Curriculum Vitae and List of Publications

Alain VALETTE

September 13, 2011

1 Personal data

<u>Name</u>: Alain Joseph Jean VALETTE
<u>Place and date of birth</u>: 24 december 1958, Berchem-Sainte-Agathe (Belgium)
<u>Citizenship</u>: Belgian (Permis C in Switzerland)
<u>Marital status</u>: Married; 3 children (b. 1988, 1990, 1992).
<u>Position</u>: Full Professor at the Université de Neuchâtel (since June 1988).

2 Education

Master in Mathematics, Univ. Libre de Bruxelles, july 1980 (Grade: "la plus grande distinction").
PhD in Sciences, Univ. Libre de Bruxelles, december 1983 (Grade: "la plus grande distinction et les félicitations du Jury"); Title: *K-théorie pour certaines C*-algèbres associées aux groupes de Lie* ; supervisors: Profs L. Waelbroeck (ULB) and A. Connes (Collège de France).

3 Employment history

Oct. 1980-Sept. 1984: Research assistant, belgian National Fund for Scientific Research;
June 1986-May 1988: Senior Research assistant, belgian National Fund for Scientific Research;
Oct. 1986-Sept. 1988: "Maître d'Enseignement", ULB;

4 Visiting professorships

Nice (April-May 1988); Metz (Nov. 1993 and Feb. 2004); Brussels (Feb. 1996); Strasbourg (Nov. 1996); Sydney (Feb. 1997); ETH Zürich (April-june 1999); Paris-Sud (Nov-dec. 1999); Lille (Sept. 2006); Orléans (Oct.-dec. 2008); Leuven (March 2011).

5 Scientific Prizes

Prix Sterpenich du Dép. de Maths, ULB, july 1978;
Prix F. Mercier de la Faculté des Sciences, ULB, july 1978;

Lauréat, Concours des Bourses de Voyage de l'Etat belge, oct. 1981;
Lauréat, Concours annuel (groupe I), Science class of Belgian Royal Acad., december 1987.
Francqui Chair, Francqui Foundation (Belgium), 2011.

6 Administrative responsabilities

6.1 At the local level (selected):

Swiss SNF grants: I benefited of those without interruption since 1989: I was responsible of the post-doctoral stays of P. JOLISSAINT (1989-1991), A. DEUTSCH (1991-1993), Z. CHEN (1993-1995), C. PITTET (1995-1996), D. KUCEROVSKY (1996-1997), T. CECCHERINI-SILBERSTEIN (1997-1998), N. LOUVET (1998-2000), H. OYONO-OYONO (1999), F. PIERROT (2000-2001), M. NEUHAUSER (2001-2003); N. PRUDHON (2003-2005), S. GAL (2005-2006), E. DAVID-GUILLOU (2007), P.-E. CAPRACE (2007), D. OTERA (2007-2008), L. NGUYEN VAN THE (2009), F. BAUDIER (2010), J. BRIEUSSEL (2011), V. CAPRARO (2011-2012), S. BURGDORF
Member of the Research Committee of U. Neuchâtel (1992-2000); chairman of this Committee (2004-2008).
Head of the Mathematics Institute at U. Neuchâtel (2000-2004).
Deputy Dean of the Faculty of Sciences, U. Neuchâtel, since September 2007.

6.2 At the Swiss level (selected):

Chairman of the 3ème Cycle Romand de Mathématiques (from May 1994 to December 2002); member of the Scientific Committee since 1990.
Member of the scientific board of Centre Interfacultaire Bernoulli, EPFL (since 2002).
(with G. Arzhantseva) Project leader for "Limits of graphs in group theory and computer science", thematic semester at Centre Interfacultaire Bernoulli (EPFL), January-June 2007; available budget: 180.000 CHF.

6.3 At the international level (selected):

Elected by SCNAT (Swiss Academy of natural sciences) as representative in the board of IHES (January 2000).
Member of the European network TMR *Geometric Analysis* (from april 2000 to march 2004): 114.000 euros, financing 24 months of post-doctoral stays.
Project member of a Marie Curie Action: In the framework of the above-mentioned thematic semester at Centre Interfacultaire Bernoulli, G. Arzhantseva and I took part in a *Marie Curie Action*, in collaboration with other teams active in group theory; budget allocated by European Commission: 522.000 euros.
Member of the Scientific Committee for Mathematics, FWO-Flanders (since January 2010).
Project leader of a Sinergia project of Swiss SNF: joint research project with Profs G. Arzhantseva (Vienna) and N. Monod (EPFL), from April 1st, 2010, to March 31, 2013. Budget: 800.000 CHF

External member of the Scientific Committee for Mathematics, FNRS (Belgique), since 2010.

7 List of publications (limited to last 5 years)

7.1 Peer-reviewed papers

1. (with F. Martin) Reduced 1-cohomology of representations, the first ℓ^p-cohomology and applications,Groups Geom. Dyn. 1 (2007), 81-100.

2. (with Y. Stalder) Wreath products with the integers, proper actions and Hilbert space compression, Geom. Dedicata 124 (2007), 199-211.

3. (with Y. de Cornulier and R. Tessera) Isometric group actions on Hilbert spaces: growth of cocycles, Geometric and Functional Analysis (GAFA) 17 (2007), 770-792.

4. Fractions continues et équivalence sous $GL_2(\mathbb{Z})$,appendix to *Fractions continues et action des groupes de congruence sur la droite réelle*, by C. Troessaert, Bull. Belgian Math. Soc. - Simon Stevin, 14 (2007), 669-680.

5. (with Y. de Cornulier and Y. Stalder) Proper actions of lamplighter groups associated with free groups, C. R. Math. Acad. Sci. Paris 346, No. 3-4, 173-176 (2008).

6. (with Y. de Cornulier et R. Tessera) Isometric group actions on Banach spaces and representations vanishing at infinity, Transformation Groups 13 (2008), 125-147.

7. (with Y. de Cornulier and R. Tessera) Isometric group actions on Hilbert spaces: structure of orbits, Canadian J. Math. 60 (2008), 1001-1009.

8. Characterizing finite or abelian compact groups, appendix to Samea, H.; Abolghasemi, M. *Derivations on certain matrix algebras with applications to compact groups*, Bull. Belg. Math. Soc. Simon Stevin 16 (2009), no. 2, 361-372.

9. (with A. Naor and T. Austin) The Euclidean distortion of the lamplighter group, Discrete and Computational Geometry 44 (2010), 55-74.

10. (with Y. de Cornulier and Y. Stalder) Proper actions of wreath products and generalizations, to appear in Trans. Amer. Math. Soc.

11. (with R. Cluckers, Y. Cornulier, N. Louvet and R. Tessera), The Howe-Moore property for real and p-adic groups, to appear in Math. Scand.

12. (with T. Fernos) Reduced 1-cohomology and relative property (T), to appear in Math. Z.

7.2 Proceedings papers

1. (with S. Moon) Non-properness of amenable actions on graphs with infinitely many ends, Ischia Group Theory 2006, T. Hawkes, P. Longobardi, M. Maj eds., Proceedings, World Scientific 2007, 227-233.

2. Amenability and Margulis super-rigidity, in Representation theory and complex analysis, E. Casadio Tarabusi, A. D'Agnolo, M. Picardello eds., CIME Summer school (Venice, 10-17 June 2004), Springer Lecture Notes in Mathematics 1931 (2008), 233-256.

3. (with F. Martin) Free groups and reduced 1-cohomology of unitary representations, in Quanta of Maths (Conference in honor of Alain Connes), Clay Math. Proc. 11, Amer. Math. Soc. 2011, 459-463.

4. Affine isometric actions on Hilbert spaces and amenability, to appear in Proc. Special semester on amenability, Erwin Schrödinger Institute, Vienna, march 2007.

7.3 Monographs

(with B. Bekka et P. de la Harpe) Kazhdan's property (T), Cambridge Univ. Press, 2008.

7.4 Book edition

1. (with G. Arzhantseva) Limits of graphs in group theory and computer science, EPFL Press, 2009.

2. (with K. Dekimpe, P. Igodt) Discrete groups and geometric structures, Contemporary Math. 501, AMS, 2009.

7.5 Popularization papers

1. (with Martin Raussen) An interview with Beno Eckmann, Eur. Math. Soc. Newsl. 66, 31-32 (2007). Reprinted in "math.ch/100, Swiss Math Soc. 1910-2010", European Math. Soc. (2010), 389-401.

2. Imagination et mathématiques: deux exemples, Bulletin de la Société des Enseignants Neuchâtelois de Sciences no 35 (juillet 2008).

3. Elon Lindenstrauss, médaille Fields 2010; Tangente no 137, 2010.

4. Les Médailles Fields 2010, Losanges, n 12 - mars 2011 - p. 35-41.