Mateusz Bogdan

Ph.D, Normalien

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French
36 years

Work Experience

Since 2016 **Reasearch Engineer and Project Manager**, *AREP - L'hypercube*, Paris, France, Project manager for urban climate and air quality studies, research engineer

Since 2018 **Lecturer**, *ENS Paris Saclay, ENSAM Paris*, France
Urban scale climatic studies, Life Cycle Analysis

2012 – 2015 **Ph.D.**, *LMT Cachan - ENS Cachan - AREVA NC*, Cachan, France, Morphological multiscale modeling of cementitious materials – Numerical Homogenization of effective diffusive properties
Under the supervision of L. Stefan and Profs. J.-B. Colliat and F. Benboudjema

2009 – 2014 **Lecturer and tutoring**, *ENS Cachan, ESTP, CNAM, USTH universities*, France & Vietnam
Applied acoustics, Cementitious Materials, Material Strength, Master's internships supervision

2011 **Master's Internship**, *LMT Cachan*, France, Morphological modeling of cement based materials – Application to hydration modeling
Supervised by Prof. J.-B. Colliat

2010 **Interpreter - Translator**, *SAFRAN - Hispanu-Suiza*, Colombes, France, French-Polish technical translations (mechanical machining workshop)

2009 – 2010 **Scientific Advisor**, *Vietnam Green Building Council*, Hanoï, Vietnam

2008 **Bachelor's Internship**, *University of California - EERC*, Berkeley,U.S.A, Numerical and experimental assessment of a seismic test slab natural frequencies
Supervised by Prof. B. Stojadinović

Education

2012 – 2015 **Ph.D.**, *LMT Cachan – ENS Cachan*, France, Morphological multiscale modeling of cementitious materials – Numerical Homogenization of effective diffusive properties
Under the supervision of Profs. J.-B. Colliat and F. Benboudjema

2010 – 2011 **Master's degree M.S.**, *ENS Cachan*, France, Civil and Environmental Engineering – Research oriented
Specialized in *Materials and Structure Modeling and Computations*

2006 – 2007 **Bachelor's degree B.S. & "Agrégation"**, *ENS Cachan*, France, Civil and Environmental Engineering
Specialized in *Materials, Structures and Organization*

Selected Publications

Articles

2020 **Techniques de l'Ingénieur**, *C-8131*, Calcul des pressions en façade pour la ventilation naturelle dans les espaces semi-ouverts
E. Walther, A. Hubert, A. Sauvageon, *M. Bogdan*

2017 **Science of The Total Environment**, *Vol. 607-608*, Modelling of airborne particulate matter concentration in underground stations using a two size-class conservation model
E. Walther, *M. Bogdan*

| 2017 | **Transportation Research Part D**, *Vol. 56*, A novel approach for the modelling of air quality dynamics in underground railway stations |
| | E. Walther, *M. Bogdan* |

| 2015 | **Defect and Diffusion Forum**, *Vol. 362*, Effective Permeability and Transfer Properties in Fractured Porous Media |
| | G. Rastiello, R. Bennacer, G. Nahas, *M. Bogdan* |

| 2015 | **European Journal of Environmental and Civil Engineering**, *Vol. 19*, Cement Paste Morphologies and effective diffusivity Using the Lattice Boltzmann Method |
| | E. Walther, *M. Bogdan*, C. Desa, R. Bennacer |

Conferences

| 2019 | **16th IBPSA international conference**, *Rome, Italy*, Improving the prediction of natural ventilation by coupling CFD and BES: A case study in Strasbourg train station, E. Walther, A. Hubert, A. Sauvageon, *M. Bogdan* |

| 2017 | **Air Pollution 2017**, *Cadiz, Spain*, A Novel Approach For The Modelling Of Air Quality Dynamics In Underground Railway Stations, E. Walther, *M. Bogdan* |

| 2014 | **Euro-C**, *St. Antom am Arlberg*, Autriche, Microscopic model for concrete diffusivity prediction |
| | *M. Bogdan*, J.-B. Colliat, F. Benboudjema, L. Stefan |

| 2012 | **Microdurability 12**, *Amsterdam*, The Netherlands, Morphological modelling of cement based materials and hydration process |
| | *M. Bogdan*, E. Roubin, J.-B. Colliat, F. Benboudjema, L. Stefan |

| 2011 | **COMPLAS XI**, *Barcelone*, Spain, Multi-scale failure for heterogeneous materials: link with morphological modeling |
| | E. Roubin, *M. Bogdan*, J.-B. Colliat |

Skills

Langages	French & Polish: First languages, English: Fluent
Programming	Python, Bash, Web (some PHP, some Javascript), C/C++, Fortran
Software	OpenFOAM, ParaView, Cast3m, Matlab/Scilab, Blender, Linux environments
Editon	Microsoft/Open Office, Adobe Illustrator/Photoshop, Gimp, LaTeX, Web (HTML-CSS)

Miscellaneous

| 2006 – 2007 | **Student Union Office**, *ENS Cachan* |
| | Co-Manager of the "K-fet" (recreational area - yearly budget 250k€) |

| 2011 – 2012 | **"Le Parasol" association**, *LMT Cachan* |
| | Co-Manager of the laboratory coffee room and recreational area (yearly budget 15k€) |

| 2013 | **AUGC'13 Conference**, *ENS Cachan* |
| | Organizing committee, Website development contribution |

| Theatre | Enthousiast, European literature classics, young promising authors, following numerous directors |

| Sport | Ice Hockey, Climbing, Golf, Cycling |