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Professor at Université Lille 1 / Institute of Electronics, Microelectronics and Nanotechnologies (IEMN)

Current position (since September 2016)

Professor at Université Lille 1 (France) and researcher at IEMN laboratory. My research activities mainly focus on microscale acoustofluidics that is to say subjects at the interface between acoustics, microfluidics and microsystems :

- **Design and physical study of microsystems based on surface acoustic waves for the control of fluids and particles at micrometric scales.** In particular we developed an acoustical toolbox based on the inverse filter technique and a transducer array that enables to perform many microfluidic operations with a single system. We also developed some selective, label-free, biocompatible, flat, easy to miniaturize acoustical tweezers based on interdigitated transducers and a holographic technique.
- **Study of the sound produced by microfluidic two-phase flows.** In particular we aim at improving the physical understanding of the sound produced by the rupture of liquid plugs in pulmonary airways due to obstructive pulmonary diseases. Such knowledge might greatly improve their diagnosis.
- **Multiple scattering of acoustic waves by dense suspensions of particles** both for the design of new acoustic materials but also the characterization of suspensions (spectroscopy).

Responsibilities

International

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| 2015 | Member of the organizing committee (5 people) of an international Summer School entitled “Microfluidics’15” , Porquerolles, France, 21 to 26 June 2015 (all courses in English, speakers from France, Germany, United States and Denmark) <ul style="list-style-type: none">— Organizer and chair of the short talk session— Organizer and chair of the poster session |
| 2012 | Member of the organizing committee (4 people) of an international workshop entitled “Acoustic waves for the control of microfluidic flows” , Lorentz Center, the Netherlands, 23 to 27 April 2012 <ul style="list-style-type: none">— Objective : bring together international experts of different scientific communities (physics of fluids, acoustics, microsystems) to improve our understanding of microfluidic actuators based on acoustic waves— 52 participants from 12 different countries |

- 2011 **Member of the organizing committee (3 people) of an international summer school entitled “Lab-based Workshop on bubbles and drops”,** University of Florida, 20 to 25 June 2011
- Funding : American NSF-PIRE program
 - Participants : 30 researchers, PhD students and MSc students from US, France and Japan

National

- 2011 **Member of the organizing committee (4 people) of a session on acoustofluidics at the 15th “Journée de la Matière Condensée”,** Bordeaux, 22nd to 26th of August 2016
- Since 03/2015 **Member of the “GDR Microfluidique” steering committee**
- 2011-2015 **Member of the National Board of French Universities (CNU)**
- Evaluation of the applicants for Assistant Professor qualification
 - Evaluation of the assistant and Associate Professors applying for promotions
 - Participation in the collegial decisions concerning the evolution of French Universities

Local

- Since 05/2015 **Member of the Mathematics department (UFR de Mathématique) board**
- Since 09/2014 **Director of undergraduate studies in mechanics** (125 students)
- Complete reorganization of the training in mechanics to obtain a more attractive, coherent and efficient program
 - Creation of partnerships with companies working in the field of mechanics (PSA - ONERA - NUMECA - CENAERO)
 - Daily management of the undergraduate studies in mechanics
- Since 09/2014 **Head of the Master of Engineering in Mechanics (CMI),** a selective program with additional activities to prepare students to the job of scientific expert in companies
- A Master of Engineering in France can obtain the CMI label only after examination of the project by a national commission. I developed the project with the help of the professors of my department and defended it to obtain the label
 - Organization of the additional activities

Current and past fundings

- 2012-2016 **Scientific coordinator of the SATT project “Acoustipince”,** a technology maturation program which aims at developing our patented acoustical tweezers in order to obtain a mature technology for commercialization.
- Grant from SATT du Nord / Amount : **315 k€**

- 2012-2016 **Coordinator (with the support of Pr. Olivier Bou Matar) of the ANR project "AWESOM"**, which aims at developing a Lab on a Chip based on hybrid technologies for the manipulation and characterization of biofluids
- Partnership between 5 French and Canadian institutes (IEMN / Université Lille 1, INSP / Université Paris 6, IJL / Université de Nancy, UMI-LN2 / Université de Sherbrooke, MSC / Université Paris 7)
 - Grant from the French National Agency for Research (ANR) / Amount : **532 k€**
- 2011-2018 **Obtention of 5 grants for PhD students working on my research activities** from (i) the Region "Nord-Pas-de-Calais", (ii) the French General Directorate for Armament (DGA), (iii) the University of Lille and (iv) the "Ecole Normale Supérieure"
- Total amount of the grants : **486 k€**

Supervision

Supervision of 5 PhD students :

- *Adrien Bussonière (2011-2014)* (50%)
 - Subject : "SAW microsystems for microfluidics : from physical understanding to biological applications"
- *Ilyesse Bihi (2012-2016)* (25%)
 - Subject : "Removal of microparticles from a surface due to interfacial and shear forces in two-phase flows"
 - Thesis prize "Pierre Isoard" from ASPEC Institute
- *Antoine Riaud (2013-2016)* (33%)
 - Subject : "Study of the potentialities offered by the synthesis of complex surface acoustic wave wavefields : focus on fluid actuation and contactless manipulation."
- *Juan Carmelo Magniez (2014-2017)* (75%)
 - Subject : "Two-phase flows in microfluidics complex networks"
- *Stéphanie Signé Mamba (2014-...)* (75%)
 - Subject : "From the dynamics of liquid plugs in synthetic microfluidics networks to the diagnosis and treatment of pulmonary obstructive diseases"

Supervision of 5 master students

Review of PhD, projects and papers

- 05/2017 **Grant review panelist for the ANR ASTRID**
- 10/2016 **Grant review panelist for the DFG** (German Research Funding Agency)
- 09/2016 **Reviewer of I. Bernard PhD thesis**, entitled "Manipulation of particles and generation of fluid vortices using surface acoustic waves in a microfluidic environment", Université de Grenoble-Alpes, France
- 12/2015 **Member of the jury of M. Costalonga PhD thesis**, entitled "2 exemples d'effets stationnaires dans des liquides vibrés", Université Paris VII, France
- 08/2014 **Reviewer of D.J. Collins PhD thesis**, entitled "Manipulation in microfluidics systems using Surface Acoustic Waves (SAW)", Monash University, Australia
- 08/2013 **Grant review panelist for the DFG** (German Research Funding Agency)
- 12/2013 **Member of the jury of T. Roux-Marchand PhD Thesis** entitled "SAW microfluidics systems : from DNA replication to PCR", Université de Lorraine, France

05/2013	Extern member of an appointment committee for an Assistant Professor position in "Fluid Biomechanics", UTC Compiègne, France
2008-...	Scientific content reviewer for peer-reviewed publications including : New Journal of Physics, Journals of Micromechanics and Microengineering, Sensors and Actuators B, Acta Acustica united with Acustica, Soft Matter, Langmuir, Journal of the Acoustical Society of America, Journal of Fluids Engineering, Lab on a Chip, Measurement Science and Technology, Proceedings of the Royal Society A, Advanced Functional Materials.

Honors and awards

2014	Front cover of "Soft Matter" journal (IF : 4,1) for our work on the controlled synthesis of armored bubbles. Our paper entitled "Capillary tube wetting induced by particles : towards armoured bubbles tailoring" has also been highlighted as one of the hot papers of the year.
2013	Distinguished by the national award for excellence in research (PES)

Education

2008	Postdoctoral fellow in microfluidics, Ecole Polytechnique, LadHyX — Subject : "Dynamics of liquid plugs in microfluidic networks" — Advisors : C. Baroud et P. Manneville
2004/07	PhD in Acoustics and Fluid Mechanics, Université Paris 6 — Delivered the 11th January 2008 — Thesis topic : "Nonlinear acoustics and multiple scattering in suspensions of rigid particles" — Advisors : F. Coulouvrat (d'Alembert) and J.L. Thomas (INSP)
2003/04	MSc in Fluid Mechanics at Université Paris 6 with First Class Honours
2001/04	MSc in Mechanical Engineering at ENSTA
1999/01	Undergraduate studies at lycée Lakanal and lycée Henri IV

International collaborations

Project ANR AWESOM (578 k€)	Countries involved : Canada, France Partners : Sherbrooke University, Canada (UMI-LN2) - Institut des NanoSciences de Paris (INSP), France - Institut Jean L'amour (IJL), France - Laboratoire Matière et Systèmes Complexes (MSC), France - Institut Jean le Rond d'Alembert (d'Alembert), France Role in the project : Coordinator (with the support of Pr. O. Bou Matar) Collaborations with : Alan Renaudin, Michel Grandbois, Paul Charrette (UMI-LN2) - Jean-Louis Thomas (INSP) - Philippe Brunet (MSC) - Arnaud Antkowiak, Régis Wunenburger, François Ollivier (d'Alembert) Shared publications [A9], [A10], [A12], [A13], [A14], [A16], [A19], [A20].
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Marie-Curie
IRSES euro-
pean program
(505 k€)

Countries involved : Russia, France, Japan, USA, Israel

Partners : University of Florida (UF), USA- Japanese Spatial Agency (JAXA), Japan - Technion, Israel - Tokyo University of Science (TUS), Japan - Bordeaux 1 University, France - Wave Research Center of General Physics Institute (RAS), Russia - Moscow State Institute of Radio-Engineering, Electronics and Automation (MSI), Russia

Collaboration with : Pr. Jason Butler (UF)

Role in the project : Participant

Mobility : 10 days at the University of Florida

Common publications [A15], [A17].

Publications and conferences

All the following publications can be downloaded at the following address :
<http://films-lab.univ-lille1.fr/michael/>

A. Publications in peer-reviewed international journals

The corresponding authors are underlined.

- Submitted — [A22] S. Signé Mamba, J.C. Magniez, F. Zoueshtiagh, M. Baudoin, Dynamics of a liquid plug in a capillary tube under cyclic forcing : memory effect and airway reopening, *submitted to J. Fluid. Mech.* (April 2017)
- 2017 — [A21] G. Prabhudesai, I. Bihi, F. Zoueshtiagh, J. Jose M. Baudoin, Nonspherical armoured bubble vibration, *Soft Matter*, 13 :3879 (2017)
- [A20] 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 (2017)
- [A19] 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)
- 2016 — [A18] 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)
- [A17] 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)
- [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 (2015)
- [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, *accepted for publication in IEEE T. Ultrason. Ferr.*, Février 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* (IF : 2,3), 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* (IF : 4,0), 10(47) : 9403-9412, (2014)
- [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* (IF : 6,1), 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* (IF : 2,3), 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.* (IF : 9,7), 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.* (IF : 3,3), 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.* (IF : 1,5), 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.* (IF : 1,5), 129 : 1209-1220 (2011)
- [A4] Y.Song, **M. Baudoin**, P. Manneville and C.N. Baroud, The air-liquid flow in a microfluidic airway tree, *Medical Engineering and Physics* (IF : 1,8), 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* (IF : 2,3), 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* (IF : 1,5), 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* (IF : 1,5), 121 : 3386-3397 (2007)

A*. Patents

- [A*3] Deposited the 24th of May, 2016 : "Acoustical tweezers based on focalized SAW" European patent request number : EP16 305601.3
- [A*2] Deposited on the 15th of March, 2016 : "Acoustical tweezers based on swirling SAWs", PCT Request number : PCT/EP2016/055611
- [A*1] Deposited on the 9th Decembre 2015 : "Active control of surface slipness with SAWs" INPI Request number : 1562067

B. Invited conferences

- [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*. Invited lectures at summer schools

- [B*3] **Acoustofluidics** summer school, course entitled "Surface acoustics waves for microfluidics", Porquerolles, 13-17 June 2016
- [B*2] **Nonlinear acoustics and complex media** summer school, course entitled "Nonlinear acoustics for microfluidics", Oléron, 1-6 June 2014
- [B*1] **Lab-Based workshop on the dynamics of bubbles and drops**, three courses in english entitled "Introduction to interfacial flows", "Interfaces and vibrations" and "Dynamics of bubbles and liquid plugs in confined geometries", University of Florida, 20-24 June 2011

C. International conferences

La personne ayant fait la présentation à la conférence est soulignée.

- [C24] **M. Baudoin**, G. Prabhudesai, I. Bihi, J. Jose, F. Zoueshtiagh, Nonspherical armoured bubble vibration, *Flow2017*, 3-5 Juillet 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 (Sweden)
- [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 (Royaume-Uni)
- [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. National conferences

- [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 mars 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 décembre 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/Nano- Systèmes et Micro/nano- Fluidique*, 7-8 juillet 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 avril 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 avril 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 avril 2006, Tours (France), CDROM

E. Invited seminars in laboratories

- [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