

BAUDOIN Michaël,
46 ans, Français
<https://pro.univ-lille.fr/en/michael-baudoin>
michael.baudoin@univ-lille.fr

**PROFESSEUR A L'UNIVERSITE DE LILLE, CHERCHEUR A L'IEMN
MEMBRE DE L'INSTITUT UNIVERSITAIRE DE FRANCE, FONDATEUR ET
CTO/CSO STARTUP VISION**



PARCOURS PROFESSIONNEL

- Depuis 2023 **Directeur technique et scientifique (CTO/CSO) de la startup VISION** (commercialisant la technologie Cleardrop) <https://cleardrop.tech>
- 03/2021 **Co-fondateur de la startup VISION** (spin-off de mes recherches à l'IEMN)
- 2019-2024 **Membre Junior de l'Institut Universitaire de France (IUF)**
- Depuis 2016 **Professeur à l'Université de Lille** (de classe exceptionnelle depuis 2024), **chercheur au laboratoire IEMN, France**
- 2008-2016 **Maître de Conférence à l'Université de Lille, chercheur au laboratoire IEMN, France**
- 2008 **Posdoctorant à l'Ecole Polytechnique**, laboratoire LadHyX en microfluidique dans l'équipe du Pr. Charles Baroud

FORMATION



INSTITUT
POLYTECHNIQUE
DE PARIS



- 2004-2007 **Thèse en acoustique et mécanique des fluides, Sorbonne Université** : « Acoustique non linéaire et diffusion multiple dans les suspensions de particules rigides »
- 2001-2004 **Diplôme d'Ingénieur de l'Institut Polytechnique de Paris / ENSTA** (option systèmes de transport)
- 2003-2004 **Master en mécanique des fluides, Sorbonne Université, mention Très bien** (Effectué en parallèle de ma 3^{ème} année d'école d'ingénieur)
- 1998-2001 **Classes préparatoires scientifiques aux lycées Henri IV (Paris) et Lakanal (Sceaux)**

PUBLICATIONS / BREVETS / CONFERENCES (VOIR LISTE DETAILLE A LA FIN DU CV)



Science Advances
AAAS's open-access journal



- **45 publications** (Nature Comm, Science Adv., Ann. Rev. Fluid Mech., PNAS, Phys. Rev. Lett. (3), JFM, JASA, Phys. Rev. Appl., Phys. Rev. Fluid, App. Phys. Lett., Lab on Chip, Med. Eng. & Phys., Phys. Rev. E, Soft Matter,...) + **3 soumises**
- **17 brevets** (dont 12 licenciés, 7 par un équipementier automobile + 5 par une startup que nous avons créée)

- **14 conférences internationales invitées (dont une conférence d'ouverture et 4 Keynotes)** IEEE IUS 2025 (**Keynote**), Netherland / Acoustofluidics 2024, Sweeden / SAW Symposium 2023 (**Keynote**) / 182th ASA meeting 2022, USA / APS Physics Journal Club / 4th IHMTC International conference 2021 (**Keynote**) / 176th ASA Meeting 2018, Canada/ AFPAC 2018, UK / Acoustofluidics 2016, Danemark (**conférence d'ouverture**) / 171th ASA meeting 2016, USA / IEEE Int. Ultras. Symp 2015, Taiwan / Acoustics 2012 Hong Kong / 6th IEEE-NEMS conference 2011, Taiwan
- **7 cours invités dans des écoles d'étés internationales** European Summer School on Physical Acoustics", Cargèse, (France), 2024/ "Acoustofluidics", Porquerolles (France), 2022 / "Complex Motion in Fluids 2019", Denmark organized by Cambridge (UK), Ecole Polytechnique (France), DTU (Denmark) / "Acoustofluidics 2016" Porquerolles (France) / "Nonlinear Acoustics 2014", Oléron (France)), Lab based workshop on bubbles & Drops, Univ. Florida (USA), 2011
- **7 papiers hilights:**
 - 2023 : Phys. Rev. Lett. Papier sur les ressault hydrauliques oscillants **highlighté dans APS Phys. et sélectionné parmi les editors' suggestions**
 - 2022 Phys. Rev. Fluid Letter sur les bulles éternelles **highlighté dans Nature et APS "Physics"** et sélectionné parmi les **parmi les editors' suggestions**
 - 2020: Phys. Rev. Lett. papier sur le son émi par les bulles de savon lors de leur rupture **highlighté dans APS Phys. et sélectionné parmi les editors' suggestions**
 - 2020: **Revue invité** sur les pinces acoutiques dans **Ann. Rev. Fluid Mech.**
 - 2017: **Phys. Rev. Appl.** papier sur les pinces acoustiques hilighté dans **Physics Buzz of APS**
 - 2017: **JFM paper** sur le streaming acoustique dans induit par des ondes acoustiques de surface dans une goutte d'eau **highlighté dans Focus on Fluids,**
 - 2014: **Page de couverture du journal Soft Matter** sur nos bulles en armure cylindriques.
- Plus de 40 communications dans des conférences internationales à comité de lecture

PRIX / RECOMPENSES

2024	Passage à la Classe Exceptionnelle du corps des Professeurs d'Université
2023	Lauréat du concours d'innovation i-Lab pour la startup VISION développant la une technologie ultrasonore de nettoyage de surface optique.
2019	Élu membre Junior de l'Institut Universitaire de France / Médaille remise à l'Académie Française
2018, 2023	Financement d'un projet ISITE ERC Generator par la fondation ISITE-ULNE (programme sélectif permettant d'augmenter les chances d'un chercheur prometteur d'obtenir l'ERC)
2021, 2017	Distingué par la Prime d'Encadrement Doctoral et de Recherche (PEDR)
2013	Distingué par la Prime d'Excellence Scientifique (PES)

VALORISATION

2024	Directeur technique et scientifique (CTO & CSO) de la startup VISION commercialisant la technologie brevetée Cleardrop (https://www.cleardrop.tech) issue de nos recherches académiques
2021	Co-fondateur de la startup VISION
2016-2021	Coordinateur scientifique de 2 projets de maturation (SATT NORD), 2 projets de co-maturation (SATT NORD/VALEO) et d'un contrat de collaboration (CNRS/VISION) pour augmenter le niveau TRL de technologie développées au labo. Grâce à ce travail, 9 brevets/13 déposés par notre équipe sont licenciés

FINANCEMENTS ACTUELS ET PASSES

2023-2028	Coordinateur du projet ANR PRME ACOUSURF (370k€), sur les analogues quantiques acoustiques.
2023-2027	Co-coordonateur du projet de chaire internationale WILL « ICMINA » (500k€) en collaboration avec le Pr. H. Bruus, membre de l'Académie Royale des Sciences et professeur à DTU, pour un projet sur la manipulation acoustique

- 2023-2027** **Coordinateur du projet international CAPES-COFECUB de collaboration France-Brésil** sur la manipulation acoustique (~50k€)
- 2021-2023** **Coordinateur du projet Région HDF/ISITE StartAIRR « OPTEAM »** (145 k€) : Développement de nouveaux systèmes de synthèse de champs arbitraires
- 2018-2021** **Coordinateur du projet ISITE ERC Generator (200 k€)** : Programme sélectif financé par la fondation ISITE pour aider les chercheurs prometteurs à obtenir un financement ERC.
- 2020** **Coordinateur scientifique d'un projet de co-maturation SATT Nord - VALEO pour le développement d'une technologie** basée sur nos brevets (WO201709776O, FR1910588, FR1910589, FR1910590)
- 2018-2019** **Coordinateur scientifique d'un projet de pré-maturation SATT Nord - VALEO (140k€), pour le développement d'une technologie** basée sur notre brevet (WO201709776O)
- 2018-2020** **Coordinateur scientifique d'un projet de pré-maturation (70 k€):** financé par l'ISITE-ULNE pour un projet de pré-maturation permettant de développer de nouvelles fonctionnalités de pinces acoustiques
- 2016-2018** **Coordinateur scientifique d'un projet SATT Nord de Maturation (315k€),** pour la maturation d'une technologie de pinces acoustiques (EP16 305601.3, PCT/EP2016/055611)
- 2012/2016** **Coordinateur** (avec le support du Pr. O. Bou Matar) **du projet ANR international "AWESOM" (532k€)** financé par l'Agence Nationale de la Recherche (ANR)
- 2011/2020** **7 financements (661 k€) de thèse** pour des étudiants travaillant sur mes activités de recherche, financés par (i) la Région « Nord-Pas-de-Calais », (ii) la DGA, (iii) l'Université de Lille, (iv) l'École Normale Supérieure.

SUPERVISION DE DOCTORANTS ET DE POSTDOCTORANTS

- 2008-2024** **Supervision de 9 doctorants / 4 postdoctorants / 11 étudiants de master** (de France, du Danemark, d'Inde, de Chine, et du Liban).

ORGANISATION DE CONFERENCES INTERNATIONALES

- 2023** **Membre du comité d'organisation d'une session sur l'acoustique pour la microrobotique à la conférence MARSS, Abu Dhabi, 9 au 13 Octobre 2023**
- 2022** **Membre du comité d'organisation (3 personnes) de l'école d'été d'Acoustofluidique, Porquerolles 13 au 17 Juin 2022**
- 2021** **Organisateur d'une journée Thématique du GDR Microfluidique « Ondes, Fluides, Interfaces », Lille, 14/10/2021, 41 participants**
- 2018** **Président de la conférence internationale Acoustofluidics 2018**, qui a regroupé à Lille plus de 120 participants de 22 pays et 4 continents, 8 intervenants invités, 5 sponsors industriels du 29 au 31 Août 2018
- 2017** **Membre du comité scientifique du Congrès Français de Mécanique 2017 et organisateur de la session « Microfluidique », Lille, 28 août-1^{er} septembre 2017**
- 2016** **Membre du comité d'organisation (3 personnes) de la session « Acoustique et Matière Molle », des Journées de la Matière Condensée, 22-26 août 2016**
- 2015** **Membre du comité d'organisation (5 personnes) d'une école d'été internationale "Microfluidics'15", Porquerolles, France, 21 to 26 June 2015**
- 2012** **Membre du comité d'organisation (4 personnes) d'un Workshop international intitulé "Acoustic Waves for the control of microfluidic flows", Lorentz Center, Pays-Bas, 23 au 27 Avril 2012**
- 2011** **Membre du comité d'organisation (3 personnes) d'une école d'été internationale intitulée "Lab-based Workshop on bubbles and drops", Université de Floride, 20 to 25 Juin 2011**

RESPONSABILITES

Depuis 05/2021 **Membre du Conseil de la Faculté des Sciences de l'Université de Lille et de la commission formation**

2020-2021 **Membre du Conseil Scientifique** du laboratoire IEMN

Depuis 2017 **Membre du conseil de département et de la commission mixte du Département de Mécanique, Université de Lille**

Depuis 2015 **Membre du Comité de Pilotage du GDR “Microfluidique”**
 2018-2019 **Responsable d’un des 5 départements scientifique de l’IEMN**
 Depuis 09/2014 **Responsable de la Licence de Mécanique** de l’Université de Lille (plus de 200 étudiants)
 2014-2019 **Responsable du Cours Master en Ingénierie (CMI)**, un programme sélectif en 5 ans
 comportant des activités additionnelles pour préparer les étudiants au métier d’ingénieur
 2011-2015 **Membre du Conseil National des Université (CNU)**
 Depuis 05/2015 **Membre du conseil de l’UFR de Mathématique puis du conseil du département de
 Mécanique**

COMMISSIONS

2013-2023 **Expertise de 5 projets ANR (dont 1 ANR Astrid)**
 2021-2022 **Expertise de 2 projet IDEX de l’Université de Grenoble**
 Depuis 2008 **Membre du jury de 15 thèses** en France, Royaume-Uni, Australie et Danemark, dont 10 en
 tant que rapporteur
 2013, 2016 **Rapporteur pour la DFG** (Équivalent allemand de l’ANR)
 Depuis 2008 **Rapporteur pour des revues internationales à comité de lecture: Nat. Commun, Phys.
 Rev. Lett., J. Fluid Mech., New J. Phys., J. Acoust. Soc. Am., Lab Chip, J. Micromech. &
 Microeng, Sens. Actuators B, Soft Matter, Langmuir, Proc. Roy. Soc. A,...**

LISTES DETAILLEE DE PUBLICATIONS / BREVETS / CONFERNCES

A. PUBLICATIONS DANS DES REVUES INTERNATIONALES A COMITE DE LECTURE

Toutes les publications peuvent être consultées à l'adresse : <https://pro.univ-lille.fr/en/michael-baudoin-michael-baudoin/publications/> / *Corresponding author

Soumis

- [A49] I. Haouche, B. Reichert, **M. Baudoin**, P.K. Farsoiya, A hybrid Volume-of-Fluid and Phase-Field method for Direct Numerical Simulations of soluble surfactant-laden interfacial flows, *submitted to J. Comp. Phys.* (2026)
- [A48] J.F. Acevedo-Espinosa, F.O.S. D'Amato, M.V.D. Vermelho, A.J.X.B. Branco, A.A.O. Carneiro, **M. Baudoin**, J.L.E. Cuello, G.T. Silva*, Reduced-parameter ultrasound electrical impedance spectroscopy for characterization of piezoelectric transducers and polymer materials, *submitted to Ultrasonics* (2026)
- [A47] J. Ghesquière, M. Terzi, O. Bou Matar, S. Cleve, A. Aleshin*, **M. Baudoin***, Hertz–Mindlin contact governs the reverse motion of particles driven by surface acoustic waves, *submitted to Phys. Rev. Lett* (2026)
- [A46] R. Al Sahely, J.C. Gerbedoen, N. Smagin, R. Chutani, O. Bou Matar, **M. Baudoin***, Ultra-High frequency vortex-based tweezers for microparticles manipulation with high spatial selectivity, *submitted to Phys. Rev. Appl*

2026



- [A45] J. P. Martishang, B. Reichert*, I. Haouche, G. Rousseau, A. Duchesne, **M. Baudoin***, Orbiting, colliding and merging droplets on a soap film: toward gravitational analogues, *PNAS NEXUS*, 5, pga079 (2026)

- [A44] J. Ghesquiere, G. Modler, S. Mollaei, D. Guérin, O. Bou Matar, H. Bruus, **M. Baudoin**, S. Cleve*, Microstreaming induced by a micro-cantilever vibrating elliptically in a viscous fluid, *J. Fluid Mech.*, 1028, A11 (2026)

2025

- [A44] J. Ghesquiere, G. K. Modler, S.Mollaei, D. Guérin, O. Bou-Matar, H. Bruus, M. Baudoin, S. Cleve, Microstreaming induced by a micro-cantilever vibrating elliptically in a viscous fluid, *accepted for publication in J. Fluid Mech.* (2025)
- [A43] S. Almohamad, G.K. Modler, R. Chutani, U. Ghosh, S. Cleve, H. Bruus and **M. Baudoin***, Patterning and micromanipulation of miscible fluids using vortex-based single-beam acoustic tweezers, *Phys. Rev. Appl.*, 23(5): 054094 (2025)



- [A42] L. Guerassimoff, S. De Smedt, F. Sauvage, **M. Baudoin***, Acoustic tweezers for targeted drug delivery, *Adv. Drug. Delivery Review*: 220: 115551 (2025)

2024

- [A41] V. Daru, **M. Baudoin***, High speed and acceleration micrometric jets induced by GHz streaming: a numerical study with direct numerical simulations, *J. Acoust. Soc. Am.*, 155, 2470-2481 (2024) (2023)

2022

- [A39] N. Chastrette, **M. Baudoin**, P. Brunet, L. Royon, R. Wunenburger*, Elucidating the oscillation instability of sessile drops triggered by surface acoustic waves, *Phys. Rev. Fluids*, 7: 124201 (2022)
- [A38] A. Roux, J.P. Martishang, **M. Baudoin***, Self radiation force on a moving monopolar source, *J. Fluid Mech.*, 952, A22 (2022)
- [A37] Z. Gong, **M. Baudoin***, Single beam acoustical tweezers based on focused beams: A numerical analysis of 2D and 3D trapping capabilities, *Phys. Rev. Appl.*, 18: 044033 (2022)



- [A36] A. Roux, A. Duchesne, **M. Baudoin***, Everlasting bubbles and liquid films resisting drainage, evaporation and nuclei-induced bursting, *Phys. Rev. Fluid (Letter)*, 7: L011601 (2022) **highlighted in NATURE**, 602:10 (2022) **in the "Research Highlights" and APS Physics and selected among the Editors' suggestion**

[A35] P. Brunet*, **M. Baudoin**, Unstationary dynamics of drops subjected to MHz-surface acoustic waves modulated at low frequency, *Exp. Fluids.*, **63**, 34 (2022)

2021

[A34] Z. Gong, **M. Baudoin***, Equivalence between angular spectrum-based and multipole expansion-based formulas of the acoustic radiation force and torque, *J. Acoust. Soc. Am.*, **149**: 3469-3482 (2021)

[A33] Z. Gong, **M. Baudoin***, Three-dimensional trapping and dynamic axial manipulation with frequency-tuned spiraling acoustical tweezers: A theoretical study, *Phys. Rev. Appl.*, **16**: 024034 (2021)

[A32] A. Riaud*, Q. Wang, Z. Gong J. Zhou and **M. Baudoin***, Acoustic radiation force on small spheres due to transient acoustic fields, *Phys. Rev. Appl.*, **15**: 044034 (2021)

2020

[A31] Z. Gong, **M. Baudoin***, Three-dimensional trapping and assembly of small particles with synchronized spherical acoustical vortices, accepted for publication in *Phys. Rev. Appl.*, **14**: 064002 (2020)

[A30] Z. Gong*, **M. Baudoin**, Acoustic radiation torque on a particle in a fluid: an angular spectrum based compact expression, accepted for publication in *J. Acoust. Soc. Am.*, **148**(5): 3131-3140 (2020)



[A29] P. Favreau, A. Duchesne, F. Zoueshtiagh, **M. Baudoin***, The motion of long levitating drops in tubes in an anti-Bretherton configuration, *Phys. Rev. Lett.*, **125**: 194501 (2020)



[A28] **M. Baudoin***, J.-L. Thomas, R.A. Sahely, J.C. Gerbedoen, Z. Gong, A. Sivery, O. Bou Matar, N. Smagin, A. Vlandas*, Spatially selective manipulation of cells with single beam acoustical tweezers, *Nature Commu.*, **11**: 4244 (2020)



[A27] A. Bussonnière, A. Antkowiak, F. Ollivier, **M. Baudoin**, R. Wunenburger*, Acoustic sensing of forces driving fast capillary flows, *Phys. Rev. Lett.*, **124**: 084502 (2020),
Editor's suggestion, Highlighted in Physics (APS)



[A26] **M. Baudoin***, J.-L. Thomas*, Acoustic tweezers for particle and fluid micromanipulation, *Ann. Rev. Fluid Mech.*, **52**: 205-234 (2020)

2019



[A25] **M. Baudoin***, J.-C. Gerbedoen, A. Riaud, O. Bou Matar, N. Smagin, J.-L. Thomas, Folding a focalized acoustical vortex on a flat holographic transducer: miniaturized selective acoustical tweezer, *Science Advances*, **5**: eaav1967 (2019)

[A24] Z. Gong, **M. Baudoin***, Particle assembly with synchronized acoustical tweezers, *Phys. Rev. Appl.*, **12**: 024045 (2019)

[A23] S. Signé Mamba, F. Zoueshtiagh, **M. Baudoin***, Pressure-driven dynamics of liquid plugs in rectangular micro-channels: influence of the transition between static and dynamic film deposition regimes, *Int. J. Multiph. Flow*, **113**: 343-357 (2019)

2018

[A22] S. Signé Mamba, J.C. Magniez, F. Zoueshtiagh, **M. Baudoin***, Dynamics of a liquid plug in a capillary tube under cyclic forcing: memory effects and airway reopening, *J. Fluid. Mech.*, **838**: 165-191 (2018)

2017

[A21] G. Prabhudesai, I. Bihi, F. Zoueshtiagh, J. Jose, **M. Baudoin***, Nonspherical armoured bubbles vibration, *Soft*

Matter, **13**: 3879 (2017)



[A20] A. Riaud, **M. Baudoin***, O. Bou Matar, L. Becera, J.-L. Thomas*, Selective manipulation of microscopic particles with precursor swirling Rayleigh waves, *Phys. Rev. Appl.*, **7**: 024007

(2017), highlighted in Physics Buzz of APS Central



[A19] A. Riaud, **M. Baudoin***, O. Bou Matar, J.-L. Thomas, P. Brunet, On the influence of viscosity and caustics on acoustic streaming in sessile droplets: an experimental and a numerical study with a cost-effective method, *J. Fluid Mech.*, **81**: 384-420 (2017),

highlighted in "Focus on Fluids"

2016



[A18] I. Bihi, **M. Baudoin***, J.E. Butler, C.Faille F. Zoueshtiagh*, Inverse Saffman-Taylor experiments with particles lead to capillary driven fingering instabilities, *Phys. Rev. Lett.*, **117**: 034501 (2016)

[A17] J.C. Magniez, **M. Baudoin***, C. Liu, F. Zoueshtiagh, Dynamics of liquid plugs in prewetted capillary tubes: from acceleration and rupture to deceleration and airway obstruction, *Soft Matter*, **12**: 8710-8717(2016)

[A16] A. Bussonière, **M. Baudoin***, P. Brunet and O. Bou Matar, Dynamics of sessile and pendant drop excited by surface acoustic waves: gravity effects and correlation between oscillatory and translational motions, *Phys. Rev. E*, **93**: 053106 (2016)

[A15] C. Faille*, I. Bihi, A. Ronse, G. Ronse, **M. Baudoin** and F. Zoueshtiagh, Drying conditions of a contaminated surface and the subsequent resistance to detachment of adherent microspheres and Bacillus spores, *Coll. Surf. B: Biointerfaces* **143**: 293-300 (2016)

[A14] A. Riaud, **M. Baudoin***, J.-L. Thomas, O. Bou Matar, SAW synthesis with inverse filter and IDTs array: toward a versatile platform for microfluidics and biological applications, *IEEE T. Ultrason. Ferr.*, **63**(10): 1601-1607 (2016)

2015

[A13] A. Riaud, J.L. Thomas, **M. Baudoin*** and O. Bou Matar, Taming the degeneracy of Bessel beams at anisotropic-isotropic interface: toward three dimensional control of confined vortical waves, *Phys. Rev. E*, **92**: 063201 (2015)

[A12] A. Riaud, J.L. Thomas, E. Charron, A. Bussonière, O. Bou Matar and **M. Baudoin***, Anisotropic swirling surface acoustic waves synthesis by inverse filter for on-chip generation of acoustical vortices, *Phys. Rev. Appl.*, **4**: 034004 (2015)

2014

[A11] F. Zoueshtiagh*, **M. Baudoin***, D. Guerrin, Capillary tube wetting induced by particles: towards armoured bubbles tailoring, *Soft Matter*, **10**(47): 9403-9412 (2014). Front cover of the journal.

[A10] A. Bussonière, Y. Miron, **M. Baudoin***, O. Bou-Matar, M. Grandbois, P. Charette*, and A. Renaudin*, Cell detachment and label-free cell sorting using modulated surface acoustic waves in droplet-based microfluidics, *Lab on a chip*, **14**: 3556 (2014)

[A9] A. Riaud, **M. Baudoin***, J.-L. Thomas, O. Bou-Matar, Cyclones and attractive streaming generated by acoustical vortices, *Phys. Rev. E*, **90**: 013008 (2014)

2013



[A8] **M. Baudoin**, Y. Song, P. Manneville, C.N. Baroud*, Airways reopening through catastrophic events in a hierarchical network, *Proc. Nat. Ac. Sci.*, **110**: 859-864 (2013)

2012

[A7] **M. Baudoin***, P. Brunet, O. Bou-Matar, E. Herth, Low power sessile droplet actuation via modulated surface acoustic waves, *Appl. Phys. Lett.*, **100**: 154102 (2012)

2011

[A6] **M. Baudoin**, F. Coulouvrat*, J.-L. Thomas, Clouds impact on the attenuation of sound, ultrasound and sonic boom, *J. Acoust. Soc. Am.*, **130**: 1142-1153 (2011)

[A5] **M. Baudoin***, J.-L. Thomas, F. Coulouvrat, C. Chanéac, Scattering of ultrasonic shock wave in suspensions of rigid particles, *J. Acoust. Soc. Am.*, **129**: 1209-1220 (2011)

[A4] Y. Song, **M. Baudoin**, P. Manneville and C.N. Baroud*, The air-liquid flow in a microfluidic airway tree, *Med. Eng. & Phys.*, **33**: 849-456 (2011)

2010

[A3] P. Brunet*, **M. Baudoin**, O. Bou Matar, F. Zoueshtiagh, Droplet displacement and oscillations induced by ultrasonic surface acoustic waves: a quantitative study, *Phys. Rev. E*, **81**: 026315 (2010)

2008

[A2] **M. Baudoin***, J.L. Thomas, F. Coulouvrat, On the influence of spatial correlations on sound propagation in concentrated solutions of rigid particles, *J. Acoust. Soc. Am.*, **123**: 4127-4139 (2008)

2007

[A1] **M. Baudoin***, J.L. Thomas, F. Coulouvrat, D. Lhuillier, An extended coupled phase theory for the sound propagation in polydisperse concentrated suspensions of rigid particles, *J. Acoust. Soc. Am.*, **121**: 3386-3397 (2007)

A* BREVETS

Les brevets **P1, P6, P7, P8, P9, P10, P11** sont licencié par **VALEO** et les brevet **P12, P13, P14, P16 et P17** par une startup (**VISION/Cleardrop**) que nous avons co-fondée

[P17] **M. Baudoin (60%)**, R. Chutani (40%), "Device for cleaning a substrate comprising a low-wettability surface using an ultrasonic surface wave." submitted on 23/06/2026, application number FR2608543

[P16] **M. Baudoin (35%)**, O.B. Matar (15%), R. Chutani (25%), B. Lemkalli (25%), "Readily integrable electroacoustic device for cleaning a substrate by converting an ultrasonic bulk wave into an ultrasonic surface wave or an ultrasonic plate wave." submitted on 23/06/2026, application number FR2608545

[P15] **M. Baudoin (70%)**, O.B. Matar (15%), A. Vlandas (15%), "Optoelectroacoustic device and method for generating an acoustic field." submitted on 10/12/2025, application number FR2514970

[P14] **M. Baudoin (27,5%)**, O.B. Matar (17,5%), A. Vlandas (5%), R. Al Sahely (25%), N. Christopoulos (25%), "Device and method for cleaning a support by conversion of a bulk wave into a surface wave" submitted on 11/07/2024, application number FR2407618

[P13] **M. Baudoin (30%)**, O. Bou Matar (20%), N. Christopoulos (25%), R. Sahely (25%), "Cleaning of solar panel with acoustic waves", submitted on 24/01/2023, application number: FR2300659

[P12] **M. Baudoin (30%)**, O. Bou Matar (20%), N. Christopoulos (25%), R. Sahely (25%), "Cleaning of solid element with acoustic waves", submitted on 24/01/2023, application number: FR2300658

[P11] **M. Baudoin (17%)**, O. Bou Matar (16,5%), R. Chutani (16,5%), F. Bretagnol (12,5%), I. Vincent (12,5%), C. Gérald (12,5%), A. Filloux (12,5%), "Device based on acoustic transducers and an atomizer to clean an optical surface", submitted on 31/03/2021, application number: FR2103337, international patent WO2022207667 (Priority date: 31/03/2021 / Published: 10/06/2022)

[P10] **M. Baudoin (35%)**, R. Chutani (15%), F. Bretagnol (25%), A. Peret (25%), "Acoustical device to clean an optical surface II", submitted on 14/12/2020, application number: FR2013212, international patent WO2022128919A1 (Priority date: 14/12/2020, Published: 17/06/2022)

[P9] **M. Baudoin (35%)**, R. Chutani (15%), F. Bretagnol (25%), A. Peret (25%), "Acoustical device to clean an optical surface I", submitted on 14/12/2020, application number: FR2013210, international patent WO2022128914 (Priority date: 17/06/2022 / Published: 17/06/2022)

[P8] **M. Baudoin (35%)**, O. Bou Matar (15%), F. Bretagnol (25%), A. Peret (25%), "Electroacoustic device designed to generate surface acoustic waves on a non-piezoelectric substrate", submitted on 25/09/2019, application number: FR1910590, international patent: WO2021058666 (Priority date: 25/09/2019 / Published: 26/03/2021)

[P7] **M. Baudoin (40%)**, O. Bou Matar (10%), F. Bretagnol (25%), A. Peret (25%) "Device based on multiple transducers designed to clean surfaces covered with liquids", submitted on 25/09/2019, application number: FR1910589, international patent WO2021058662 (Priority date: 25/09/2019 / Published: 26/03/2021)

[P6] **M. Baudoin (50%)**, R. Chutani (10%), F. Bretagnol (20%), A. Peret (20%), "Defrost process based on acoustic waves", submitted on 25/09/2019, application number: FR1910588, international patent WO2021058664 (Priority date: 25/09/2019 / Published= 26/03/2021)

[P5] **M. Baudoin (30%)**, A. Riaud (30%), J.L. Thomas (30%), O. Bou Matar (10%), "Acoustic tweezers with controlled rotation", submitted on 18/12/2019, application number EP19306682, international patent WO2021122479 (Priority date: 18/12/2019 / Published: 24/06/2021)

[P4] **M. Baudoin (30%)**, A. Riaud (30%), J.L. Thomas (30%), O. Bou Matar (10%), "Acoustic tweezers" based on focused acoustical vortices, submitted on 25/10/2017, application number: EP17198204, international patent: WO2019081521 (Priority date: 25/10/2017 - Published: 02/05/2019)

[P3] **M. Baudoin (30%)**, A. Riaud (30%), J.L. Thomas (30%), O. Bou Matar (10%), "Acoustical tweezers based on focused SAW", submitted on 25/05/2016, application number: EP16305601, international patent WO2017202747 (Priority date: 24/05/2016 - Published: 02/04/2019)

[P2] **M. Baudoin (30%)**, A. Riaud (30%), J.L. Thomas (30%), O. Bou Matar (10%), 'Acoustic tweezers' based on swirling SAWs, submitted on 15/03/2016, international patent WO2017157426 (Priority date: 15/03/2016 / Published: 21/09/2017)

[P1] **M. Baudoin (40%)**, A. Buissonnière (30%), O. Bou Matar (15%), and P. Brunet (15%), "Method for increasing the ability of at least one droplet to slide over a medium", application number: 1562067, international patent WO2017097769 (Priority date: 12/09/2015 / Published: 15/06/2017)

B. CONFERENCES INVITEES INTERNATIONALES

(Orateur souligné)

[B14] **M. Baudoin**, **Keynote** "Advancing the frontiers of acoustic micro-actuators", **Acoustofluidics 2024**, Sweden, 14-16 August 2024, Uppsala Universitt (Sweden)

[B13] **M. Baudoin**, **Kenoyte 1**: Acoustical tweezers based on Interdigital Transducers, **SAW Symposium 2023**, 21-22 September 2023, Dresden (Germany)

[B13] **M. Baudoin**, **Kenoyte 2**: Surface cleaning with Surface Acoustic Waves, **SAW Symposium 2023**, 21-22 September 2023, Dresden (Germany)

[B12] **M. Baudoin**, Z. Gong, Single beam selective acoustical tweezers: from acoustical vortices to focused beams, **APS DFD**, 20-22 November 2022, Indianapolis (USA)

[B11] **M. Baudoin**, A. Roux, A. Duchesne, Everlasting bubbles and liquid films resisting drainage, evaporation and nuclei induced bursting, **APS Journal Club**, 22 February 2022, Online

[B10] **M. Baudoin**, J.L. Thomas, A. Riaud, R.A. Sahely, J.C. Gerbedoen, Z. Gong, A. Sivery, O. Bou Matar, N. Smagin, A. Vlandas, Active holographic tweezers based on spiralling interdigitated transducers, **182th ASA Meeting**, 26 May 2022, Denver (USA)

[B9] **M. Baudoin**, I. Bihi, A. Duchesne, A. Roux, F. Zoueshtiagh, Extraordinary interfacial properties induced by partially wetting microparticles, **IHMTC**, 17-20 December 2021, **Keynote**, Online

[B8] **M. Baudoin**, J.-C. Gerbedoen, A. Riaud, O. Bou Matar, N. Smagin, J.-L. Thomas, Compact selective tweezers based on focalized acoustical vortices and spiraling interdigitated transducers, **176th ASA Meeting**, 5-9 November 2018, Victoria (Canada)

[B7] **M. Baudoin**, O. Bou Matar, J.C. Gerbedoen, A. Riaud, J.-L. Thomas, Acoustical vortices" synthesis with flat microsystems for selective tweezing and manipulation of micro-particles, **Anglo-French Physical Acoustics 2018**, 17-19 January 2018, Surrey (UK)

[B6] **M. Baudoin**, O. Bou Matar, J.C. Gerbedoen, A. Riaud, J.-L. Thomas, Miniaturized selective acoustical tweezers based on spiraling IDTs, Acoustofluidics forum and Olympics, **3rd SIG Meeting of the Acoustofluidics** in Fluidic Network, 26-27 April 2018, Newcastle (UK)

[B5] **M. Baudoin**, A. Riaud, J.-L. Thomas, O. Bou Matar, SAW-based vortical acoustofluidics, **Acoustofluidics 2016**, **Opening keynote lecture**, USWNET, 22-23 September 2016, Copenhagen (Denmark)

- [B4] **M. Baudoin**, A. Riaud, J.-L. Thomas, O. Bou Matar, On-chip generation of acoustical vortices with swirling SAWs for single particle manipulation and vorticity control, **171th ASA Meeting**, 23-27 May 2016, Baltimore (USA)
- [B3] **M. Baudoin**, A. Riaud, J.-L. Thomas, A. Bussonière, O. Bou Matar, invited for an extended lecture (30 min), SAW synthesis with inverse filter and IDTs arrays for microfluidic and biological applications, **IEEE International Ultrasonic Symposium**, 21-24 October 2015, Taipei (Taiwan)
- [B2] **M. Baudoin**, P. Brunet, O. Bou Matar, **Acoustics 2012 Hong Kong, joint conference from ASA, ASC, WESPAC and HKIOA**, 13-18 mai 2012, Hong Kong (Chine)
- [B1] **M. Baudoin**, P. Brunet, O. Bou Matar, **6th IEEE-NEMS Conference**, 20-23 février 2011, Kaohsiung (Taiwan)

B*. COURS INVITES DANS DES ECOLES D'ETE

- [B*7] **European summer school on Physical Acoustics**, 1h30 course entitled "Wave synthesis with Interdigital Transducers", Cargèse (France), 16-20 September 2024
- [B*6] **Microfluidics summer school**, 1h30 course entitled "Acoustics for microfluidics or Acoustofluidics", Saint-Raphaël (France), 18-23 June 2023
- [B*5] **Acoustofluidics summer school**, 1h30 course entitled "Acoustics for microfluidics", Porquerolles (France), 13-17 June 2022
- [B*4] **Complex Motion in Fluids summer school** (organized by University of Cambridge, Polytechnique, University of Twente, DTU), 2x2h courses entitled "Acoustic tweezers and vortices", 28-24 August 2019, Gilleleje (Denmark)
- [B*3] **Acoustofluidics summer school**, 1h30 course entitled "Surface acoustics waves for microfluidics", Porquerolles (France), 13-17 June 2016
- [B*2] **Nonlinear acoustics and complex media summer school**, 2h course entitled "Nonlinear acoustics for microfluidics", Oléron (France), 1-6 June 2014
- [B*1] **Lab-Based workshop on the dynamics of bubbles and drops**, three courses (3x1h30) in English entitled "Introduction to interfacial flows", "Interfaces and vibrations" and "Dynamics of bubbles and liquid plugs in confined geometries", University of Florida (USA), 20-24 June 2011

C. CONFERENCES INTERNATIONALES

(Orateur souligné)

- [C42] **J. Ghesquiere**, **M. Baudoin**, O.B. Matar, and S. Cleve, Microstreaming induced by the complex motion of a micro-pillar, **Acoustofluidics 2023**, 16-18 August 2023, Saint Louis (USA)
- [C41] **S. Almohamad**, S. Cleve, U. Ghosh, R. Chutani, G. K. Modler H. Bruus, **M. Baudoin**, Active manipulation of inhomogeneous miscible fluid interfaces using acoustical tweezers, **Forum Acusticum 2023**, 1-15 September 2023, Torino (Italy)
- [C40] **A. Goerlinger**, **M. Baudoin**, F. Zoueshtiagh, A. Duchesne, The spontaneous oscillations of a circular hydraulic jump., 76th APS DFD Meeting 19-21 November 2023, Washington (USA)
- [C39] **J.P. Martishang**, A. Roux, **M. Baudoin**, Can an acoustic dipole propel on its self-generated radiation force? Toward a 3D macroscopic wave-particle coupling., 76th APS DFD Meeting 19-21 November 2023, Washington (USA)
- [C38] **M. Baudoin**, O.B. Matar, J.C. Gerbedoen, Z. Gong, A. Riaud, J.-L. Thomas, R.A. Sahely, A. Sivery and A. Vlandas, Selective tweezers: from reconfigurable to high frequency active holograms, **DAGA 2023**, 6-9 March 2023, Hamburg (Germany)
- [C37] **M. Baudoin**, A. Roux, A. Duchesne, Everlasting bubbles and liquid films, **APS DFD**, 22 February 2022, 20-22

November 2022, Indianapolis (USA)

[C36] Z. Gong, **M. Baudoin**, Single focused-beam acoustical tweezers, Acoustofluidics 2022, 19-21 October 2022, Glasgow (Scotland)

[C35] **M. Baudoin**, A. Roux, J.P. Martishang, Self-induced radiation force on a moving monopolar source, Acoustofluidics 2022, 19-21 October 2022, Glasgow (Scotland)

[C34] **M. Baudoin***, P. Favreau, A. Duchesne, F. Zoueshtiagh, Beyond Hoffman regime: formation of anti-Bretherton droplets, EFMC 14th, 13-16 September 2022, Athens (Greece)

[C33] V. Daru, M. Baudoin, GHz acoustic streaming for the synthesis of ultra-thin high speed streaming jets: a numerical study, 22nd ISNA, 4-8 July 2022, Oxford (UK)

[C32] **M. Baudoin**, Z. Gong, Single beam acoustical tweezers based on focused waves, 182th ASA Meeting, 26 May 2022, Denver (USA)

[C31] Z. Gong, **M. Baudoin**, One-Sided Acoustical Tweezers Based on Focused Acoustical vortices for 3D Trapping and Axial Positioning of Cells and Microparticles, IEEE IUS Symposium, 12-16 September 2021, Online

[C30] Z. Gong, **M. Baudoin**, Axial displacement of typical cells with 3D trapping in a high-frequency single beam acoustical tweezers, Acoustofluidic 2021, 26-27 August 2021, Online

[C29] Z. Gong, **M. Baudoin**, Equivalence of 3D acoustic radiation force and torque formulas

based on angular spectrum and multipole expansion method, ASA meeting 2020, 7-11 December 2020, Online

[C28] Z. Gong, **M. Baudoin**, Three-dimensional trapping and assembly with synchronized spherical acoustical vortices, ASA meeting 2020, 7-11 December 2020, Online

[C27] **M. Baudoin**, J.L. Thomas, R. El Sahely, J.C. Gerbdoen, Z. Gong, A. Sivery, O.B Matar, N. Smagin, A. Vlandas, Advanced cells manipulation with vortex based tweezers, Acoustofluidics 2020, September 2020, Online

[C26] **M. Baudoin**, O.B Matar, J.C. Gerbdoen, Z. Gong, A. Riaud, J.L. Thomas, Selective miniaturized acoustical tweezers, Acoustofluidics 2019, September 2019, University of Twente (Netherland)

[C25] P. Brunet, R. Herbaut, M. Costalonga, M. Baudoin, L. Royon, M. Limat, Non-stationay contact lines : the search for mobility laws, 8th International Symposium on Bifurcations and Instabilities in Fluid Dynamics, July 2019, University of Limeric (Ireland)

[C24] **M. Baudoin**, G. Prabhudesai, J. Jose, I. Bihi, F. Zoueshtiagh, Nonspherical armoured bubble vibration, Flow 17, 3-5 July 2017, Paris (France)

[C23] S. Signé Mamba, F. Zoueshtiagh, **M. Baudoin**, Liquid plugs in capillaries under periodic forcing, EFMC 22, 12-16 September 2016, Seville (Spain)

[C22] A. Riaud, M. Baudoin, J.L. Thomas, O. Bou Matar, Acoustical twisting, Condensed Matter in Paris, 24-29 August 2014, Paris (France)

[C21] **M. Baudoin**, Y. Song, P. Manneville, C.N. Baroud, Airways reopening through catastrophic events in a hierarchical network, Flow 2014 Conference, 18-21 May 2014, Twente (Netherland)

[C20] A. Bussonière, A. Renaudin, Y. Miron, M. Grandbois, **M. Baudoin** and P. Charette, Removal of living cells from biosensing surfaces in droplet based microfluidics using surface acoustic waves, ICA 2013, joint meeting from the Acoustical Society of America and the Canadian Acoustical Association, 2-7 June 2013, Montreal (Canada)

[C19] **M. Baudoin**, P. Brunet, O. Bou-Matar and E. Herth, Sessile droplet resonances and low power SAW actuation, USWNET 2012 Conference, 21-22 September 2012, Lund (Sweedon)

[C18] P. Brunet, **M. Baudoin**, O. Bou-Matar, Drops subjected to surface acoustic waves : flow dynamics, APS 65th annual DFD Meeting, 18-20 November 2012, San Diego (USA)

[C17] P. Brunet, **M. Baudoin**, O. Bou Matar, E. Herth, F. Zoueshtiagh, On the influence of viscosity on droplet actuation

by surface acoustic waves, 2nd European Conference on Microfluidics, 8-10 December 2010, Toulouse (France)

[C16] **M. Baudoin**, Y. Song, P. Manneville, C. Baroud, Airways reopening through cascades of plug ruptures in a binary network, Multiflow, 8-10 November 2010, Brussels (Belgium)

[C15] P. Brunet, **M. Baudoin**, O. Bou Matar, F. Zoueshtiagh, Droplet motion and deformation induced by acoustic streaming and radiation pressure, 20th International Congress on Acoustics, 23-27 August 2010, Sydney (Australia)

[C14] P. Brunet, **M. Baudoin**, O. Bou Matar, F. Zoueshtiagh, Drop displacement and deformation induced by surface acoustic wave, 5th Conference of the International Marangoni Association, 7-10 June 2010, Florence, Italy

[C13] **M. Baudoin**, F. Coulouvrat and J.L. Thomas Infrasound absorption by atmospheric clouds, EGU general assembly, 2-7 May 2010, Vienne (Austria)

[C12] P. Brunet, **M. Baudoin**, O. Bou Matar, F. Zoueshtiagh, Droplet mixing and displacement by surface acoustic wave, Ultrasonic Standing Wave Network Conference 2009, 30 November-1st December 2009, Stockholm (Sweden)

[C11] P. Brunet, **M. Baudoin**, F. Zoueshtiagh, A. Merlen, Drop mixing and displacement by surface acoustic wave, French/Chinese conference on microfluidics, 11-15 October 2009, Paris (France)

[C10] Y. Song, **M. Baudoin**, P. Manneville and C.N. Baroud, 2nd French-Chinese Conference on Microfluidics, The air liquid flow in a microfluidic airway tree, 11-15 October 2009, Paris (France)

[C9] P. Brunet, **M. Baudoin**, F. Zoueshtiagh, A. Merlen, Drop mixing and displacement by surface acoustic wave, International workshop Bubble and Drop Interfaces, 23-25 September 2009, Thessaloniki (Greece)

[C8] Y. Song, **M. Baudoin**, P. Manneville, C. Baroud, The air-liquid flow in a microfluidic airway tree, 2nd Micro and Nano Flows Conference, 1-2 September 2009, Londres (RoyaumeUni)

[C7] **M. Baudoin**, Y. Song, C. Baroud, P. Manneville, Microscopic airways reopening through cascades of plug ruptures, 7th International Conference on Nanochannels, Microchannels and Minichannels, 22-24 June 2009, Pohang (South Korea), CDROM, ISBN : 978-0-7918-3850-1

[C6] **M. Baudoin**, Y. Song, P. Manneville and C.N. Baroud, Reopening of a microfluidic airway tree in the presence of liquid plugs., 61st Annual Meeting of the APS Division of Fluid Mechanics, 23-25 November 2008, San Antonio, Texas (USA) (Bulletin of the American Physical Society, vol. 53, n° 15, p. 115)

[C5] **M. Baudoin**, Y. Song, P. Manneville and C.N. Baroud, The air-liquid flow in bifurcating networks of micro-channels, 7th Euromech Fluid Mechanics Conference, 14-18 September 2008, Manchester (Angleterre)

[C4] **M. Baudoin**, J.L. Thomas, F. Coulouvrat, C. Chanéac, Acoustic shock wave propagation through solutions of nanoparticles, 18th International Symposium on Nonlinear Acoustics, 7-10 July 2008, Stockholm (Suède), AIP Conf. Proc. 1022, 241-244"

[C3] **M. Baudoin**, J.L. Thomas, F. Coulouvrat, D. Lhuillier, A self-consistent effective medium theory for the sound propagation in concentrated suspensions of rigid particles, 19th International Congress on Acoustics, 2-7 September 2007, Madrid (Espagne), CDROM, ISBN : 84-87985-12-2

[C2] J.L. Thomas, F. Coulouvrat, R. Marchiano, **M. Baudoin**, L. Ganjehi, Experimental simulation of the sonic boom at the laboratory scale, 19th International Congress on Acoustics, 2-7 September 2007, Madrid (Espagne), CDROM, ISBN : 84-87985-12-2

[C1] **M. Baudoin**, F. Coulouvrat, J.L. Thomas, Absorption of sonic boom by clouds, 17th International Symposium on Nonlinear Acoustics, 18-22 July 2005, Penn-State (Etats-Unis), AIP Conf. Proc. 838, 619 (2006),

D. CONFERENCES NATIONALES

(Orateur souligné)

[D9] **M Baudoin**, Journée d'Inauguration de l'Année de la Mécanique, 14 Octobre 2021, Paris (France), conférence

invitée sur les « Pincettes acoustiques holographiques pour la micromanipulation biologique »

[D8] N. Chastrette, L. Royon, M. **Baudoin**, P. Brunet, R. Wunenburger, Déformation de gouttes excitées par des ondes acoustiques de surface, Rencontres du Non linéaire, 15-17 March 2016, Paris (France), poster

[D7] C. Faille, A. Ronse, G. Ronse, G. Bourdin, I. Bihi, M. **Baudoin**, F. Zoueshtiagh, Rôle des conditions de séchage sur les interactions bactéries/matériaux, 7ème Colloque du réseau national Biofilms, 2-3 December 2015, Toulouse (France)

[D6] M. **Baudoin**, A. Riaud, J.L. Thomas, O. Bou Matar, Cyclones and attractive streaming generated by acoustical vortices (présentation en anglais), Journée nationale du GDR "Micro/NanoSystèmes et Micro/NanoFluidique, 7-8 July 2014 (France)

[D5] M. **Baudoin**, J.-L. Thomas et F. Coulouvrat, Influence des nuages sur l'atténuation du son, des infrasons et du bang sonique, 10ème Congrès Français d'Acoustique, 12-16 April 2010, Lyon (France), CDROM

[D4] P. Brunet, M. **Baudoin**, O. Bou Matar, F. Zoueshtiagh, Déformation de gouttes par ondes acoustiques de surface, 10ème Congrès Français d'Acoustique, 12-16 April 2010, Lyon (France), CDROM

[D3] P. Brunet, M. **Baudoin**, O.B. Matar, F. Zoueshtiagh, Déplacement et oscillations de gouttes sous l'effet d'ondes de surface ultrasonores, Résumé des exposés de la 13ème Rencontre du Non-Linéaire, 13 janvier 2010, Paris (France)

[D2] M. **Baudoin**, J.L. Thomas, F. Coulouvrat, D. Lhuillier, Un modèle diphasique auto-consistant pour la propagation du son dans les solutions concentrées de particules rigides, 18ème Congrès Français de Mécanique, 27-31 août 2007, Grenoble (France), CDROM (CFM2007- 1129)

[D1] M. **Baudoin**, F. Coulouvrat, J.L. Thomas, Propagation d'ondes de choc dans des suspensions diluées, 8ème Congrès Français d'Acoustique, 24-26 April 2006, Tours (France), CDROM

E. SEMINAIRES INVITES DANS DES LABORATOIRES

(Orateur souligné, gris séminaire invités à l'étranger)

[E17] M. **Baudoin** et al., Acoustic manipulation: from holographic micro-tweezers to quantum analogues., MECHE Colloquium, EPFL, Switzerland, May, 2023

[E16] M. **Baudoin** et al., Dynamics and rupture of liquid plugs: networks, cycles and anti-Bretherton, University of Manchester, UK, November, 2023

[E15] M. **Baudoin** et al., Droplet displacement and surface cleaning with Surface Acoustic Waves, University of Seville, Spain, May 2023

[E14] M. **Baudoin** et al., Acoustofluidics: an overview of our research activities, NTNU University, Norway, February 2022

[E13] M. **Baudoin**, I. Bihi, A. Duchesne, A. Roux, F. Zoueshtiagh, Extraordinary properties of particle-covered interfaces, MSC Laboratory, France, November 2022

[E12] A. Duschene, A. Roux, M. **Baudoin**, Everlasting bubbles and anti-bubbles, LPS laboratory, France, May 2022

[E11] M. **Baudoin**, O. Bou Matar, J.C. Gerbedoen, Z. Gong, A. Riaud, J.L. Thomas, Acoustical vortices and micromanipulation, PPrime Laboratory, France, September 2021

[E10] M. **Baudoin**, O. Bou Matar, J.C. Gerbedoen, Z. Gong, A. Riaud, J.L. Thomas, Manipulation of particles and fluids at microscales with selective acoustical tweezers, PMMH Laboratory, ESPCI, France, May 2019

[E9] M. **Baudoin**, O. Bou Matar, J.C. Gerbedoen, Z. Gong, A. Riaud, J.L. Thomas, Manipulation of particles and fluids at microscales with selective acoustical tweezers, University of Bristol, UK, September 2019

[E8] M. **Baudoin**, A. Riaud, J.L. Thomas, O. Bou Matar, On-chip generation of acoustical vortices with swirling SAWs for selective single particle manipulation, LadHyX, Polytechnique, France, April 2017

[E7] M. **Baudoin**, A. Riaud, J.L. Thomas, O. Bou Matar, On-chip generation of acoustical vortices with swirling SAWs for selective single particle manipulation, Tokyo University of Science, December 2016

[E6] M. **Baudoin**, A. Riaud, J.L. Thomas, A. Bussonière, O. Bou Matar, Acoustical vortices for the manipulation of particles

and the controlled synthesis of hydrodynamic vortices, Seminar at LIMSI laboratory, France, December 2015

[E5] M. Baudoin, Y. Song, P. Manneville, C.N. Baroud, Cascade of plug ruptures : from milk-shake to pulmonary airways, Seminar at University of Florida, USA May 2015

[E4] M. Baudoin, Y. Song, P. Manneville, C.N. Baroud, Cascade of plug ruptures : from milk-shake to pulmonary airways, Seminar at Gulliver Laboratory, ESPCI, France, October 2012

[E3] M. Baudoin, Y. Song, P. Manneville, C.N. Baroud, Cascade of plug ruptures : from milk-shake to pulmonary airways, Seminar at Laboratoire Transferts, Interfaces et Procédés, Université Libre de Bruxelles, Belgium, June 2011

[E2] M. Baudoin, Y. Song, P. Manneville, C.N. Baroud, Cascade of plug ruptures : from milk-shake to pulmonary airways, Seminar at Institut de Physique de Rennes, Université de Rennes 1, France, October 2011

[E1] M. Baudoin, Y. Song, P. Manneville, C.N. Baroud, Cascade of plug ruptures : from milk- shake to pulmonary airways, Seminar at Institut Jean le Rond d'Alembert, Université Paris 6, France, October 2010