

# Chapitre 1

## Curriculum Vitae

### Mihai Radu STANCU

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- Date of birth : 16 July 1976
- Citizenship : Romanian
- Languages : Romanian, French, English, Hungarian
- Civil status : Married to Veronika CZELLAR STANCU
- Professional address : LAMFA UMR 6140, Université de Picardie - Jules Verne, 33 rue St Leu, 80039 Amiens Cedex 1, France.
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### Education

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- PhD in Mathematics, Université de Lausanne, 19 July 2002
- Master in Mathematics, Université de Genève, 24 June 2000
- Bachelor Diploma in Mathematics, Université de Genève, 12 January 1998
- Programmer Certificate, Tudor Vianu High School, Bucharest, 15 June 1995

### Academic Positions

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- Associate Professor (LAMFA, UMR 6140, Université de Picardie), since November 2009
- Associate Researcher (LAMFA, UMR 6140, Université de Picardie), March - June 2009.
- Invited Professor (LAMFA, UMR 6140, Université de Picardie), October 2008.
- Lecturer (HEC, Paris), November 2008 - January 2009
- Postdoc in Algebra and Topology (Copenhagen University), Sep. 2007 - Aug. 2008
- Zassenhaus Assistant Professor (The Ohio State University), Sep. 2004 - Aug. 2007
- Invited Researcher and Lecturer (The Ohio State University), Apr. 2003 - Aug. 2004
- Teaching Assistant (Université de Genève), April 1998 - March 2003

## Distinctions and Fellowships

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- January - March 2008, MSRI, Berkeley,  
Invited Researcher ; Program : Representation Theory of Finite Groups.
- April - June 2005, Centre Bernoulli, Lausanne,  
Invited Researcher ; Program : Topology, Representation Theory, Cohomology.
- April 2003 - August 2004, The Ohio State University,  
National Swiss Foundation Fellowship ; Collaboration with Professor Markus Linckelmann  
on Broué Abelian Defect Conjecture and Fusion Systems.

## Research Interests

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- finite groups, modular representation theory, fusion systems,  $p$ -local groups ;
- Hochschild cohomology, category theory,
- functor cohomology, biset functors, double Burnside ring ;
- $p$ -completed classifying spaces of fusion systems and connection with algebraic topology ;

## Publications and Preprints

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- The extension algebra of some cohomological Mackey functors  
(with Serge Bouc)  
preprint 2010, submitted
- *On the composition product of saturated fusion systems*  
(with Kári Ragnarsson and Sejong Park) to appear Journal of Algebra
- *Tate's and Yoneda's Theorems on control of transfer for fusion systems*  
(with Antonio Diaz, Adam Glessner and Sejong Park),  
to appear in J. London Math. Soc.
- *Encoding fusion data in the double Burnside ring*  
(with Kári Ragnarsson)  
preprint 2010, submitted.
- *On the graded center of the stable category of a finite  $p$ -group*  
(with Markus Linckelmann),  
Journal of Pure and Applied Algebra, 214 (2010), no. 6, 950–959.
- *A characteristic subgroup for fusion systems*  
(with Silvia Onofrei)  
Journal of Algebra, 322 (2009), no. 5, 1705–1718
- *A reduction theorem for fusion systems of blocks*  
(with Radha Kessar)  
Journal of Algebra 318 (2008), no. 2, pp. 806-823
- *Conjectures on finite and  $p$ -local groups*  
(with Ron Solomon)  
L'Enseignement Mathématique 54 (2008), pp. 61-66

- *Realizing fusion systems*  
(with Ian Leary)  
Algebra and Number Theory 1 (2007), no. 1, pp. 17-34
- *Control of the fusion in fusion systems*  
Journal of Algebra and its Applications 5 (2006), no. 6, pp. 817-837
- *Almost all generalized extraspecial  $p$ -groups are resistant*  
Journal of Algebra 249 (2002), pp. 120-126.
- *Equivalent definitions of fusion systems*, preprint, 2003
- *On normal subsystems of fusion systems*, preprint, 2003
- *Propriétés locales des groupes finis*  
PhD thesis, July 2002

## Programming Skills

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- C, Fortran, Pascal, Scheme, Basic, Maple, Splus, GAP

## Participation to Conferences and Seminars

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- Representations of Finite Groups, MFO, 25-31 March 2012, Oberwolfach
- Conference "Interactions between topology and group theory", 9-11 November 2011, Strasbourg,  
*Transfer for Fusion Systems*
- Fusion Day, Universidad de Málaga, 29 June 2011, Málaga,  
*Fusion systems on pro- $p$  groups*
- Algebra/Topology Seminar, University of Copenhagen, 18 April 2011, Copenhagen,  
*Extensions of cohomological Mackey functors*
- Séminaire Chevalley, Paris 7, 28 October 2010, Paris,  
*Algèbre d'extensions de certains foncteurs de Mackey cohomologiques simples.*
- Algebra Seminar, NTU, 14 April 2010, Singapore,  
*The theory of fusion systems*
- Barcelona Topology Workshop, Universidad Autonoma de Barcelona, 18 December 2009, Barcelona,  
*Saturated fusion systems as idempotents in the double Burnside ring.*
- Séminaire de Topologie Alébrique, LAGA, Paris 13, 08 October 2009, Paris  
*Fusion dans l'anneau double de Burnside*
- Journées Fusion, LAMFA, Université de Picardie, 10-11 September 2009, Amiens,  
*Encoding fusion data in the double Burnside ring.*
- Séminaire de Théorie des groupes, EPFL, 23 June 2009, Lausanne  
*Fusion et l'anneau double de Burnside*
- Conference on Algebraic Topology, Group Theory and Representation Theory, 9-15 June 2009, Isle of Skye,  
*On the graded centre of a stable category of a finite  $p$ -group.*
- Representations of Finite Groups, MFO, 22 - 28 March 2009, Oberwolfach,

- On the graded center of the stable category of a finite  $p$ -group*
- Séminaire Chevalley, Université Paris 7, 8 January 2009, Paris,  
*Sur le centre gradué de la catégorie stable d'un  $p$ -groupe fini*
  - Workshop 'Local Methods in Fusion Systems', University of Copenhagen, 17 - 21 December 2008, Copenhagen,  
*Characteristic idempotents and fusion systems*
  - Séminaire d'algèbre, Université de Saint-Etienne, 18 November 2008, Saint-Etienne,  
*Le centre gradué de la catégorie stable d'un  $p$ -groupe fini*
  - Séminaire d'algèbre, Université de Picardie, 1 October 2008, Amiens,  
*Sur le centre gradué de la catégorie stable d'un  $p$ -groupe fini*
  - Algebra/Topology Seminar, University of Copenhagen, 10 August 2008, Copenhagen,  
*On the graded center of the stable module category in characteristic  $p$*
  - Modules and representation Theory, Babes-Bolyai University, 7 - 12 July 2008, Cluj,  
*A characteristic subgroup for fusion systems*
  - Algebra/Topology Seminar, University of Copenhagen, 15 Mai 2008, Copenhagen,  
*Schemes, sheaves of modules and cohomology*
  - Group Theory Seminar, Ohio State University, 19 March 2008, Columbus,  
*A characteristic subgroup for fusion systems at even prime*
  - Algebra Seminar, University of Washington, 4 March 2008, Seattle,  
*Fusion Systems via graphs of groups*
  - Postdoc Seminar MSRI, 22 February 2008, Berkeley,  
*Realizing Fusion Systems*
  - Séminaire d'algèbre, EPFL, 22 January 2008, Lausanne,  
*Systèmes de fusion et graphes de groupes*
  - Algebra Seminar, University of Aberdeen, 6 December 2007, Aberdeen,  
*Fusion system and graphs of groups*
  - Algebra/Topology Seminar, University of Copenhagen, 30 August 2007, Copenhagen,  
*Fusion systems inside infinite groups*
  - Conference 'Around Broué's conjectures', 28 Mai - 1 June 2007, Luminy,  
*Realizing fusion systems*
  - Zassenhaus Group Theory Conference, 16 - 18 March 2007, Saint Louis,  
*Searching for Resistant Groups*
  - Algebra Seminar, University of Washington, 21 January 2007, Seattle,  
*Fusion Systems of Blocks and Generalizations*
  - AMS National Meeting, 5 - 6 January 2007, New Orleans,  
*Control of Fusion and Normal Fusion Subsystems*
  - The 28th Ohio State-Denison Mathematics Conference, 19 - 21 Mai 2006, Columbus,  
*Fusion Systems of Blocks of Group Algebras*
  - Representations of Finite Groups, MFO, 26 March - 1 April 2006, Oberwolfach
  - Workshop on Group Actions and Representation Theory, 11 - 16 November 2005, Banff,  
*A Reduction Theorem for Fusion Systems of Blocks*
  - Groups, Homotopy and Configuration Spaces, 5 - 11 July 2005, Tokyo,  
*Reduction Theorems for Fusion Systems of Blocks*
  - Cohomology of Finite Groups : Interactions and Applications, MFO, 4 - 9 September 2005,

- Oberwolfach,
- Workshop on Topology, Representation Theory, Cohomology, Centre Bernoulli, EPFL, 4 - 10 April 2005, Lausanne. *Exotic Fusion Systems for Blocks*
  - Algebra Seminar, University of Georgia, 28 April 2004, Athens, *Control of the Fusion in Fusion Systems*
  - AMS Sectional Meeting, Ohio University, 26 - 27 March 2004, Athens, *Fusion Control in Fusion Systems*
  - Group Theory Seminar, Rutgers University, 24 March 2004, New Brunswick, *Resistant Groups*
  - Weekend Algebra Meeting, Florida Atlantic University, 7 - 9 November 2003, Boca Raton, *Fusion Systems over Finite  $p$ -Groups*
  - Séminaire d'Algèbre et de Théorie de Nombres, EPFL, 11 October 2003, Lausanne, *Contrôle de la  $p$ -fusion dans les groupes finis*
  - Schweizerische Mathematische Gesellschaft, Herbsttagung 18 - 19 September 2002, Davos, *Local Properties of Finite Groups*

## Scientific Responsibilities

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### Conference Organization

- 22-25 June 2010, Conference 'Group Representation Theory and Related Topics', Centre Bernoulli, EPFL, Lausanne, (with Jon Carlson, Nadia Mazza et Donna Testerman).
- 17-21 December 2008, Workshop 'Local Methods in Fusion Systems', University of Copenhagen, Copenhagen, (with Jesper Grodal).

### Local Seminar Co-organization :

- since 2009 : Work group in Algebra, Université de Picardie, Amiens
- 2008 : Algebra Seminar, University of Copenhagen, Copenhagen
- 2007 : Algebra Seminar, Ohio State University, Columbus

### Expert in Master and PhD Thesis Committee :

- March 2012, PhD Thesis, Biset functors, by Mélanie Baumann, EPFL, Lausanne.
- 4 June 2010, PhD Thesis, The structure of  $p$ -local compact groups, by Alex González de Miguel, UAB, Barcelona.
- 19 June 2009, PhD Thesis, Posets of subgroups, by David Bornand, EPFL, Lausanne.
- 12 September 2008, Master Thesis, Control of Fusion, by Lorna Henderson, University of Aberdeen, Aberdeen.
- 25 January 2008, Master Thesis, Les sous-groupes génétiques, by Mélanie Baumann, EPFL, Lausanne.

### Referee for Mathematical Journals :

- Journal of the London Mathematical Society,
- Journal of Algebra,
- Advances in Mathematics,

- Journal of Topology,
- Proceedings of the Edinburgh Mathematical Society,
- Journal of Group Theory,
- L'Enseignement Mathématique.