

November 2008

Addresses

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- 24 rue de la TRAMONTANE 66430 BOMPAS
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Personal Born in Clermont-Ferrand (France), married, 2 children
Nationality: French

Research topics

- Variational Inequalities (existence, stability)
- Quasiconvex optimization
- Mathematical economy
- Generalized convexity of sets and functions

Professional employment

At University of Perpignan:

- Maître de Conférences (associate professor) since sept. 1996
- Attaché Temporaire d'Enseignement et de Recherche, 1995-96

At University of Clermont-Ferrand II:

- Attaché Temporaire d'Enseignement et de Recherche, 1994-95
- Allocataire de recherche MRT, 1991-94
- Moniteur de l'Enseignement Supérieur, 1992-94

Rmk: Military service from 1989 to 1991

Academic degrees

HABILITATION À DIRIGER DES RECHERCHES:

“Contributions en analyse multivoque et en optimisation”
Univ. Montpellier II (2005).

PHD THESIS:

“Théorème de la Valeur Moyenne et Convexité Généralisée en Analyse non Régulière”
Univ. Clermont II (1994).

AWARDS :

Prime d’encadrement doctoral et de recherche (2006-2010).

Selected visiting positions

- Centro de Modelamiento Matematico, Universidad Nacional de Chile, Santiago du Chili, November 2008.
- IMCA, University of Lima, Peru, October 2007.
- Department of Mathematics, University of la Réunion, January 2007.
- Centro de Modelamiento Matematico, Santiago du Chili, December 2006.
- Department of Mathematics and Statistics, University of Victoria, Canada, November-December 2005.
- Department of Mathematics and Statistics, University of Victoria, Canada, April-May 2004.
- Department of Applied Mathematics, National Sun Yat-Sen University, Kaohsiung, Taiwan, May-June 2001.
- Department of Mathematics University Antilles-Guyane, April 1999.
- Department of Mathematics University Antilles-Guyane, December 1997.

And soon:

- Universidad de la Havana, Cuba, March 2009.
- IMCA, University of Lima, Peru, May 2009.

Responsibilities

IN A LOCAL INSTITUTION:

- Assesseur then Director of the Department of Mathematics and Computer sciences from 1999 to 2004.
- President of the jury of “Licence de Mathématiques” from 2000 to 2003.
- Member of the “conseil d’UFR” from 2004 to 2008.

IN A NATIONAL INSTITUTION:

- Elected member of the Conseil National des Universités (section Applied Math.) since 2007.
- Elected member of the Scientific committee of group MODE (a subgroup of SMAI) from 2002 to 2008.

IN AN INTERNATIONAL INSTITUTION:

- Elected member of the “International Scientific Committee” of the “Working Group on Generalized Convexity”, an international research group (400 members - 46 countries).
- Consulting expert of the Ministère des Affaires Etrangères for a pedagogical action in Comorian Islands.

Publications List

INTERNATIONAL REFEREED JOURNALS:

- D. Aussel & J. Dutta, *Generalized Nash equilibrium problem, variational inequality and quasiconvexity*, Oper. Research Letters., à paraître (2008).
- M. Ait Mansour & D. Aussel, *Quasimonotone variational inequalities and quasiconvex programming: qualitative stability*, J. Convex Analysis, à paraître (2008).
- D. Aussel & J. Ye, *Quasiconvex minimization on locally finite union of convex sets*, J. Optim. Th. Appl., à paraître (2008).
- M. Ait Mansour & D. Aussel, *Quasimonotone variational inequalities and quasiconvex programming: quantitative stability*, Pacific J. Optimization 2 (2006), 611-626.
- D. Aussel & J. Ye, *Quasiconvex programming with locally starshaped constraint region and application to quasiconvex MPEC*, Optimization 55 (2006), 433-457.
- D. Aussel & N. Hadjisavvas, *Adjusted sublevel sets, normal operator and quasiconvex programming*, SIAM J. Optim., 16 (2005), 358-367.
- D. Aussel & D. T. Luc, *Existence conditions in general quasimonotone variational inequalities*, Bull. Austral. Math. Soc., 71 (2005), 285-303.
- D. Aussel, A. Daniilidis & L. Thibault, *Subsmooth sets: functional characterizations and related concepts*, Trans. Amer. Math. Soc., 357 (2005), 1275-1301.
- D. Aussel & N. Hadjisavvas, *On Quasimonotone Variational Inequalities*, J. Optim. Th. Appl., Vol. 121 (2004), 445-450.

- D. Aussel & C.C. Chou, *Asymptotical well behavior for constrained minimization problems*, Bull. Australian Math. Soc., Vol. 66 (2002), 499-516.
- D. Aussel & A. Daniilidis, *Normal cones to sublevel sets: an axiomatic approach. Applications in quasiconvexity and pseudoconvexity*, Proceedings of the 6th International Symposium on Generalized Convexity/Monotonicity, Lecture Notes in Economics and Mathematical Systems, Ed. Springer, No. 502 (2001), 88-101.
- D. Aussel & A. Daniilidis, *Normal characterization of the main classes of quasiconvex functions*, Set-Valued Analysis, Vol. 8 (2000), 219-236.
- D. Aussel, J.-N. Corvellec & M. Lassonde, *Nonsmooth constrained optimization and multidirectional mean value theorem*, SIAM J. of Optimization, Vol. 9, No. 3 (1999), 690-706.
- D. Aussel, *Subdifferential properties of quasiconvex and pseudoconvex functions : a unified approach*, J. Optim. Th. Appl., Vol. 97, No. 1 (1998), 29-45.
- D. Aussel, J.-N. Corvellec & M. Lassonde, *Mean Value Property and Subdifferential Criteria for Lower Semicontinuous Functions*, Transactions of the Amer. Math. Soc., Vol. 347 (1995), 4147-4161.
- D. Aussel, J.-N. Corvellec & M. Lassonde, *Subdifferential characterization of quasiconvexity and convexity*, Journal of Convex Analysis, Vol. 1 (1994), 195-201.

SUBMITTED PAPERS:

- D. Aussel, Y. Garcia & N. Hadjisavvas, *Single directional property of multivalued maps and lack of metric regularity for variational systems*, 2008.
- D. Aussel & J. Dutta, *On gap functions for multivalued variational inequalities*, 2008.

BOOKS AND COURSES:

- *A course on Numerical Analysis*, (with J.-P. Crouzeix), CUST, 1995, 61 pp.
- Chapter "*Optimization*" in the book "Mathématiques du L3", Ed. Pearson, 2009.

THESIS:

- *Contributions en analyse multivoque et en optimisation*, Habilitation à diriger les recherches, Montpellier II, 2005, 274 pp.
- *Théorème de la valeur moyenne et convexité généralisée en analyse non différentiable*, PhD thesis, Clermont II, 1994, 134 pp.

Selected Conferences (since 2000)

- Workshop on Variational Analysis - Santiago, Chile - November 2008. “*Single-directional property of set-valued maps and Applications*”
- Conference on Optimization and Practices in Industry - Paris - November 2008. “*Single directional set-valued maps*”
- 9th Conference on Generalized Convexity/Monotonicity - Kaohsiung, Taiwan - July 2008.
- VIII Seminario internacional en optimizacion y areas afines - Lima, Pérou, November 2007. “*Generalized equilibrium and related topics*”
- XXV Coloquio de la Sociedad Matematica Peruana - Lima, Pérou, November 2007. “*Minimizing quasiconvex functions on (possibly) nonconvex sets*”
- 11th Workshop on well-posedness and optimization problems and related topics - Alicante, September 2007. “*Stability of variational inequalities under weak monotonicity assumptions*”
- International Conference on Nonsmooth and Variational Analysis in Sciences and Engineering - Limoges, June 2007. “*Optimality conditions for quasiconvex programming*”
- Conférence internationale sur les mathématiques de l’optimisation et de la décision - Paris (IHP), April 2007 (Plenary speaker). “*Disjunctive quasiconvex minimization and bilevel programming*”
- International Conférence on Mathematics IMCA - Lima, November 2006. “*Existence and stability results for quasimonotone variational inequalities*”
- International conference on optimization and decision making - Pointe-à-Pitre, Guadeloupe, April 2006. “*Stability results for quasimonotone variational inequalities*”
- Cinquièmes journées franco-chiliennes d’optimisation - Dijon, January 2006. “*Recent advance in quasiconvex optimization*”
- Canadian Mathematical Society Winter Meeting - Victoria, Canada, December 2005. “*On quasiconvex mathematical programming problems with equilibrium constraints*”
- 8th International Conf. on Generalized Convexity/Monotonicity - Varese, Italy, July 2005. “*Minty and Stampacchia variational inequalities*”
- Workshop on Optimization, Games and Economics Applications - Barcelona, June 2005. “*Normal operator: properties and applications*”
- Journée Thématique Quasiconvexité - Montpellier, February 2005. “*Quasiconvex programming: existence results and optimality conditions*”
- International Conference on Optimization - Avignon, September 2004. “*Variational inequalities, adjusted sublevel sets and applications*”
- CORS/INFORMS International Meeting - Banff, Canada, May 2004. “*Quasimonotone variational inequalities and applications*”

- Journée Convexité généralisée - Perpignan, June 2003. “*Quasimonotone variational inequality: A new step*”
- 7th International Conf. on Generalized Convexity/Monotonicity - Hanoi, Vietnam - August 2002. “*Normal operator in quasiconvex programming*”
- International conference on Optimization and Optimal Control - Tainan, Taiwan - June 2001. “*Stationary sequence and minimizing sequence for constrained optimization problems*”
- Workshop on Generalized Convexity - Chang Hua, Taiwan - June 2001. “*Normal operator in Quasiconvex analysis: Recent developments*”
- Congrès du Groupe Mode - Toulouse - March 2000. “*Cônes normaux aux sous-niveaux d’une fonction : quelques applications*”

Doctoral courses (in international summer schools)

- Advanced courses on Variational Analysis - Santiago, Chile - November 2008.
- Summer school on Generalized Convexity/Monotonicity - Kaohsiung, Taiwan - July 2008.

Present International projects

- Project PLATON of Egide (Partenariat Hubert Curien) with Greece (univ. of the Aegean) on the topic: “generalized convex analysis and applications” - 2007-2008.
- Project Fondecyt 1080173 (2008) with the “Centro de Modelamiento Matemático” in Santiago, Chili and university F. Santa Maria in Valparaiso. topic: Characterization of various Lipschitz like properties of functions, sets and set-valued mappings - 2008-2011.
- Project Prefalc (Cuba, Colombia, Guadeloupe, Perpignan, Peru), 2009-2011.
- Projet MathAmSud (Argentine, Brésil, Chili, Pérou, Guadeloupe, Perpignan), under evaluation.
- GDR Mathématiques de l’Optimisation et Applications (MOA), under evaluation.
- CIMPA school on “Variational inequalities and related problems”, Hanoi, Vietnam, May 2010, under evaluation.

Organization of conferences

- Organizer of a cluster in the “20th International Symposium on Mathematical Programming”, Chicago, USA, August 2009.
- Organizer of “Journée Thématique Quasiconvexité”, Montpellier, February 2005.
- Organizer of “Quatrièmes Journées Catalanes de Mathématiques Appliquées”, Tarragona (Spain), February 1998.