

# Massimiliano Maria Villone

## List of Publications by Year in descending order

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Version: 2024-02-01

56  
papers

986  
citations

516710  
16  
h-index

434195  
31  
g-index

56  
all docs

56  
docs citations

56  
times ranked

941  
citing authors

| #  | ARTICLE   | IF   | CITATIONS |
|----|---|------|-----------|
| 1  | Single line particle focusing induced by viscoelasticity of the suspending liquid: theory, experiments and simulations to design a micropipe flow-focuser. Lab on A Chip, 2012, 12, 1638. | 6.0  | 182       |
| 2  | Particle motion in square channel flow of a viscoelastic liquid: Migration vs. secondary flows. Journal of Non-Newtonian Fluid Mechanics, 2013, 195, 1-8.                                 | 2.4  | 96        |
| 3  | Full-angle tomographic phase microscopy of flowing quasi-spherical cells. Lab on A Chip, 2018, 18, 126-131.   | 6.0  | 83        |
| 4  | Perspectives on liquid biopsy for label-free detection of circulating tumor cells through intelligent lab-on-a-chips. View, 2020, 1, 20200034.  | 5.3  | 69        |
| 5  | Simulations of deformable systems in fluids under shear flow using an arbitrary Lagrangian Eulerian technique. Computers and Fluids, 2014, 90, 88-100.                                    | 2.5  | 58        |
| 6  | Magnetophoresis meets viscoelasticity: deterministic separation of magnetic particles in a modular microfluidic device. Lab on A Chip, 2015, 15, 1912-1922.                               | 6.0  | 56        |
| 7  | Simulations of viscoelasticity-induced focusing of particles in pressure-driven micro-slit flow. Journal of Non-Newtonian Fluid Mechanics, 2011, 166, 1396-1405.                          | 2.4  | 54        |
| 8  | Dynamics, rheology, and applications of elastic deformable particle suspensions: a review. Rheologica Acta, 2019, 58, 109-130.  | 2.4  | 41        |
| 9  | Numerical simulations of deformable particle lateral migration in tube flow of Newtonian and viscoelastic media. Journal of Non-Newtonian Fluid Mechanics, 2016, 234, 105-113.            | 2.4  | 36        |
| 10 | Numerical simulations of particle migration in a viscoelastic fluid subjected to Poiseuille flow. Computers and Fluids, 2011, 42, 82-91.  | 2.5  | 31        |
| 11 | Validated modeling of bubble growth, impingement and retraction to predict cell-opening in thermoplastic foaming. Chemical Engineering Journal, 2016, 287, 492-502.                       | 12.7 | 28        |
| 12 | Simulations of an elastic particle in Newtonian and viscoelastic fluids subjected to confined shear flow. Journal of Non-Newtonian Fluid Mechanics, 2014, 210, 47-55.                     | 2.4  | 27        |
| 13 | Quantitative imaging of the complexity in liquid bubbles evolution reveals the dynamics of film retraction. Light: Science and Applications, 2019, 8, 20.                                 | 16.6 | 26        |
| 14 | Elasticity in Bubble Rupture. Langmuir, 2018, 34, 5646-5654.  | 3.5  | 24        |
| 15 | Dehydration of plant cells shoves nuclei rotation allowing for 3D phase-contrast tomography. Light: Science and Applications, 2021, 10, 187.  | 16.6 | 21        |
| 16 | Dynamics of prolate spheroidal elastic particles in confined shear flow. Physical Review E, 2015, 92, 062303.   | 2.1  | 17        |
| 17 | Continuous 3D Printing of Hierarchically Structured Microfoamed Objects. Advanced Engineering Materials, 2022, 24, 2101226.   | 3.5  | 15        |
| 18 | Assembling and rotating erythrocyte aggregates by acoustofluidic pressure enabling full phase-contrast tomography. Lab on A Chip, 2019, 19, 3123-3132.                                    | 6.0  | 14        |

| #  | ARTICLE  | IF  | CITATIONS |
|----|--|-----|-----------|
| 19 | Design of a microfluidic device for the measurement of the elastic modulus of deformable particles. <i>Soft Matter</i> , 2019, 15, 880-889.  | 2.7 | 14        |
| 20 | Lateral migration of deformable particles in microfluidic channel flow of Newtonian and viscoelastic media: a computational study. <i>Microfluidics and Nanofluidics</i> , 2019, 23, 1.              | 2.2 | 14        |
| 21 | Modeling and simulation of viscoelastic film retraction. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2017, 249, 26-35.   | 2.4 | 10        |
| 22 | Numerical design of a T-shaped microfluidic device for deformability-based separation of elastic capsules and soft beads. <i>Physical Review E</i> , 2017, 96, 053103.                               | 2.1 | 10        |
| 23 | Bio-Lightweight Structures by 3D Foam Printing. , 2021, , .  |     | 9         |
| 24 | Numerical simulations of cell sorting through inertial microfluidics. <i>Physics of Fluids</i> , 2022, 34, .   | 4.0 | 9         |
| 25 | Numerical simulations of the separation of elastic particles in a T-shaped bifurcation. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2016, 233, 75-84.  | 2.4 | 6         |
| 26 | Dissolution of concentrated surfactant solutions: from microscopy imaging to rheological measurements through numerical simulations. <i>Soft Matter</i> , 2019, 15, 8352-8360.                       | 2.7 | 6         |
| 27 | Axisymmetric bare freestanding films of highly viscous liquids: Preparation and real-time investigation of capillary leveling. <i>Journal of Colloid and Interface Science</i> , 2021, 596, 493-499. | 9.4 | 6         |
| 28 | Numerical simulations of viscoelastic film stretching and retraction. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2019, 266, 118-126.  | 2.4 | 5         |
| 29 | Numerical simulations of linear viscoelasticity of monodisperse emulsions of Newtonian drops in a Newtonian fluid from dilute to concentrated regime. <i>Rheologica Acta</i> , 2014, 53, 401-416.    | 2.4 | 4         |
| 30 | Rotating tensiometer for the measurement of the elastic modulus of deformable particles. <i>Physical Review Fluids</i> , 2020, 5, .  | 2.5 | 3         |
| 31 | Bubble impingement in the presence of a solid particle: A computational study. <i>Computers and Fluids</i> , 2018, 170, 349-356.   | 2.5 | 2         |
| 32 | Numerical simulations of oscillatory shear flow of particle suspensions at finite inertia. <i>Rheologica Acta</i> , 2019, 58, 741-753.   | 2.4 | 2         |
| 33 | 3D imaging in microfluidics: new holographic methods and devices. , 2019, , .  |     | 2         |
| 34 | Deep learning-based non-intrusive detection of instabilities in formulated liquids. , 2021, , .  |     | 2         |
| 35 | An Experimental and Numerical Investigation on Bubble Growth in Polymeric Foams. <i>Entropy</i> , 2022, 24, 183.   | 2.2 | 2         |
| 36 | Tomographic flow cytometry of circulating human breast adenocarcinoma cells. , 2018, , .   |     | 1         |

| #  | ARTICLE  | IF  | CITATIONS |
|----|--|-----|-----------|
| 37 | Recent Advancements and Perspective About Digital Holography: A Super-Tool in Biomedical and Bioengineering Fields. Conference Proceedings of the Society for Experimental Mechanics, 2019, , 235-241. | 0.5 | 1         |
| 38 | Particle manipulation through polymer solutions in microfluidic processes. AIP Conference Proceedings, 2015, , .   | 0.4 | 0         |
| 39 | Soft Matter in Flow and High Performance Computing. , 2017, , 291-305.   |     | 0         |
| 40 | Microfluidic engineering for continuous in-flow cyto-tomography. EPJ Web of Conferences, 2019, 215, 10003.   | 0.3 | 0         |
| 41 | Design Of An Optofluidic Device For The Measurement Of The Elastic Modulus Of Deformable Particles. EPJ Web of Conferences, 2019, 215, 14003.  | 0.3 | 0         |
| 42 | Tomographic flow cytometry as the key-enabling technology for label-free liquid biopsy. , 2021, , .  |     | 0         |
| 43 | Label-free microfluidic platform for blood analysis based on phase-contrast imaging. , 2021, , .   |     | 0         |
| 44 | Design of a microfluidic device for the phase-contrast tomography of flowing cells. , 2021, , .  |     | 0         |
| 45 | Investigation of plant cells intracellular dynamics by digital holography. , 2021, , .   |     | 0         |
| 46 | Numerical simulations of small amplitude oscillatory shear flow of suspensions of rigid particles in non-Newtonian liquids at finite inertia. Journal of Rheology, 2021, 65, 821-835.                  | 2.6 | 0         |
| 47 | Tomographic phase microscopy for label-free imaging in biomedicine. , 2018, , .  |     | 0         |
| 48 | New perspective for liquid biopsy: in flow-tomography of circulating tumor cells. , 2018, , .  |     | 0         |
| 49 | Methods for holographic 3D tracking and rotating angle recovery in tomographic flow cytometry. , 2019, , .   |     | 0         |
| 50 | Label-free imaging of cancer cells by in-flow tomography. , 2019, , .  |     | 0         |
| 51 | Phase contrast imaging in acoustophoresis platforms for biological applications. , 2019, , .   |     | 0         |
| 52 | Holographic imaging of erythrocytes in acoustofluidic platforms. , 2019, , .   |     | 0         |
| 53 | Design of an optofluidic device for the measurement of the elastic modulus of deformable particles. , 2019, , .  |     | 0         |
| 54 | Holographic imaging for 3D cells morphology in microfluidic flow. , 2019, , .  |     | 0         |

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|----|--|----|-----------|
| 55 | Induced dehydration as a method to enhance phase-contrast observation of plant cells intracellular dynamics. , 2021, , . |    | 0         |
| 56 | Rheo-Engineered Microfluidics @ UNINA. , 2022, 3, 100024.  |    | 0         |