LEPOUTRE Thomas

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Born on 1984/02/02, French citizen
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Education and positions

Since October 2010	**INRIA Junior researcher (CR2 then CR1) in project team DRACULA** *Inria Rône Alpes and Institut Camille Jordan (Lyon 1)*
2007-2009	**PHD in applied mathematics: Analysis and modelling of growth and motion phenomenon from biology** *Université Pierre et Marie Curie Paris (France) supervisors: J. Clairambault, S. Gaubert and B. Perthame*
2006-2007	**Master 2 (Applied mathematics in life sciences)** *Université Pierre et Marie Curie Paris (France)*
2006	**Agrégation de mathématiques (Degree for teaching)**
2005	**Second semester (Master 1) at Imperial College London (UK)**
2003-2008	**Student in mathematics at École Normale Supérieure de Lyon (France)**

PhD Students

since 2014	Alvaro Matteos Gonzales co advised with H. Berry and V. Calvez, on mathematical modelling of anomalous diffusion using age structured models
since 2014	Apollos Besse, co advised with S. Bernard on mathematical modelling of chronic myeloid leukemia.

Interns

2016	Emma Leschiera (L2) TIPE
2014	Alvaro Matteos Gonzales (M2) co advised with H. Berry and V. Calvez,
2014	Apollos Besse (M2), co advised with S. Bernard,
2013	Cigdem Ak (M2), co advised with F. Crauste
2013	Martin Legras (L3)
2011	Claire Elias (M1) co advised with S. Bernard

Participations to resarch projects

	Principal Investigator
Since 2017	(with V. Bansaye, CMPA Ecole Polytechnique) GDR MaMoVi. French research networks on mathematical modelling in life sciences. `http://gdr-mamovi.math.cnrs.fr/spip/`
Since 2012	Inria Partnerships programm Modelling Leukemia `http://dracula.univ-lyon1.fr/modelling_leukemia.php`. This programm funds exchange between our team and the group of Doron Levy (CSCAMM, University of Maryland, USA) on the mathematical modelling of leukemia.
2011	Inria Programme Explorateur : funding for a 5 weeks stay at CSCAMM (led to the Inria Patrnerships afterwards).
	Member
Since 2014	ERC MESOPROBIO (PI: V. Calvez, ENS Lyon, France)
Since 2013	member of ANR Grant KIBORD (PI: Laurent Desvillettes,CMLA ENS CACHAN, France) `https://www.ljll.math.upmc.fr/kibord/`. This programm is dedicated to the development of PDEs methods for issues coming out of biology and connected subjects (chemistry, medical sciences).
before	member of the young resarcher ANR Grant MODPOL (PI: Vincent Calvez, ENS LYON, France), ANR Procell (PI: Fabien Crauste, UCBL Lyon 1, France), ANR Toppaz (PI: Marie Doumic Inria Paris, France)

Collaborations

Oct. 2016	**short visit to Doron Levy** *College Park (USA)* .
Nov. 2015	**short visit to Doron Levy** *College Park (USA)* .
May 2015	**short visit to Doron Levy** *College Park (USA)* .
Nov. 2014	**short visit to Doron Levy** *College Park (USA)* .
Aug 2013	**2 weeks visit to Peter Kim** *University of Sydney (Australia)* .
Dec 2012	**2 weeks visit to Doron Levy** *College Park (USA)* .
May-Jun. 2012	**2 months visit to Nicolas Meunier** *Université Paris Descartes* .
Oct.-Nov. 2011	**5 weeks visit to Doron Levy** *College Park (USA)* .
Mar. 2011	**2 weeks visit to Salome Martinez** *CMM Santiago (Chile)* .
Jan. 2010	**2 weeks visit to Salome Martinez** *CMM Santiago (Chile)* .
Jun. 2008	**2 weeks visit to Mostafa Bendahmane** *Universidad de Concepcion (Chile)* .

Organization of conferences

july 2016	co-organizer of school "EDP et Probabilités pour les sciences du vivant" (`http://programme-scientifique.weebly.com/1426.html`) .
July 2015	member of the organizig comittee of EQUADIFF 2015 (Lyon) .
October 2013	co-organizer of GDR METICE days (Lyon) .
may 2013	co-organizer of EMS-ESMTB school "Multiscale modeling in the life sciences" (`http://mathbio2013.sciencesconf.org/resource/page/id/5`) .
sept. 2012	co-organizer of school "Modélisation en dynamique de populations et évolution" (`http://www.cmap.polytechnique.fr/~ecolemathbio2012/index.php`) .
nov. 2011	minisymposium at SIAM Conference on Analysis of Partial Differential equations (San Diego, USA).

Jurys and comittees

2016	PhD defence of Bastien Polizzi (Nice, examiner)
2014	Hiring comittee MCF Lyon 1
2013	Hiring comittee MCF Paris Sud

Recent Communications

December 2016	CIMPA school (Mauritius)
October 2016	CERMICS Seminar
December 2015	CSCAMM Seminar Univ. Maryland
October 2015	ESH John Goldman conference (Estoril, poster presentation)
September 2014	ANR STAB days, Lyon
July 2014	AIMS conference (Madrid) MS-talk.

Teaching

2016-2017	Agrégation (Option B: Scientific Computing and Modelling), UCBL (Lyon 1).
jan.- june 2016	Agrégation (Option B: Scientific Computing and Modelling), UCBL (Lyon 1).
sept.-dec 2015	Master 2 lectures on integro-differential equations (shared with L. Tine)
sept.-dec 2014	Master 2 lectures on integro-differential equations (shared with L. Tine)
sept.-dec 2013	Master 2 lectures on integro-differential equations (shared with V. Calvez)
sept.-dec 2013	Exercises class of Master 2 lectures on Hamilton Jacobi equations (lecturer V. Calvez)
jan.-june 2013	Agrégation (Option B: Scientific Computing and Modelling), UCBL (Lyon 1).
sept.-dec 2012	Exercises class of Master 2 lectures on Hamilton Jacobi equations (lecturer V. Calvez)
jan.-june 2012	Agrégation (Option B: Scientific Computing and Modelling), UCBL (Lyon 1).
jan.-june 2012	Student seminar on Perron Frobenius theory and population dynamics, ENS LYON (with V. Calvez)
dec. 2011	Short introduction to population dynamics, ENS CACHAN
2007-2010	Exercises class, Université Pierre et Marie Curie (L1-L2)

Miscelleanous

2010-2015	member of Opérations Postes (website clarifying recruitment process for Ph. D. candidates) .
2011-2014	member of the press team for images des Mathématiques (we collect articles mentionning mathematics in press and summarize them every month).

Skills

Languages	English (fluent), French (native) and German (basics) .
Softwares	Scilab, Matlab, LaTeX.

Publications

[1] A. Besse, T. Lepoutre, and S. Bernard. "Long-term treatment effects in chronic myeloid leukemia." In: *Journal of Mathematical Biology* (2017).

[2] T. Lepoutre and A. Moussa. "Entropic structure and duality for multiple species cross-diffusion systems". In: *Nonlinear Analysis* (Sept. 2017). accepted for publication.

[3] H. Berry, T. Lepoutre, and Á. M. González. "Quantitative Convergence Towards a Self-Similar Profile in an Age-Structured Renewal Equation for Subdiffusion". In: *Acta Applicandae Mathematicae* 145.1 (2016), pp. 15–45.

[4] G. D. Clapp, T. Lepoutre, F. E. Nicolini, and D. Levy. "BCR-ABL transcript variations in chronic phase chronic myelogenous leukemia patients on imatinib first-line: Possible role of the autologous immune system". In: *OncoImmunology* 5.5 (Jan. 2016), e1122159.

[5] G. D. Clapp, T. Lepoutre, R. El Cheikh, S. Bernard, J. Ruby, H. Labussifffdre-Wallet, F. E. Nicolini, and D. Levy. "Implication of the Autologous Immune System in BCR-ABL Transcript Variations in Chronic Myelogenous Leukemia Patients Treated with Imatinib." eng. In: *Cancer Res* 75.19 (Oct. 2015), pp. 4053–4062.

[6] L. Desvillettes, T. Lepoutre, A. Moussa, and A. Trescases. "On the Entropic Structure of Reaction-Cross Diffusion Systems". In: *Communications in Partial Differential Equations* 40.9 (2015), pp. 1705–1747.

[7] S. Gaubert and T. Lepoutre. "Discrete limit and monotonicity properties of the Floquet eigenvalue in an age structured cell division cycle model". English. In: *Journal of Mathematical Biology* (2015), pp. 1–41.

[8] F. Billy, J. Clairambault, O. Fercoq, S. Gaubert, T. Lepoutre, T. Ouillon, and S. Saito. "Synchronisation and control of proliferation in cycling cell population models with age structure". In: *Mathematics and Computers in Simulation* 96 (2014), pp. 66–94.

[9] L. Desvillettes, T. Lepoutre, and A. Moussa. "Entropy, Duality, and Cross Diffusion". In: *SIAM Journal on Mathematical Analysis* 46.1 (2014), pp. 820–853.

[10] T. Lepoutre and S. Martinez. "Steady state analysis for a relaxed cross diffusion model". Anglais. In: *Discrete and Continuous Dynamical Systems - Series A* 2 (2014), pp. 613–633.

[11] T. Lepoutre, N. Meunier, and N. Muller. "Cell polarisation model: The 1D case". In: *Journal de Mathématiques Pures et Appliquées* 101.2 (Feb. 2014), pp. 152–171.

[12] F. Thomas, D. Fisher, P. Fort, J.-P. Marie, S. Daoust, B. Roche, C. Grunau, C. Cosseau, G. Mitta, S. Baghdiguian, F. Rousset, P. Lassus, E. Assenat, D. Grfffdgoire, D. Missfffd, A. Lorz, F. Billy, W. Vainchenker, F. Delhommeau, S. Koscielny, R. Itzykson, R. Tang, F. Fava, A. Ballesta, T. Lepoutre, L. Krasinska, V. Dulic, P. Raynaud, P. Blache, C. Quittau-Prevostel, E. Vignal, H. Trauchessec, B. Perthame, J. Clairambault, V. Volpert, E. Solary, U. Hibner, and M. E. Hochberg. "Applying ecological and evolutionary theory to cancer: a long and winding road." eng. In: *Evol Appl* 6.1 (Jan. 2013), pp. 1–10.

[13] R. El Cheikh, T. Lepoutre, and S. Bernard. "Modeling Biological Rhythms in Cell Populations". In: *Math. Model. Nat. Phenom.* 7 (06 2012), pp. 107–125.

[14] T. Lepoutre, M. Pierre, and G. Rolland. "Global Well-Posedness of a Conservative Relaxed Cross Diffusion System". In: *SIAM Journal of Mathematical Analysis* 44.3 (2012), pp. 1674–1693.

[15] J. Clairambault, S. Gaubert, and T. Lepoutre. "Circadian rhythm and cell population growth". In: *Math. Comput. Modelling* 53 (2011), pp. 1558–1567.

[16] M. Bendahmane, T. Lepoutre, A. Marrocco, and B. Perthame. "Conservative cross diffusions and pattern formation through relaxation". In: *Journal de Mathématiques Pures et Appliqués* 92.6 (May 2009), pp. 651–667.

[17] J. Clairambault, S. Gaubert, and T. Lepoutre. "Comparison of Perron and Floquet Eigenvalues in Age Structured Cell Division Cycle Models". In: *Math. Model. Nat. Phenom.* 4.3 (2009), pp. 183–209.

[18] M. Doumic, T. Goudon, and T. Lepoutre. "Scaling limit of a discrete prion dynamics model". In: *Commun. Math. Sci.* Volume 7, Issue 4 (2009), pp. 839–865.