30 novembre 2015

Edouard Pauwels

DÉTAILS PERSONNELS

Naissance	2 mai 1986 à Strasbourg, France
Position actuelle	Maître de conférences, Institut de Recherche en Informatique de Toulouse, Université Paul Sabatier, 31400, Toulouse, France.
Web	edouard.pauwels@irit.fr, http://cbio.ensmp.fr/~epauwels

AFFECTATIONS

Maître de conférences Sept. 2015 - Pres.
IRIT, Toulouse, France

Collaboration à l'université Paul Sabatier entre les instituts d'Informatique (IRIT) et de Mathématiques (IMT).

Post-doctorant en Mathématiques Appliquées Oct. 2014 - Juil. 2015
Technion, Haifa, Israel

Encadrant : Shoham Sabach. Optimisation convexe de grande taille.

Post-doctorant en Mathématiques Appliquées Jan. 2014 - Sept 2014
LAAS-CNRS, Université de Toulouse, France

Encadrants : Didier Henrion et Jean-Bernard Lasserre. Optimisation polynomiale pour le contrôle inverse.

FORMATION

Doctorant en Mathématiques Appliquées Sept. 2010 - Dec. 2013
Center for Computational Biology, Mines ParisTech, Institut Curie, INSERM U900, France

Encadrant : Véronique Stoven. Apprentissage statistique en biologie computationnelle.

Elève ingénieur Sept. 2006 - Jul. 2010
Mines ParisTech, France

Informatique, optimisation, statistiques. Option Géostatistiques.

ENSEIGNEMENT

Statistique exploratoire *Université Paul Sabatier* Sep. 2015 - Dec. 2015

Niveau L3, cours d'introduction, TD, TP.

Chargé de cours (tutorat) *Mines-Paristech* Nov. 2013 - Dec. 2013

Investissements, cancer du sein : onze étudiants, trois semaines, temps plein, analyse de données, infographie, rapport et soutenance.

Colleur *Lycée Pasteur* Sep. 2006 - Juin 2008

Interrogations hebdomadaires en mathématiques MP niveau sup par groupes de trois élèves.

SERVICES ACADÉMIQUES

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.

30 novembre 2015

Publications

SOUMIS

— 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

PUBLIÉS DANS DES REVUES AVEC COMITÉ DE LECTURE

— 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

PUBLIÉS DANS DES ACTES DE CONGRÈS AVEC COMITÉ DE LECTURE

— E. Pauwels, D. Henrion, and J.-B. Lasserre. Inverse optimal control with polynomial optimization. In *IEEE 53nd 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

COMMUNICATIONS ORALES

— Linear conic optimization for inverse optimal control. Wokshop 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, Israël.

— 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 moleculaires et phenotypiques. Seminaire maths et systemes, January 2011, Mines ParisTech, France