ACS Applied Nano Materials, 2019, 2, 7696-7704. | 5.0 | 15 |
| 26 | Conical micro-structures as a route for achieving super-repellency in surfaces with intrinsic hydrophobic properties. Applied Physics Letters, 2019, 115, 053703. | 3.3 | 14 |
| 27 | Jacobi galerkin spectral method for cylindrical and spherical geometries. Chemical Engineering Science, 2007, 62, 6777-6783. | 3.8 | 12 |
| 28 | Experimental Study of Horizontal Flow Boiling Heat Transfer of R134a at a Saturation Temperature of 18.6â€‰Â°C. Journal of Heat Transfer, 2017, 139, . | 2.1 | 12 |
| 29 | Water droplet dynamics on a heated nanowire surface. Applied Physics Letters, 2018, 113, . | 3.3 | 12 |
| 30 | Effect of heating profile on the characteristics of pressure drop oscillations. Chemical Engineering Science, 2017, 158, 453-461. | 3.8 | 11 |
| 31 | Macroscopic description of dropletâ€“film interaction for gasâ€“liquid systems. Applied Mathematical Modelling, 2009, 33, 3309-3318. | 4.2 | 10 |
| 32 | Effect of Interfacial Waves on Turbulence Structure in Stratified Duct Flows. Journal of Fluids Engineering, Transactions of the ASME, 2008, 130, . | 1.5 | 9 |
| 33 | On the influence of heat flux updating during pressure drop oscillations â€“ A numerical analysis. International Journal of Heat and Mass Transfer, 2013, 63, 31-40. | 4.8 | 9 |
| 34 | Wetting State Transitions over Hierarchical Conical Microstructures. Advanced Materials Interfaces, 2018, 5, 1701039. | 3.7 | 9 |
| 35 | Law of resistance in two-phase flows inside pipes. Applied Physics Letters, 2019, 114, 173704. | 3.3 | 9 |
| 36 | Dropletâ€“surface impact at high pressures. Chemical Engineering Science, 2010, 65, 5320-5343. | 3.8 | 8 |

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| 37 | PARAMETRIC STUDY OF THE PRESSURE CHARACTERISTIC CURVE IN A BOILING CHANNEL. Computational Thermal Sciences, 2011, 3, 157-168. | 0.9 | 7 |
| 38 | Numerical Study of the Condensation Length of Binary Zeotropic Mixtures. Energy Procedia, 2015, 64, 43-52. | 1.8 | 7 |
| 39 | On the scaling of convective boiling heat transfer coefficient. International Journal of Heat and Mass Transfer, 2021, 164, 120589. | 4.8 | 7 |
| 40 | Improving superamphiphobicity by mimicking tree-branch topography. Journal of Colloid and Interface Science, 2022, 611, 118-128. | 9.4 | 7 |
| 41 | hp-Adaptive spectral element solver for reactor modeling. Chemical Engineering Science, 2009, 64, 904-911. | 3.8 | 6 |
| 42 | Simulation of a natural circulation loop using a least squares hp-adaptive solver. Mathematics and Computers in Simulation, 2011, 81, 2517-2528. | 4.4 | 6 |
| 43 | Two-Phase Flow Instabilities in Boiling and Condensing Systems. Journal of Power and Energy Systems, 2012, 6, 302-313. | 0.5 | 6 |
| 44 | Study of the influence of axial conduction in a boiling heated pipe. Chemical Engineering Research and Design, 2012, 90, 1141-1150. | 5.6 | 6 |
| 45 | A numerical investigation of flow boiling of non-azeotropic and near-azeotropic binary mixtures. International Journal of Refrigeration, 2015, 49, 99-109. | 3.4 | 6 |
| 46 | Numerical Solution of Coupled Cahn-Hilliard and Navier-Stokes System Using the Least-Squares Spectral Element Method. , 2016, , . | | 6 |
| 47 | The least-squares spectral element method for phase-field models for isothermal fluid mixture. Computers and Mathematics With Applications, 2017, 74, 1981-1998. | 2.7 | 6 |
| 48 | Multiphysic Two-Phase Flow Lattice Boltzmann: Droplets with Realistic Representation of the Interface. Communications in Computational Physics, 2011, 9, 1414-1430. | 1.7 | 5 |
| 49 | Numerical Simulation of Evaporation Process of Two-Phase Flow in Small-Diameter Channels. Heat Transfer Engineering, 2014, 35, 440-451. | 1.9 | 5 |
| 50 | Effect of Micropillar Characteristics on Leidenfrost Temperature of Impacting Droplets. , 2016, , . | | 5 |
| 51 | A redefined energy functional to prevent mass loss in phase-field methods. AIP Advances, 2020, 10, . | 1.3 | 5 |
| 52 | The heat transfer coefficient similarity between binary and single component flow condensation inside plain pipes. International Journal of Heat and Mass Transfer, 2022, 186, 122450. | 4.8 | 5 |
| 53 | Fractional step two-phase flow lattice Boltzmann model implementation. Journal of Statistical Mechanics: Theory and Experiment, 2009, 2009, P06014. | 2.3 | 4 |
| 54 | Modeling of annular-mist flow during mixtures boiling. Applied Thermal Engineering, 2015, 91, 463-470. | 6.0 | 4 |

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| 55 | Probability description of single droplet events at high pressures: Dropletâ€“wall collision case. Journal of Natural Gas Science and Engineering, 2011, 3, 476-483. | 4.4 | 3 |
| 56 | The Leidenfrost Phenomenon on Silicon Nanowires. , 2016, , . | | 3 |
| 57 | Droplet evaporation during dropwise condensation due to deposited volatile organic compounds. AIP Advances, 2021, 11, . | 1.3 | 3 |
| 58 | The overlooked role of pressure oscillations on heat transfer deterioration during self-sustained flow oscillations. Applied Physics Letters, 2020, 117, 253701. | 3.3 | 3 |
| 59 | Numerical Solution of Incompressible Cahn-Hilliard and Navier-Stokes System with Large Density and Viscosity Ratio Using the Least-Squares Spectral Element Method. Journal of Fluid Flow, Heat and Mass Transfer, 0, , . | 0.0 | 3 |
| 60 | An improved flowsheet simulation approach for advanced CO2 absorption process design and optimization. Energy Procedia, 2009, 1, 4257-4264. | 1.8 | 2 |
| 61 | Experimental study of density wave oscillations in horizontal straight tube evaporator. , 2014, , . | | 2 |
| 62 | The Least Squares Spectral Element Method for the Navier-Stokes and Cahn-Hilliard Equations. , 2015, , . | | 2 |
| 63 | Flow Boiling in a Horizontal Tube at High Vapor Qualities. , 2016, , . | | 2 |
| 64 | ICONE19-43568 MODELING OF DYNAMIC INSTABILITIES IN BOILING SYSTEMS. The Proceedings of the International Conference on Nuclear Engineering (ICONE), 2011, 2011.19, _ICONE1943-_ICONE1943. | 0.0 | 2 |
| 65 | Anisotropic wetting and final shape of droplets impacting on micropillars with non-vertical lateral walls. AIP Advances, 2021, 11, 115319. | 1.3 | 2 |
| 66 | Toward Surfaces with Droplet Impact Robustness and Low Contact Angle Hysteresis. Advanced Materials Interfaces, 2022, 9, . | 3.7 | 2 |
| 67 | Experimental Investigation and Discussion of Heat Transfer Mechanisms During Flow Boiling in Mini-Channels Using Refrigerant R134a. , 2016, | | 1 |
| 68 | <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" id="mml29" display="inline" overflow="scroll" altimg="si29.gif"><mml:msup><mml:mrow><mml:mi>C</mml:mi></mml:mrow><mml:mrow><mml:mn>1</mml:mn></mml:mrow></m continuous <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" id="mml30" display="inline" overflow="scroll" altimg="si1.gif"><mml:mi>h</mml:mi></mml:math>-adaptive least-squares spectral element method for phase-field models. Computers and Mathematics With Appli | 2.7 | 1 |
| 69 | Thermal two-phase flow with a phase-field method. International Journal of Multiphase Flow, 2018, 100, 77-85. | 3.4 | 1 |
| 70 | Numerical Solution of Cahn-Hilliard System by Adaptive Least-Squares Spectral Element Method. Lecture Notes in Computer Science, 2018, , 128-136. | 1.3 | 1 |
| 71 | SS: High Pressure Gas-Liquid Separation: High-pressure droplet-deposition: from experiments to closure laws. , 2010, , . | | 0 |
| 72 | A turbulent Eulerian multi-fluid reactive flow model and its application in modelling sorption enhanced steam methane reforming. Journal of Physics: Conference Series, 2011, 318, 092022. | 0.4 | 0 |

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|---|---|---|---|
| 73 | Numerical Simulation of Adiabatic Two-Phase Flow in Micro-Channels. , 2011, , . | | 0 |
| 74 | Controlling micro-sized droplet generation using electrical pulses for studying liquid-liquid systems. , 2014, , . | | 0 |
| 75 | Effect of the Pressure Drop Oscillation on the Local Heat Transfer Coefficient in a Heated Horizontal Pipe. , 2018, , . | | 0 |
| 76 | Experimental Study of Nucleate Flow Boiling to Convective Flow Boiling Transition in a Horizontal Heated Pipe. , 2018, , . | | 0 |
| 77 | Sensitivity Analysis of Heat Exchangers Using Perturbative Methods. Lecture Notes in Computational Science and Engineering, 2011, , 275-282. | 0.3 | 0 |
| 78 | Does the Criteria of Instability Thresholds During Density Wave Oscillations Need to Be Redefined?. Springer Proceedings in Energy, 2021, , 45-54. | 0.3 | 0 |
| 79 | Reconsidering the influence of the mass flux during nucleate flow boiling in a horizontal heated pipe. AIP Advances, 2021, 11, . | 1.3 | 0 |