

PERSONAL DETAILS

Birth May 02, 1986 in Strasbourg, France (French nationality)
Currently Assistant professor,
 Institut de Recherche en Informatique de Toulouse,
 Université Paul Sabatier, 31400, Toulouse, France.
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APPOINTMENTS

Assistant Professor Start - Sept. 2015
IRIT, Toulouse, France
 Collaboration at Université Paul Sabatier between Informatics (IRIT) and Mathematics (IMT) institutes.

Post-doc in Applied Mathematics Oct. 2014 - Jul. 2015
Technion, Haifa, Israel
 Supervisor: Shoham Sabach. Large scale convex optimization.

Post-doc in Applied Mathematics Jan. 2014 - Sep. 2014
LAAS-CNRS, University of Toulouse, France
 Supervisors: Didier Henrion and Jean-Bernard Lasserre. Polynomial optimization for inverse control.

EDUCATION

Ph.D. in Applied Mathematics Sept. 2010 - Dec. 2013
Center for Computational Biology, Mines ParisTech, Curie Institute, INSERM U900, France
 Supervisor: Véronique Stoven. Machine learning in computational biology.

Engineering degree (M.Sc.) Sept. 2006 - Jul. 2010
Mines ParisTech, France
 Computer science, optimization, statistics. Majoring in Geostatistics.

TEACHING

Exploratory statistics *Université Paul Sabatier* Sep. 2015 - Dec. 2015
 Undergraduate level, introductory cours, exercise and practical sessions.

Tutoring *Mines-Paristech, France* Nov. 2013 - Dec. 2013
 Investment strategies toward increase of survival in breast cancer: eleven students, three weeks project.
 Tutoring in data analysis, computer graphics, report and defense drafting.

Examiner *Lycée Pasteur, Neuilly Sur Seine, France* Sep. 2006 - Jun. 2008
 Weekly oral tests in mathematics in math sup preparatory class (undergraduate level).

ACADEMIC SERVICES

Reviewer

Bioinfo., Int. Conf. Mach. Learn. (ICML), Neur. Inf. Proc. Sys. (NIPS), IEEE Trans. Autom. Cont., IEEE Trans. Comput. Biol., J. Optim. Th. Appl., Mol. BioSyst., Optim., Plos One., SIAM J. Optim., Math. Prog. Math. Op. Res.

SUBMITTED

- E. Pauwels, D. Henrion, and J.-B. Lasserre. Linear conic optimization for inverse optimal control. *Submitted to SIAM Journal on Control and Optimization*, 2014. <http://homepages.laas.fr/henrion/Papers/iocpconic.pdf>
- D. Henrion and E. Pauwels. Linear conic optimization for nonlinear optimal control. *Submitted for possible inclusion as a contributed chapter in S. Ahmed, M. Anjos, T. Terlaky (Editors). Advances and Trends in Optimization with Engineering Applications. MOS-SIAM series, SIAM, Philadelphia, 2015*, 2014. <http://homepages.laas.fr/henrion/Papers/lpcontrol.pdf>

PUBLISHED IN PEER REVIEWED JOURNALS

- A. Beck, P. Edouard, and S. Sabach. The cyclic block conditional gradient method for convex optimization problems. *Accepted in SIAM journal on Optimization*, 2015. <http://arxiv.org/pdf/1502.03716v2.pdf>
- J. Bolte and E. Pauwels. Majorization-minimization procedures and convergence of sqp methods for semi-algebraic and tame programs. *Accepted for publication in Mathematics of Operations Research*, 2015. <http://arxiv.org/pdf/1409.8147.pdf>
- E. Pauwels, C. Lajaunie, and J.-P. Vert. A bayesian active learning strategy for sequential experimental design in systems biology. *BMC Systems Biology*, 8:102, 2014. <http://link.springer.com/content/pdf/10.1186%2Fs12918-014-0102-6.pdf>
- Y. Yamanishi, E. Pauwels, and M. Kotera. Drug side-effect prediction based on the integration of chemical and biological spaces. *Journal of chemical information and modeling*, 52(12):3284–3292, 2012
- E. Pauwels, D. Surdez, G. Stoll, A. Lescure, E. Del Nery, O. Delattre, and V. Stoven. A probabilistic model for cell population phenotyping using hcs data. *PLoS ONE*, 7(8):e42715, 08 2012. <http://www.plosone.org/article/fetchObject.action?uri=info%3Adoi%2F10.1371%2Fjournal.pone.0042715&representation=PDF>
- E. Pauwels, V. Stoven, and Y. Yamanishi. Predicting drug side-effect profiles: a chemical fragment-based approach. *BMC bioinformatics*, 12(1):169, 2011. <http://www.biomedcentral.com/content/pdf/1471-2105-12-169.pdf>
- Y. Yamanishi, E. Pauwels, H. Saigo, and V. Stoven. Extracting sets of chemical substructures and protein domains governing drug-target interactions. *Journal of chemical information and modeling*, 51(5):1183–1194, 2011

PUBLISHED IN PROCEEDINGS OF PEER REVIEWED CONFERENCES

- E. Pauwels, D. Henrion, and J.-B. Lasserre. Inverse optimal control with polynomial optimization. In *IEEE 53rd Annual Conference on Decision and Control (CDC), 2014*. IEEE, 2014. <http://arxiv.org/pdf/1403.5180v1.pdf>
- Y. Tabei, E. Pauwels, V. Stoven, K. Takemoto, and Y. Yamanishi. Identification of chemogenomic features from drug–target interaction networks using interpretable classifiers. *Bioinformatics*, 28(18):i487–i494, 2012. <http://bioinformatics.oxfordjournals.org/content/28/18/i487.full.pdf>
- S. Mizutani, E. Pauwels, V. Stoven, S. Goto, and Y. Yamanishi. Relating drug–protein interaction network with drug side effects. *Bioinformatics*, 28(18):i522–i528, 2012. <http://bioinformatics.oxfordjournals.org/content/28/18/i522.full.pdf>

ORAL COMMUNICATIONS

- Linear conic optimization for inverse optimal control. Workshop on Geometric and Numerical Foundations of Movements, Nov. 20 2015. LAAS-CNRS, Toulouse, France.
- Non-linear programming with semi-algebraic data: convergence beyond the proximal decomposition setting. Nonlinear Analysis and Optimization seminar, Jan. 18 2015, Mathematics Faculty, Technion, Haifa, Israel.
- A Bayesian active learning strategy for sequential experimental design in systems biology. MIA-T seminar, Feb. 14 2014, INRA Toulouse, France.
- Identification of chemogenomic features from drug-target interaction networks using interpretable classifiers. ECCB 2012, Basel, Switzerland.
- Modeling cell populations in high content screening using copulas. Poster, NIPS 2011 Workshop on Copulas in Machine Learning, Grenada, Spain.
- Mixture models for cell population phenotyping. 2nd Workshop on Bioinformatics for Medical and Pharmaceutical Research, 2011, Institut Curie, France
- Analyse statistique de liens entre les espaces moléculaires et phénotypiques. Séminaire maths et systèmes, January 2011, Mines ParisTech, France