

CURRICULUM VITAE

PERSONAL DETAILS

First name : **Céline**

Last name : **RIGHI**

Date of birth : 25 January, 1980

Nationality : French

Professional address :

Universit de Poitiers

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EDUCATION

2004-2007 PhD Thesis, University of Poitiers, France.

Thesis advisor : Rupert Yu.

Title : *Characterization and enumeration of ad-nilpotent ideals of a parabolic subalgebra of a simple Lie algebra.*

Examiners : P. Papi, E. Sommers, T. Levasseur, P. Tauvel, R. Yu.

Laboratory : UMR 6086, LMA, Poitiers, France.

2003-2004 Diplôme d'Etude Approfondie (Pure Mathematics), University of Poitiers, France.

Essay on *Nilpotent ideals of a Borel subalgebra*, under the supervision of R. Yu.

2002-2003 Agrégation externe in Mathematics, France.

2001-2002 Master in Mathematics, University of Poitiers, France.

PROFESSIONAL EXPERIENCE

2010-2011 PRAG (lecturer) at the University of Poitiers.

Associate at the Mathematical laboratory (UMR 6086 CNRS) of the University.
"Khôlles" in Mathematics (supervisions) for MPSI "Classes Préparatoires" students, Lycé Camille Guérin, Poitiers, France.

- 2009-2010** Post-doctorat position “Assegno di ricerca”, University of Rome “La Sapienza”, Italy.
- 2007-2009** Attaché temporaire d’enseignement et de recherche (position with research activities and undergraduate teaching) at the University of Poitiers, France.
- February to May 2007** Pre-doctorate position from the european research network Liegrits at the University La Sapienza of Rome, Italy.
- 2004-2007** French University position “Allocataire moniteur” for PhD students with undergraduate teaching.
- 2003-2004** 48 hours of teaching in *Mathematics* for second year undergraduates in Biology, University of Poitiers, France.
“Khôlles” in Mathematics (supervisions) for MPSI and MP “Classes Préparatoires” students, Lycé Camille Guérin, Poitiers, France.

TEACHING ACTIVITIES

- 2010-2011** Teaching for undergraduate students.
- 2008-2009** *Series of functions and Riemann integration* for second year undergraduates in Mathematics.
Mathematics for algorithmic analysis for second year undergraduates in Computer Science.
- 2007-2008** *Hermitian and Euclidean spaces* for second year undergraduates in Mathematics.
Mathematics for third year undergraduates in Social Sciences and Arts.
Initiation to L^AT_EX for PhD students in Science.
- 2006-2007** *Multilinear algebra* for second year undergraduates in Mathematics.
Mathematics for third year undergraduates in Social Sciences and Arts.
Initiation to L^AT_EX for third year undergraduates in Mathematics.
- 2005-2006** *Integration and numerical series* for second year undergraduates in Mathematics.
Multilinear algebra for second year undergraduates in Mathematics.
Linear algebra for first year undergraduates in Mathematics.
- 2004-2005** *Integration and numerical series* for second year undergraduates in Mathematics.
Scientific calculation for third year undergraduates in Mathematics.
Office automation for first year undergraduates in Science.
- 2003-2004** *Mathematics* for second year undergraduates in Biology.
“Khôlles” in Mathematics for MPSI and MP “Classes Préparatoires” students.

RESPONSABILITIES

- 2010-2011** President of the L1 AES council of the University of Poitiers.
- 2008-2009** Co-organizer of the work group on “Algebraic groups” at the University of Poitiers, France.
- October 2005 to December 2007** Member of the council of the UMR 6086 CNRS, University of Poitiers, France.

VISITS

- Avril 2011** Invitation to the University La Sapienza, Rome, Italy.
1 February to 31 May 2007 Pre-doctorate position from the european research network Liegrits at the University La Sapienza of Rome, Italy.
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PUBLICATIONS

- *On the index of the quotient of a Borel subalgebra by an ad-nilpotent ideal*, avec R. Yu, Journal of Lie Theory 20 (2010), 49-63.
 - *Number of “udu” of a Dyck path and ad-nilpotent ideals of parabolics subalgebra of $sl_{l+1}(\mathbb{C})$* , Séminaire Lotharingien de Combinatoire 59 (2008), article B59c.
 - *Ad-nilpotent ideals of a parabolic subalgebra*, J. Algebra 319 (2008) 1555-1584.
 - PhD thesis *Characterization and enumeration of ad-nilpotent ideals of a parabolic subalgebra of a simple Lie algebra* (2007).
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PREPRINT

- *Enumeration of ad-nilpotent ideals of parabolic subalgebras for exceptional types*, arXiv math.RT/0804.2404v1 (2008).
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ARTICLES IN PREPARATION

- *Ad-nilpotent ideals of a Borel subalgebra of a Lie superalgebra*, en collaboration avec Pierluigi Möseneder Frajria et Paolo Papi.
 - *On H-sequences*.
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CONFERENCES WITH TALK

- 6-8 Jan. 2011** Colloque tournant *Representation theory*, University of Poitiers.
Talk : *Idaux ad-nilpotents d'une sous-algèbre de Borel d'une super-algèbre de Lie*.
- 26 March 2010** Rencontre Algèbre Poitiers Tours, University of Poitiers.
Talk : *Sur les H-sequences*.
- 28 Oct. 2009** Seminar Algebra and Geometry, University La Sapienza, Rome, Italy.
Talk : *On the index of the quotient of a Borel subalgebra by an ad-nilpotent ideal*.

- 27 May 2009** Workshop Lie-Toda, University of de Poitiers.
Talk : *On the index of the quotient of a Borel subalgebra by an ad-nilpotent ideal.*
- 27 Jan. 2009** Séminaire *Algèbre*, University of Saint-Etienne, France.
Talk : *Idéal ad-nilpotent d'une sous-algèbre parabolique d'une algèbre de Lie simple.*
- 2008-2009** Work group *Algebraic Groups* at the University of Poitiers, France.
Four talks : - *Algebraic varieties (I and II)*,
- *Dimension of an affine variety (I and II)*.
- 23 Oct. 2008** Séminaire *Algèbre*, University of Lyon 1, France.
Talk : *Idéal ad-nilpotent d'une sous-algèbre parabolique d'une algèbre de Lie simple.*
- 21 March 2008** Séminaire *Algèbres Enveloppantes*, University of Paris 7, France.
Talk : *Idéal ad-nilpotent d'une sous-algèbre parabolique d'une algèbre de Lie simple.*
- 7-9 Feb. 2008** Colloque tournant "Théorie des Représentations", University of Reims, France.
Talk : *Idéal ad-nilpotent d'une sous-algèbre parabolique d'une algèbre de Lie simple.*
- 8-12 Oct. 2007** Workshop "B-stable ideals and nilpotent orbits", Istituto Guido Castelnuovo, University La Sapienza of Rome, Italy.
Talk : *Ad-nilpotent ideals of a parabolic subalgebra.*
- 23-26 Sept. 2007** Séminaire Lotharingien de Combinatoire, n°59, Bertinoro, Italy.
Talk : *Ad-nilpotent ideals of a parabolic subalgebra and Dyck path.*
- 7 Feb. 2007** Seminar Algebra and Geometry, University La Sapienza, Rome, Italy.
Talk : *Ad-nilpotent ideals of a parabolic subalgebra.*
- 7 Dec. 2006** Seminar Groups, Algebras and Geometry, University of Poitiers, France.
Talk : *Ad-nilpotent ideals of a parabolic subalgebra.*
- 2005 - 2006** Participation in the work group GEGAL at the University of Poitiers, on *Simple groups and singularities.*
Talk : *Finite subgroups of $SL(2, \mathbb{C})$.*
- 2004 - 2005** Participation in the work group GEGAL at the University of Poitiers, on *Quivers and representations of quivers.*
Three talks : - *An introduction to quiver,*
- *Semi-invariant of quiver representations,*
- *Antichains and nilpotent ideals of a Borel subalgebra.*

CONFERENCES WITHOUT TALK

- 15-19 Sept. 2008** LMS/EPSRC short instructional course on *Algebraic groups and related topics*, Birmingham, United Kingdom.
- 18-20 Jan. 2007** Colloque tournant *Théorie des représentations*, Amiens, France.
- 17-22 Dec. 2006** Conference *Representation Theory of Lie Algebraic systems*, Weizmann Institute of Science, Tel Aviv, Israel.

- 20-24 Nov. 2006** Conference *Développement récent de la théorie des algèbres de Hall*, CIRM, Luminy, France.
- 22-27 May 2006** LIEGRITS conference *Lie days at Martina Franca*, Martina Franca, Italy.
- 9-27 Jan. 2006** *Advanced school and conference on representation theory and related topics*, ICTP, Trieste, Italy.
- 23-25 June 2005** *Journées Solistice d'été 2005 : Groupes*. Institut de Mathématiques de Jussieu, Paris, France.
- 9-13 May 2005** Graduate training program on *Cluster Algebras*, CIRM, Luminy, France.
- 13-15 Jan. 2005** Colloque tournant *Representation theory*, Grenoble, France.
- 14-28 May 2004** Graduate training program on *Quiver and geometric representations*, CIRM, Luminy, France.

REVIEWER

Reviewer for *Communications in Algebra* and *Linear Algebra and Its Applications*.

COMPETENCES ON COMPUTER SCIENCE

- Knowledge and use of L^AT_EX, Word, Excel, Powerpoint, Access and of the computation softwares GAP and Maple.
 - Experience in database, coding and algorithmic.
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LINGUISTIC ABILITIES

French Mother tongue

English Fluent

Italian Fluent