Damien ALLONSIUS

Post-Doctorate - UPF (Barcelona)

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Born the 18/01/1990 at Cannes, 29 years old

Education (bac + 10)

2018 – 2020	**Post-Doctorate**, *Universitat Pompeu Fabra (Barcelona)*, Member of DELTA project, `https://www.upf.edu/web/delta`. Reinforcement Learning
2015 – 2018	**PhD in Mathematics**, *Université Aix-Marseille*, Directors : Franck Boyer and Morgan Morancey, Study of the spectrum of Sturm-Liouville operators and applications in controllability theory of continuous and discret parabolic equations.
2013 – 2015	**Ecole Normale Supérieure de Cachan (normalien)**.
	○ 2014-2015 : Master 2 Research : Partial Differential Equations, Optimal Control and Calculus of Variations (Paris VI, Polytechnique) Mention TB.
	○ 2013-2014 : Agrégation de Mathématiques (option B) Rang 47.
2012 – 2013	**University of Cambridge**, *U.K*, Mathematical Tripos Part iii.
2010 – 2012	**Ecole Centrale de Lyon**, Jury's congratulations.
2007 – 2010	**CPGE Lycée Masséna**, *Nice, France*, MPSI/MP*.
2006 – 2007	**Lycée Alexis de Tocqueville**, *Grasse, France*, Mention TB.

Research

2015-2018	**Journal papers**, *joint work with Franck Boyer and Morgan Morancey*. Links available on my webpage

1. Spectral analysis of discrete elliptic operators and applications in control theory (Published : Numerische Mathematik)

2. Boundary null-controllability of semi-discrete coupled parabolic systems in some multi-dimensional geometries. (Published: Mathematical Control and Related Fields)

3. Minimal time of null-controllability of Grushin's equation on a vertical strip in a rectangular domain by the moments method. (En préparation)

4. Error estimate for the finite difference discretization of a Sturm-Liouville eigenvalue problem on quasi-uniform 1D meshes. (En préparation)

2015-2018	**Conferences**, *With Presentations*. Slides available on my webpage

1. CANUM 43e Congrès National d'Analyse Numérique. Obernai (France). May 2016.
2. PhD students seminar (Marseille). May 2016.
3. PICOF Problèmes Inverses, Contrôle, Optimisation de Formes. Mini-symposium on Control of PDE. Autrans (France). June 2016.
4. Porquerolles, Seminar. May 2016
5. GTT Jussieu Groupe de Travail des Thésards. LJLL (Paris, France). June 2016.
6. Workshop APACHE. Toulouse (France). December 2016.
7. VII Partial differential equations, optimal design and numerics. Benasque, Spain. August 2017.
8. GTT Jussieu Groupe de Travail des Thésards. LJLL (Paris, France). January 2018.
9. ISMP. Bordeaux (France). June 2018.

2015-2018	**Conferences**, *Without Presentation*.

1. Workshop OCDE 'Workshop on Optimal Control of Partial and Ordinary Differential Equations'. Ecole Polytechnique (Saclay, France). Nov 2015.
2. Porquerolles, séminaire d'équipe. May 2016

2015-2018 **Summer Schools**.

1. Mathematics In Savoie. 'Evolution Equations : long time behavior and control', 15-18 June 2015. Chambéry, France.
2. Spring School ContrOpt. 'Control and Optimization', 15-19 may 2017. Monastir, Tunisia.

2017-2018 **Other**.

Organizer of PhD students seminar (Marseille, France) : `http://ed184.lif.univ-mrs.fr/doku.php?id=espace_doctorants:seminaire:start`

Professional experiences

2015 – 2018	**Teaching in Probability, Optimization and Numerical Analysis**, *Ecole Centrale Marseille*, 64h.
2016	**Web developper project for a PhD student**, *http://diagnostic-tool.pagesperso-orange.fr/*.
2015	**Research internsip M2**, *Université Aix-Marseille*, Franck Boyer. Controllability properties of some parabolic systems
2014	**Teaching internship in Mathematics at Ecole Polytechnique**, *Saclay, France*. https://www.youtube.com/watch?v=6jURkfGeIU8
2013	**Research project M2 at Institut Camille Jordan**, *Lyon, France*, stochastic calculus, stochastic control.
2012	**Atos Wordline, Engineering internsip**, *Lyon, France*, Web developper. Web application in Tapestry https://www.orias.fr/
2011	**Mentoring in Ecole Centrale de Lyon**, Mathematics. Lebesgue Theory, Probability, Optimization.
2011	**Research Project**, *Lyon, France*. Mathematics Applied to Chemistry.
2011	**Engineering internship**, *Nice, France*, Société Monégasque de Contrôle, Véolia Eau.

IT qualifications

Web	HTML, PHP, CSS, javascript, P5, SQL (OpenClassroom certificate), Tapestry
Dev	Python (3.6), C/C++, Qt, Java
Maths	Matlab, Scilab, R, CAML, Maple
Other	Linux, Git, Bash, Prolog

Languages

French	Fluent
English	Fluent, TOEFL iBT (in 2012) : 104/120
Italian	Level B1
Spanish	Basic knowledge
Japanese	Basic knowledge

Other

Sports	Run (trail), cycle, swim, ski, bouldering, crossfit.
Driver License	2008