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Personal

French citizenship.

Employment

1995–98: Université de Strasbourg, instructor of mathematics.
1998–now: Centre National de la Recherche Scientifique, researcher (chargé de recherche).

Research interests

Geometric representation theory of classical groups, algebraic combinatorics.

Stays in research institutes abroad

University of California at Berkeley (USA), Spring 2000.
Bergische Universität Wuppertal (Germany), Spring and Fall 2002.
Mathematical Sciences Research Institute, Berkeley (USA), March-April 2008.
Université de Caen (France), Februar 2013.
OCAMI, Osaka (Japan), March 2016.
Centre de Recherche Mathématique, Montreal (Canada), August 1999.

Publications

(with F. Schmitt) *Classification of bicovariant differential calculi on quantum groups*, Comm. Math. Phys. **194** (1998), 71–86.

On the center of quantized enveloping algebras, J. Algebra **203** (1998), 244–260.

Another proof of Joseph and Letzter's separation of variables theorem for quantum groups, Transform. Groups **5** (2000), 3–20.

(with C. Kassel) *The Hall algebra of the category of coherent sheaves on the projective line*, J. Reine Angew. Math. **533** (2001), 207–233.

Canonical bases and the conjugating representation of a semisimple group, Pacific J. Math. **206** (2002), 25–37.

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(with C. Hohlweg) *A Solomon descent theory for the wreath products $G \wr \mathfrak{S}_n$*, Trans. Amer. Math. Soc. **360** (2008), 1475–1538.

(with M. Émery) *Peut-on « voir » dans l'espace à N dimensions ?*, L'Ouvert, **116** (2008), 1–8.

(with S. Gaussent) *On Mirković-Vilonen cycles and crystal combinatorics*, Represent. Theory **12** (2008), 83–130.

Weyl group action and semicanonical bases, Adv. Math. **228** (2011), 2874–2890.

(with J. Kamnitzer) *Preprojective algebras and MV polytopes*, Represent. Theory **16** (2012), 152–188.

(with S. Gaussent and J. Kamnitzer) *Réflexions dans un cristal*, C. R. Math. Acad. Sci. Paris **350** (2012), 999–1002.

(with T. Dunlap, J. Kamnitzer and P. Tingley) *Rank 2 affine MV polytopes*, Represent. Theory **17** (2013), 442–468.

(with J. Kamnitzer and P. Tingley) *Affine Mirković-Vilonen polytopes*, Publ. Math. Inst. Hautes Études Sci. **120** (2014), 113–205.

(with F. Chapoton, C. Hohlweg and H. Thomas) *Chains in shard lattices and BHZ posets.* J. Comb. **9** (2018), 309–325.

(with S. Riche) *Notes on the geometric Satake equivalence*, in *Relative Aspects in Representation Theory, Langlands Functoriality and Automorphic Forms*, CIRM Jean-Morlet Chair, Spring 2016, eds. V. Heiermann and D. Prasad, Lecture Notes in Mathematics vol. 2221, pp. 1–134, Springer, 2018.

(with J. Kamnitzer and A. Knutson) *The Mirković–Vilonen basis and Duistermaat–Heckman measures*, Acta Math. **227** (2021), 1–101.

(with A. Demarais) *Mirković–Vilonen basis in type A_1*, Represent. Theory **25** (2021), 780–806.

(with S. Gaussent and P. Littelmann) *Bases of tensor products and geometric Satake correspondence*, J. Eur. Math. Soc. (JEMS) **26** (2024), 919–983.