

## Curriculum Vitae - David Hernandez

Born on the 09/05/1978 at Evry (Essonne, France). Married, two children.

Professor, Université Paris Cité, CNRS, IMJ-PRG, F-75006 Paris, France.

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Research interests : Quantum groups, Infinite dimensional Lie algebras, Cluster algebras, Representation theory (interactions with algebraic geometry and mathematical physics).

### Positions, Fellowships, Prize :

2024 : invited speaker **European Congress of Mathematicians**.

2022 (first semester) : **Visiting Scholar at University of California, Berkeley**.

2020 : **France-Berkeley fund award** (joint award with E. Frenkel).

2015 - 2021 : **ERC Consolidator Grant**.

2015 - 2023 : **Institut Universitaire de France**.

2013 : **"Grand Prix Jacques Herbrand" of the French Academy of Science**.

2010- : **Professor, Université de Paris 7**. Research at the **CNRS Laboratory** : Institut de Mathématiques de Jussieu - Paris Rive Gauche. Promoted in 2014 ("Professeur de 1ère classe") and in 2018 ("Professeur de classe exceptionnelle").

2011- : Prime d'excellence Scientifique.

2009-2021 : Professor ("chargé de cours") at the Ecole Polytechnique (partial time).

2005-2010 : **Tenured CNRS researcher** ("chargé de recherche") : Ecole Polytechnique (2009-2010), Ecole Normale Supérieure Paris (2008-2009), Univ. Versailles (2005-2008).

ANR projects fellowships : "Géométrie et structures algébriques quantiques" (2008-2011), "Aspects analytiques et algébriques des équations aux q-différences" (2010-), "Combinatoire algébrique en théorie des représentations" (2012-).

2002-2005 : Research PhD fellowship of the Univ. Paris 6/ENS Paris.

### University Education

2009 : Habilitation à diriger des recherches (Paris 7) : *Autour des représentations des algèbres quantiques : géométrie, dualité de Langlands et catégorification des algèbres cluster*. Com. : H. Andersen, M. Duflo, E. Frenkel, M. Kashiwara, P. Littelmann, M. Rosso.

2001-2004 : Ph.D. (Univ. P. et M. Curie-Paris 6) : *Représentations des algèbres affinisées quantiques : q,t-caractères et produit de fusion*. Team : ENS-Paris. Advisor : M. Rosso.

1998-2002 : Student at ENS-Paris.

**Invited visits abroad (total : 24 months)** including : MSRI Berkeley, Cambridge Newton Institute, University of California Berkeley, Sun Yat-Sen University, Guangzhou, University La Sapienza Rome 1, RIMS Kyoto.

### **PhD Students supervised (PhD thesis defended)**

- 1) A. Bouayad (Paris 7, 2009-2013) : Quantum algebras and Langlands interpolation.
- 2) M. Mansuy (Paris 7, 2010-2013) : Representations of quantum toroidal algebras.
- 3) F. Pereira (U. Campinas, Brazil, 2010-2013, coadvisor A. Moura) : Classification of minimal affinizations of quantum groups.
- 4) H. Zhang (Paris 7, 2012-2015) : Representations of super quantum affine algebras.
- 5) L. Bittmann (Paris 7, 2016-2019) : Quantum Grothendieck rings, cluster algebras and quantum affine category  $\mathcal{O}$ .
- 6) E. Casbi (Paris 7, 2017-2020) : Categorification of cluster algebras and representations of quiver Hecke algebras.

### **Recent organization of seminars and conferences :**

- Workshop Bases for Cluster Algebras (BIRS Oaxaca, Mexico, 2022).
- **Thematic trimester Representation Theory, IHP** (Paris, January - April 2020).
- Conference Quantum Affine algebras (Washington DC, USA, 2018).
- Workshop on representation theory, CRM Montréal (Canada, 2014).
- Oberwolfach Sem. "Cluster algebras and representation theory", (MFO, Germany, 2013).
- Paris Algebra Seminar (2011 - ).

### **Main recent commitments**

- 2022 - : **Chair of the "Master 2 de Mathématiques Fondamentales" Paris Centre (UPC).**
- **Editorial Boards** : Journal de l'Ecole Polytechnique (2016 - ), Journal of Algebra (2017 - ), Bulletin des Sciences Mathématiques (2018 - ).
- **President of departement scientific council** (2016 - 2019).
- **Vice-president of the Mathematics committee of the "Conseil National des Universités" (2015 - 2019).**
- President of hiring committees (Paris 7 2013, 2015, 2021).
- Recent hiring committees : Paris 6 (2018), Polytechnique (2015), Nice (2014).
- Member of 15 PhD defense committees.
- "Examinateur titulaire" of the students hiring jury, Ecole Polytechnique (2010 - ).

**Invited series of lectures** : Boston (rescheduled), Shanghai (2020), Vienne (2017), Hamburg, Tokyo (2014), Oberwolfach (2013), ETH (2012), CIRM (2011), Berkeley (2008), Osaka (2007).

More than 100 talks, more than published 33 articles (Inventiones Mathematicae, JEMS, Duke Mathematical Journal, Compositio, Crelle...)