

PERSONAL INFORMATION

Amina Meslem



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 amina.meslem@univ-rennes1.fr

Sex Female | Date of birth 07/03/1968 | Nationality French

WORK EXPERIENCE

Sep 2014–Present

Professor

University of Rennes 1

Research and teaching activities, management of research projects at University of Rennes 1

Sep 1998–Aug 2014

Assistant professor

University of La Rochelle

Research and teaching activities, management of research projects at LaSIE Laboratory (formerly known as LEPTAB and LEPTIAB, respectively), University of La Rochelle

Sep 1996–Aug 1997

Assistant Lecturer and Researcher

Department of Civil Engineering and Urbanism INSA Lyon, France

EDUCATION AND TRAINING

2013

Habilitation Thesis in Civil Engineering and Mechanics

University of La Rochelle, France

Thesis title: Contrôle passif des jets et son intégration dans le bâtiment. Diagnostic expérimental et optimisation numérique (Passive control of jets and its integration in building. Experimental diagnostic and numerical optimization)

1997

PhD

INSA of Lyon, France

Thesis title: Contribution à l'étude du couplage thermique entre un jet et un local climatisé (Contribution to the study of the thermal coupling between a jet and an air-conditioned room)

1993

Master

Civil Engineering: Soils, Materials, Structures, Building physics, INSA of Lyon, France

1992

License

Technical University of Civil Engineering of Oran, Algeria

Civil Engineering Department

PERSONAL SKILLS

Mother tongue(s) Arabic, French

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
Common European Framework of Reference for Languages

Communication skills Good communication skills gained through my experiences as Professor, member in several committees and conference speaker

Organisational / managerial skills Good experience in project and team management gained through the fulfilment and coordination of a number of national research projects in collaboration with industrial partners

Job-related skills Expert in air-diffusion, designing innovative air-diffusers, thermal comfort, pointwise and field measurements techniques in fluid mechanics and thermal science PIV, LDV, CTA, CCA, IR

Digital competence

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Proficient user	Proficient user	Proficient user	Proficient user	Proficient user

Digital competences - Self-assessment grid

Proper handling of: MATLAB, FORTRAN, StarCCM+, Microsoft Office Tools, Tecplot

Driving licence B

ADDITIONAL INFORMATION

Publications and other indices **Reviewer in a number of International Journals, among them:** Physics of Fluids, European Journal of Mechanics - B/Fluids, International Journal of Heat and Mass Transfer, International Journal of Thermal Sciences, Building and Environment, Fluid Turbulence and Combustion, Thermal Science, Chemical Engineering and Processing: Process Intensification, Journal of Aerospace Engineering

Reviewer of recent juries of PhD thesis and Habilitation thesis:

- Contribution à l'étude des transferts de masse et de chaleur dans des systèmes complexes, Habilitation thesis of Julien PELLE, December 02, 2016, Université de Valenciennes et du Hainaut-Cambrésis
- Etude de l'influence de l'injection sur l'aérothermique de jets en impact, PhD thesis of Xuan Thao TRINH, December 10, 2015, ENSAM Poitiers, supervisors: Eva DORIGNAC & Matthieu FENOT
- Phénoménologie du mélange de scalaire passif en écoulements isotropes et anisotropes axisymétriques. Interaction mouvement cohérent-turbulence, Spécialité: MÉCANIQUE DES FLUIDES, ÉNERGÉTIQUE, UMR 6614 – CORIA, Arezki BOUHA, Normandie Université, June 27, 2016, supervisors: Luminita DANAILA & Béatrice PATTE-ROULAND
- Vélocimétrie par suivi 3D de particules pour la caractérisation des champs thermo-convectifs dans le bâtiment, Sijie FU, UNIVERSITE NICE SOPHIA ANTIPOLIS, Octobre 31, 2016,

supervisors: Pascal Henry BIWOLE & Richard PASQUETTI

Member of GDR « Turbulence » from 2008 to present

Peer Reviewed International journal articles: 38, European patent: 1, Peer Reviewed Conferences papers: 58

- Awards**
- Price : During meetings of the Research Program and Experimentation on Energy in the Building (PREBAT) from 3 - 5 June 2008 in Perpignan, the research conducted under the ANR "INDUBAT" project, coordinator Amina Meslem was selected in the category "Best Research project" and awarded by the French Ministry of Education and Research represented by François CLIN
 - Price: 2011 *Best paper awards* of Building and Environment Journal for article number 6 in the Selected publications section of the present CV
 - Holds a Scientific Excellence Award for the period 2008-2012
 - Holds a Scientific Excellence Award for the period 2012-2016

- Research contracts**
1. Research contrat N° 45083770; Starting date: 12/12/2001 ; Industrial partner ALSTOM Transport (Ayré) ; Etude du comportement thermique d'un plancher coupe-feu d'une voiture ferroviaire (10,67k€)
 2. Responsible for the project "INDUC" High-induction air conditioning for train cars; Convention CTU3-06 / PRC-R-110, Industrial partner: ALSTOM Transport (Ayré) Total project budget: 550,93k€. Grant to LEPTIAB: 352,33k €. Project closing date: december 2008
 3. Two contracts ALSTOM / LEPTIAB, Air handling of train cars
 - a. Contract N° 4700001481 ; Starting date: 15/03/2006; Contract budget : 31,50k€
 - b. Contract N° 4700002329 ; Starting date: 27/02/2007; Contract budget : 31,50k€
 4. Coordinator of Project ANR-PREBAT 2005, volet technologique « INDUBAT », Climatisation à haute induction pour le bâtiment ; Industrial Partner : Industrial Company of Thermal Applications (CIAT), ADEME convention number: 0507C0084, ANR convention number: ANR-05-PBAT-011-01; Project Start/End: 29-12-2005/29-06-2009. Project budget: 499,44k€. Subvention granted by ANR to LEPTIAB: 124,05k€. Subvention granted by ANR to CIAT: 77,15k€.
 5. Responsible for research project OSEO «Vaicteur Air 2», Emetteurs et diffusion d'air, November 2008- November 2013, Project budget: 187k€, Patent pending
 6. Project coordinator of ANR FLUBAT – *Suivi et compréhension expérimental des FLUX d'air dans les BATiments* – lauréat du programme « Villes et Bâtiments Durables 2012 », Project starting date 1^{er} mars 2013, Partners: CETHIL-Lyon, ENISE-St Etienne, CIAT-Culoz. Project budget: 800 k€, Budget LaSIE : 400k€, Administrative project manager: CNRS
 7. Collaboration with Technical University of Civil Engineering Bucharest in the following projects:
 - a. EQUATOR: Advanced strategies for high performance indoor Environmental QUALiTy in Operating Rooms- PN-II-PT-PCCA-2011-3.2-0512, 2012-2015, (700k€)
 - b. INADEVA: INtelligent Air Diffusion for healthy environments: advanced strategies and EVALuation methods - PN-II-ID-2011-3-0835, 2011-2014, (350k€)
 - c. Inovative terminal devices for HVAC air distribution – PNII RP cod CNCISIS 6, 2008- 2010, (175k€)
 8. Project PRES LPC-année 2013, Passive control of heat and mass transfer using lobed impacting jet, Institut P' (M. Fenot & E. Dorignac), LaSIE (A. Meslem & V. Sobolik), Allocated budget 12500€
 9. Collaboration with Technical University of Denmark, Department of Civil Engineering, International Centre for Indoor Environment and Energy, on the passive control of personalized ventilation

- Selected publications**
1. I., Nastase, **A. Meslem**, and P. Gervais, *Primary and secondary vortical structures contribution in the entrainment of low Reynolds number jet flows*. Experiments in Fluids, 2008. 44(6): p. 1027-

1033, IF=1.57

2. **Meslem A.**, Nastase I., Allard F., *Passive mixing control for innovative air diffusion terminal devices for buildings*. Building and Environment, Volume 45, Issue 12, December 2010, Pages 2679–2688, IF=3.804
3. I. Nastase, and **A. Meslem**, *Vortex Dynamics and Mass Entrainment in Turbulent Lobed Jets with and without Lobe Deflection Angles*, Experiments in Fluids, 2010, 48 (4), pp. 693-714, IF=1.57
4. M. El Hassan and **A. Meslem**, *Time-resolved stereoscopic PIV investigation of the entrainment in the near field of circular and daisy-shaped orifice jets*, Physics of Fluids, 22, 26p., 2010, IF=2.017
5. **Meslem A.**, Dia A., Beghein C., El Hassan M., Nastase I., Vialle P.-J., *A comparison of three turbulence models for the prediction of parallel lobed jets in perforated panel optimization*, Building and Environment, Volume 46, Issue 11, November 2011, Pages 2203–2219, IF=3.804
6. Nastase, I. **Meslem, A.**, Iordache, V., Colda, I., *Lobed grilles for high mixing ventilation—An experimental analysis in a full scale model room*, Building and Environment, Volume 46, Issue 3, March 2011, Pages 547–555, IF=3.804
7. El Hassan, M., **Meslem, A.**, Abed-Meraim, K., *Experimental investigation of the flow in the near-field of a cross-shaped orifice jet*, Physics of Fluids 23 (4), art. no. 045101, 2011
8. **Meslem, A.**, Sobolik, V., Bode, F., Sodjavi, K., Zaouali, Y., Nastase, I., Croitoru, C., *Flow dynamics and mass transfer in impinging circular jet at low Reynolds number. Comparison of convergent and orifice nozzles*. Int. Journal of Heat and Mass Transfer, Volume 67, December 2013, Pages 25–45, IF=2.980
9. Bolashikov Z., Melikov A., Spilak M., Nastase I., **Meslem A.**, *Improved inhaled air quality at reduced ventilation rate by control of airflow interaction at the breathing zone with lobed jets*, HVAC&R Research, Volume 20, Issue 2, 2014, IF=1.08
10. **Meslem, A.**, Bode F., Croitoru, C., Nastase, I., *Comparison of turbulence models in simulating jet flow from a cross-shaped orifice*, European Journal of Mechanics - B/Fluids, 44 (2014) 100–120, IF=1.687
11. **Meslem, A.**, Greffet R., Nastase I., Ammar A., *Experimental investigation of jets from rectangular six-lobed and round orifices at very low Reynolds number*, Meccanica, An International Journal of Theoretical and Applied Mechanics, October 2014, Volume 49, Issue 10, pp 2419-2437, IF=1.828
12. Croitoru, C., Nastase, I., Voicu, I., Meslem, A., Sandu, M., *Thermal Evaluation of an Innovative Type of Unglazed Solar Collector for Air Preheating*, EENVIRO – 2015, Energy Procedia, Volume 85, 2016, Pages 149-155, IF=0.92
13. Croitoru, C., Nastase, I., Bode, F., **Meslem, A.**, *Thermodynamic investigation on an innovative unglazed transpired solar collector*, Solar Energy, Volume 131, June 01, 2016, Pages 21-29, IF=4.414

Selected conference proceedings

1. Nastase I., **Meslem A.**, Colda I., *An experimental study of flows from lobed grilles in a full scale model room*, 10th REHVA World Congress "Sustainable Energy Use in Buildings", CLIMA 2010, 9-12 May, Antalya, Turkey
2. Nastase I., **Meslem A.**, El Hassan M., Melikov A., *Hemisphere lobed nozzle jet analysis for mixing and personalized ventilation*, RoomVent 2011 - 12th International conference on air distribution in rooms, Trondheim, Norway, June 19-22, 2011
3. Bode F., Nastase I., **Meslem A.**, Croitoru C., *RANS and LES models comparison for a cross shaped jet flow with application in personalized ventilation*, 2012 AIVC-Tightvent Conference, Copenhagen
4. C. Croitoru, **A. Meslem**, I. Nastase, O. Martin, *Innovative solution of unglazed transpired plate solar air heater*, CLIMA 2013, 11th REHVA World Congress & 8th International Conference on IAQVEC, Prague, Czech Republic, June 2013
5. C. Croitoru, F. Bode, **A. Meslem**, I. Nastase, *Innovative ventilated envelope elements for solar heat recovery in low energy buildings*, Building Simulation Conference 2013, Chambéry, France, August 2013
6. Croitoru, C., Nastase, I., Bode, F., **Meslem, A.**, *Innovative solar facade implementation in low energy buildings*, Indoor Air 2014 - 13th International Conference on Indoor Air Quality and

Climate, 2014, Pages 316-323, Proceedings of the 13th International Conference on Indoor Air Quality and Climate, Indoor Air 2014; Hong Kong; Hong Kong; 7-12 July 7 2014, ISBN: 9781634397315

7. Croitoru, C., Bode, F., Nastase, I., Dogeanu, A., **Meslem, A.**, *Innovative solar wall performance study for low energy buildings applications*, International Multidisciplinary Scientific GeoConference Surveying Geology and Mining Ecology Management, SGEM, Volume 1, Issue 4, 2014, Pages 307-314, 14th International Multidisciplinary Scientific Geoconference and EXPO, SGEM 2014; Albena; Bulgaria; 17 June 2014 through 26 June 2014, ISSN: 13142704
8. Sodjavi K., Montagne B., Bode F., Kristiawan M., Nastase I., **Meslem A.**, Impinging jet passive control for wall shear stress enhancement. The 15th International Heat Transfer Conference Kyoto, August 10-15th 2014, Japan
9. Bode F., Sodjavi K., **Meslem A.**, Nastase I., Comparison of turbulence models in simulating a, cruciform impinging jet on a flat wall, The 15th International Heat Transfer Conference, August 10-15th 2014, Kyoto, Japan
10. Croitoru, C., Dogeanu, A., Bode, F., Nastase, I., **Meslem, A.**, *Heat transfer analysis for a transpired solar collector numerical model*, International Multidisciplinary Scientific GeoConference Surveying Geology and Mining Ecology Management, SGEM, Volume 1, Issue 4, 2015, Pages 939-944, 15th International Multidisciplinary Scientific Geoconference and EXPO, SGEM 2015; Albena; Bulgaria; 18 June 2015 through 24 June 2015, ISSN: 13142704

Patents

Vialle P.J., Leroy E., and **Meslem A.**, *Diffusion device with lobe inserts and fan coil comprising such a device*, in *European Patent Office*. EP2933575, 2015