Curriculum Vitae
Geoffrey JANSSENS

PERSONAL DATA

CITIZENSHIP:	Belgian
EMAIL:	geoffrey.janssens@uclouvain.be
MOTHER TONGUE:	French, Dutch
FLUENT:	English, German

EMPLOYMENT AND EDUCATION

CURRENTLY	Postdoctoral Researcher, Université Catholique de Louvain-La-Neuve Fellowship: Chargé de Recherche du Fond de la Recherche Scientifique (FNRS) Member of the research team of Prof. Dr. Pedro Vaz
10/2021- (on leave till 9/2024)	Senior Postdoctoral Research Fellow, VUB Fellowship: Fonds voor Wetenschappelijk Onderzoek (FWO) Member of the research team of Prof. Dr. Kenny De Commer
3/2020 - 9/2020 & 3/2022 - 7-2022	Postdoctoral visiting researcher, Université de Paris Member of the research team 'Groupes, Représentations et Géométrie' working with Prof. Dr. Bernhard Keller.
6/2017-9/2021	Junior Postdoctoral Research Fellow, VUB Fellowship: Fonds voor Wetenschappelijk Onderzoek (FWO)
10/2014 - 5/2017	Ph.D. in Mathematics, Vrije Universiteit Brussel Title: Identities of Affine Algebras and their Asymptotic Behaviour Supervisor: Prof. Dr. Eric Jespers and Dr. Alexey Gordienko Grant: Fonds voor Wetenschappelijk Onderzoek (FWO)
10/2012 - 9/2014	Teaching assistant, Mathematics Department VUB
9/2010 - 6/2012	Master in Fundamental Mathematics, Vrije Universiteit Brussel Grade: Grootste Onderscheiding Thesis: "The Isomorphism problem for Integral Group Rings" Supervisor: Prof. Dr. Eric Jespers

SCIENTIFIC AWARDS

2016-3	KWG prize *The prize is yearly awarded at the Dutch National Mathematical Congress for mathematical merits during the PhD and ability to make subject accessible to non-specialists.*
2018-11	Reinhold Baer prize *The prize is annually granted jointly by the association AGTA and publisher Aracne for outstanding PhD thesis in group theory and its applications. Received a special mention.*

PUBLICATIONS AND PREPRINTS

Publications

(1) G. Janssens, *Primitive Central Idempotents of Rational Group Algebras*, J. Algebra Appl. 12 (2013), no. 1, 125–130

(2) A. Gordienko, G. Janssens, $\mathbb{Z}S_n$-*modules and polynomial identities with integer coefficients*, Int. J. Algebra Comput. 23 (2013), no. 8, 1925–1943

(3) E. Aljadeff, G. Janssens, Y. Karasik, *The Polynomial Part of the Codimension Growth of Affine PI algebras*, Adv. Math. 309 (2017), 487–511.

(4) A. Gordienko, G. Janssens, E. Jespers, *Semigroup graded algebras and graded PI-exponent*, Israel J. Math. 220 (2017), no.1, 387–452

(5) G. Janssens, E. Jespers, D. Temmerman, *Free products in the unit group of the integral group ring of a finite group*, Proc. Amer. Math. Soc. 145 (2017), no. 7, 2771–2783

(6) G. Janssens, *A Glimpse into the Asymptotics of Polynomial identities*, Nieuw Arch. Wiskd. (5) 18 (2017), no.1, 60–64

(7) F. Eisele, G. Janssens, T. Raedschelders, *A reduction theorem for τ-rigid modules*, Math. Z. 290 (2018), 3–4, 1377–1413

(8) G. Janssens, *Codimension Growth of Lie algebras with a generalized action*, Proc. Amer. Math. Soc. 150 (2022), no. 7, 2741–2754

(9) A. Bächle, G. Janssens, E. Jespers, A. Kiefer, D. Temmerman, *A dichotomy for integral group rings via higher modular groups as amalgamated products*, J. Algebra 604 (2022), 185–223

(10) A. Bächle, G. Janssens, E. Jespers, A. Kiefer, D. Temmerman, *Abelianization and fixed point properties of linear groups and units in integral group rings*, Math. Nachr. 296 (2023), no. 1, 8–56

Preprints and work in final phase

(11) F. Caenepeel, G. Janssens, *Glider Representation Rings with a view on distinguishing groups*, submitted (2020), 41 pp, arXiv:1911.11733

(12) G. Janssens, F. Jespers, O. Schnabel, *Units of twisted group rings and their correlations to classical group rings*, submitted (2023), 47 pp, arXiv:1811.12184

(13) G. Janssens, L. Margolis, *On integral decomposition of unipotent elements in integral group rings*, submitted (2023), 44 pp, arXiv:2307.14820

(14) G. Janssens, D. Temmerman, F. Thilmany, *Simultaneous ping-pong of finite subgroups of reductive groups*, available upon request (2023), 29 pp

(15) G. Janssens, U. Jezernik, *Rigidity of groups and associated quotient varieties related via cohomology ring*, available upon request (2023)

GAP-code

(i) F. Eisele, G. Janssens, T. Raedschelders, GAP for tau-tilting modules : code written for our paper, https://github.com/feisele/tau-tilting-article-code/blob/master/tautilting.g

INVITED TALKS

Invited talks at conferences and workshops

- "Cluster ensembles and the Fock-Goncharov conjectures", *Arbeitsgemeinschaft Cluster Algebras*, Oberwolfach, 13 October 2023

- "The representation theory bridge from the Bogomolov multiplier to class preservers", *Groups, Rings and the Yang-Baxter equation*, Blankenberghe, 20 June 2023

- "Filtrations of Group representations : a glider perspective", *Second Antipode Workshop*, ULB, Brussels, 13 September 2022

- "The Subgroup Congruence Problem and its role in group rings", *GTA: Gran Bilbao, conference,* Bilbao, Spain, 28 February 2019

- "The integral isomorphism problem, a helping hand from (geometric) group theory", *AGTA Workshop - Reinhold Baer Prize,* Napoli, Italy, 5 November 2018

- "A Glimpse into the asymptotics of Polynomial identities", *Conference Groups, Rings and the Yang-Baxter equation,* Spa, Belgium, 20 June 2017

- "Abstracte groepen, meer dan gewoon abstracte objecten", *Nationale Wiskunde Dagen,* Noordwijkerhout, Netherlands, 4 February 2017

- "Identites of Algebras and Groups and their Asymptotic behaviour", *BeNeLux Mathematical Congress,* University of Amsterdam, Netherlands, 23 March 2016

Invited talks at seminars and summerschools

- "An abundance of free products in $GL_n(D)$", *algebra seminar*, University of Ljubljana, 23 May 2023

- "The virtual structure problem for group rings: a helping hand by geometric group theory" *MSU-IIT Algebra Lecture Series* , philippines, online, 15 March 2023

- "Comparing additive and monoidal categorification via Quantum Affine Algebras" *Seminar on quantum groups,* Université de Louvain-La-Neuve, 19 October 2022

- "A polynomial identity perspective on the classification of finite dimensional algebras", *Séminaire Algébre et Topologie*, Université de Strasbourg, 11 October 2022

- "Des matrices qui communiquaient dans 2 langues étonnamment différentes (une histoire selon J. Tits)" *BSSM - Brussels Summer School Of Mathematics*, ULB, Brussels, 2 September 2022

- "On the Virtual Structure Problem for group rings", *Group Theory Seminar*, ICMAT, Madrid, 24 February 2022

- "Amalgamated Decompositions of Higher Modular Groups and their Elementary Part ", *Seminário de Álgebra*, University of Brasilia, online, 9 April 2021

- "A reduction theorem for τ-rigid modules: string algebras ringing", *Séminaire d'algèbre*, Institut Henri Poincaré (IHP), Paris, 16 March 2020

- "From Laws to Polynomial Identities: rewraping Lehmer conjecture ", *The Junior Seminar in Pure Mathematics,* KU Leuven, 11 December 2019

- "The integral isomorphism problem, a helping hand from (geometric) group theory", *Algebra seminar UPV/EHU,* Bilbao, Spain, 17 April 2018

- "Polynomial identities through the eye of Kemer", *Algebra seminar Haifa university,* Israel, 23 November 2017

- "(integral) Isomorphism Problem, a (geometric) group theory point of view",
  Algebra seminar Technion, Haifa, Israel, 9 November 2017

- "A glimpse into the asymptotics of polynomial identities",
  Antwerp algebra seminar, University of Antwerp, Belgium, 28 April 2017

- "A glimpse into the asymptotics of polynomial identities",
  Oberseminar Gruppen und Geometrie, Bielefeld, Germany, 19 October 2016

- "Growth of Algebras and Groups", *Junior Seminar in Analytic, Geometric and Topological Group Theory,* Louvain-La-Neuve, Belgium, 29 January 2015

SUPERVISION

Supervision of Ph.D. students

2015 - 2019	Doryan Temmerman, *Fixed point properties for low rank linear groups over orders and applications to integral group rings*, co-supervisor: Eric Jespers Defended on 24th of May 2019

Supervision of Bachelor thesis

2015 - 2016	Charlotte Verwimp, *Free groups and the Growth of Groups*
2015 - 2016	Maurits van Roozendaal, *The McKay Correspondence*
2019 - 2020	Maxime Wybouw, S_n *through the looking glass en* GL_d *als de Mad Hatter - Shur-Weyl dualiteit*
2019 - 2020	Julie Symons, *How abelian can a finite group be? : The Joseph Conjectures*
2020 - 2021	Robynn Corveleyn, *Lie methods in Group Theory : On Wilson and Zelmanov's GI-PI theorem*
2021 - 2022	Wannes Malfait, *Taking commuting probabilities to infinity and beyond*
2021 - 2022	Marthe Ballon, *Buchbergers algorithm and optimization with Machine Learning*
2021 - 2022	Andreas Lorrain, *Van topologie naar combinatoriek : een introductie tot simplicale verzamelingen*
2021 - 2022	Charlotte Roelants, *A trip to the tropicals: solving Hilbert's 16th problem using Tropical geometry*

Supervision of pedagogical projects

2013 - 2014	Ilse Spruyt, Onderwijsstage Analyse I
2016 - 2017	Estelle Osman, Onderwijsstage Groepentheorie

Fellowships

2014-10	Aspirant Fellowship, Research Foundation Flanders (FWO)
	Personal four year PhD research grant from the national science foundation (ranked 2nd)
2015-10	FWO Aspirant Fellowship for Doryan Temmerman (joint with Eric Jespers)
	PhD research grant for my doctoral student D. Temmerman.
2018-10	Post-doctoral Fellowship, Research Foundation Flanders (FWO)
	Personal three year post-doctoral grant (ranked 1st)
2020-02	Grant of the FWO for a long research stay abroad
	6732 euro for my long visit to Prof. B. Keller at Université de Paris
2021-10	Senior Post-doctoral Fellowship, Research Foundation Flanders (FWO)
	Personal three year post-doctoral grant
2021-10	Chargé de Recherches, Fund for Scientific Research (F.R.S.–FNRS)
	Personal three year post-doctoral grant
2022-02	Grant of the FWO for a long research stay abroad
	5148 euro for a long visit to Prof. B. Keller at Université Paris cité

Commissions

2021-2023	Academische raad VUB
	Representant of all OAP (=phd and post-docs) of the university inside the academic counsel
2021-2023	Universiteitsraad VUB
	Representant of the OAP of Faculty of Sciences inside the university counsel
2023-2024	Assemblée de la Transition UCLouvain
	group of 60 members from all structures of UCL selected to analyse the transition plan
2023-2024	Tuchtcommissie
	representant of all OAP of VUB inside the disciplinary committee
2013-2017	Departementsraad
	Representant of the teaching assistants inside VUB Math department counsel
2015-2017	Faculteitsraad
	Mathematics representant inside VUB Science and Bio-engineering faculty counsel

Research visits and stays

2022-4/7	Université de Paris (Diderot), France, hosted by Bernhard Keller (four months)
2021-8	Oberwolfach, Germany, Research in Paris with Doryan Temmerman (two weeks)
2021-11 & 2022-2 & 2023-1	ICMAT (Madrid), Spain, hosted by Leo Margolis (six weeks)
2021-6/7	Université de Paris (Diderot), France, hosted by Bernhard Keller (one month)
2018-4 & 2018-12 & 2019-3	University of the Basque Country, Spain, hosted by Urban Jezernik (seven weeks)
2018-3	University of Glasgow, hosted by Theo Raedschelders (one week)
2017-10/11	Techion- Israel institute of Technology, hosted by Eli Aljadeff (two months)
2017-6	City Univeristy London, hosted by Florian Eisele (one week)
2016-10	University of Bielefeld, hosted by Ann Kiefer (one week)
2016-2	City Univeristy London, hosted by Florian Eisele (one week)
2015-2	University of Bonn, hosted by Theo Raedschelders (one week)
2014-11	University of Stuttgart, hosted by Leo Margolis (one week)