

Curriculum Vitae

Javier J. Gutiérrez

Department of Algebra and Topology

Radboud Universiteit Nijmegen

Heyendaalseweg 135

6525 AJ, Nijmegen

April, 2015

Personal data

Surname **Gutiérrez**
Name Javier José
Date of birth 22/03/1976
Nationality Spanish
e-mail j.gutierrez@math.ru.nl
Webpage <http://www.math.ru.nl/~gutierrez>

Research lines

Algebraic topology (localization, stable homotopy theory, model categories); Operads (coloured operads, localization of structures, higher operads); Triangulated categories; Category theory (higher categories); Homological algebra.

Specialization 121007; 120103; 120107; 121006
(UNESCO cod.)

Education

- 10/09/2004 **Ph.D. in Mathematics**, *Universitat de Barcelona*.
(*cum laude*, European Doctorate)
Title: Localization and preservation of structures in stable homotopy
Advisor: Carles Casacuberta
- 30/07/2001 **Diploma of Advanced Studies**, *Universitat Autònoma de Barcelona*.
- 30/05/2001 **Master's Thesis**, *Universitat Autònoma de Barcelona*.
Title: Homotopical localization of module spectra
Advisor: Carles Casacuberta
- 30/07/1998 **Degree in Mathematics**, *Universidad de La Rioja*.

Languages

Spanish **Mother tongue**
English **Fluent**
Catalan **Fluent**
Dutch **A1 level**

Professional and academic experience

- 2013–present **Postdoctoral Researcher**, *Radboud Universiteit Nijmegen*.
Department of Algebra and Topology
- 2011–2012 ***Paternity leave***.
- 2010–2011 **SGR Postdoctoral Researcher**, *Universitat de Barcelona*.
Departament D'Àlgebra i Geometria
- 2007–2009 **Beatriu de Pinós Postdoctoral Fellow**, *Centre de Recerca Matemàtica*.
- 2006–2007 **Lecturer (non-tenured)**, *Universitat de Barcelona*.
Departament d'Àlgebra i Geometria
- 2005–2006 **MEC Postdoctoral Fellow**, *Universiteit Utrecht*.
Department of Mathematics

- 2003–2005 **Teaching Assistant (non-tenured)**, *Universitat de Barcelona*.
Departament d'Àlgebra i Geometria
- 2003 **Research Associate**, *Universitat de Barcelona*.
Departament d'Àlgebra i Geometria
- 1999–2002 **FPI Predoctoral Fellow**, *Universitat Autònoma de Barcelona*.
Departament de Matemàtiques
- 1998–1999 **Research Associate**, *Universidad de La Rioja*.
Departamento de Matemáticas y Computación

Participation in research projects (group grants)

- 2014–2016 **Enhanced homotopy**.
Spanish Ministry of Economy and Competitiveness
- Reference MTM2013-42178-P — (52.789 euros)
- Coordinator Carles Casacuberta
- 2011–2013 **Higher homotopy in algebra and geometry**.
Spanish Ministry of Economy and Competitiveness
- Reference MTM-2010-15831 — (111.804 euros)
- Coordinator Carles Casacuberta
- 2010–2013 **Research group in algebraic topology and geometry**.
Catalan Government
- Reference 2009SGR-119 — (50.960 euros)
- Coordinator Carles Casacuberta
- 2008–2010 **Higher homotopy structures**.
Spanish Ministry of Science and Education
- Reference MTM2007-63277 — (107.085 euros)
- Coordinator Carles Casacuberta
- 2006–2008 **Grup de topologia algebraica de Barcelona**.
Catalan Government
- Reference 2005SGR-00606 — (42.200 euros)
- Coordinator Jaume Agudé
- 2005–2007 **Localizations in simplicial model categories**.
Spanish Ministry of Science and Education
- Reference MTM2004-03629 — (80.040 euros)
- Coordinator Carles Casacuberta
- 2002–2004 **Universal constructions in stable and unstable homotopy**.
Spanish Ministry of Science and Technology
- Reference BFM2001-2031 — (39.907 euros)
- Coordinator Carles Casacuberta
- 2000–2003 **Modern Homotopy Theory**.
European Commission (Research Training Network)
- Reference ECC HPRN-CT-1999-00119 — (1.311.00 euros)
- Coordinator John R. Hubbuck (University of Aberdeen)
- 1999–2004 **Grup consolidat de topologia algebraica**.
Catalan Government
- Reference 1998SGR-00118; 2000SGR-00132; 2001SGR-00426
- 1998–2001 **Homological and homotopical localizations**.
General Directorate of Higher Education
- Reference PB97-0202 — (12.000 euros)
- Coordinator Carles Casacuberta

Individual grants

- 2010–2011 **SGR Postdoctoral Grant**, *Catalan Government*.
Universitat de Barcelona
- 2007–2009 **Beatriu de Pinós Postdoctoral Grant**, *Catalan Government*.
Centre de Recerca Matemàtica
- 2008 **NWO Visitors travel grant**, *Netherlands Org. for Scientific Research*.
Universiteit Utrecht
- 2005–2006 **MEC Postdoctoral Grant**, *Spanish Ministry of Science and Education*.
Universiteit Utrecht
- 2000–2002 **Travel grants for short stays**, *Spanish Ministry of Science and Education*.
Hebrew Univ. Jerusalem, Univ. of Aberdeen, Isaac Newton Inst. for Math. Sci.
- 1999–2002 **FPI Ph.D. Grant**, *Spanish Ministry of Science and Education*.
Universitat Autònoma de Barcelona

Publications

Published papers

- Authors C. Casacuberta, **J. J. Gutiérrez** and J. Rosický
Title **A generalization of Ohkawa's theorem**
Reference *Compos. Math.* **150** (2014), 893–902
- Authors C. Casacuberta, **J. J. Gutiérrez** and J. Rosický
Title **Are all localizing subcategories of stable homotopy categories coreflective?**
Reference *Adv. Math.* **252** (2014), 158–184
- Authors U. Buijs, **J. J. Gutiérrez** and A. Murillo
Title **Derivations, the Lawrence-Sullivan interval and the Fiorenza-Manetti mapping cone**
Reference *Math. Z.* **273** (2013), no. 3-4, 981–997
- Authors **J. J. Gutiérrez**, O. Röndigs, M. Spitzweck and P. A. Østvær
Title **Motivic slices and coloured operads**
Reference *J. Topol.* **5** (2012), 727–755
- Author **J. J. Gutiérrez**
Title **Cellularization of structures in stable homotopy categories**
Reference *Math. Proc. Cambridge Phil. Soc.* **153** (2012), 399–418
- Author **J. J. Gutiérrez**
Title **Transfer of algebras over operads along Quillen adjunctions**
Reference *J. London Math. Soc.* **86** (2012), 607–625
- Authors **J. J. Gutiérrez** and R. M. Vogt
Title **A model structure for coloured operads in symmetric spectra**
Reference *Math. Z.* **270** (2012), 223–239
- Authors **J. J. Gutiérrez**, A. Lukacs and Ittay Weiss
Title **Dold-Kan correspondence for dendroidal abelian groups**
Reference *J. Pure Appl. Algebra* **215** (2011), no. 7, 1669–1687

Authors C. Casacuberta, **J. J. Gutiérrez**, I. Moerdijk and R. M. Vogt
Title **Localization of algebras over coloured operads**
Reference *Proc. London Math. Soc.* **101** (2010), no. 1, 105–136

Author **J. J. Gutiérrez**
Title **Homological localizations of Eilenberg–Mac Lane spectra**
Reference *Forum Math.* **2** (2008), vol. 22, 349–356

Author **J. J. Gutiérrez**
Title **Strict modules and homotopy modules in stable homotopy**
Reference *Homol. Homotopy Appl.* **7** (2005), no. 1, 39–49

Authors C. Casacuberta and **J. J. Gutiérrez**
Title **Homotopical localizations of module spectra**
Reference *Trans. Amer. Math. Soc.* **357** (2005), no. 7, 2753–2770

Accepted for publication

Author **J. J. Gutiérrez**
Title **On solid and rigid monoids in monoidal categories**
Reference To appear in *Appl. Cat. Struct.* (DOI: 10.1007/s10485-014-9370-y)

Authors U. Buijs and **J. J. Gutiérrez**
Title **Homotopy transfer and rational models for mapping spaces**
Reference To appear in *J. Homotopy Relat. Struct.* (DOI: 10.1007/s40062-015-0107-x)

Book chapters

Author **J. J. Gutiérrez**
Title **Lectures on dendroidal sets** (notes based on lectures by I. Moerdijk)
Reference I. Moerdijk and B. Toën, *Simplicial Methods for Operads and Algebraic Geometry*. Adv. Courses Math. CRM Barcelona, 1–118, Birkhäuser, 2010

Preprints

Authors D. Ara, M. Groth and **J. J. Gutiérrez**
Title **On automorphisms of the $(\infty, 1)$ -category of ∞ -operads**
Reference *Submitted*, preprint arXiv:1312.4994

Authors **J. J. Gutiérrez** and C. Roitzheim
Title **Bousfield localisations along Quillen bifunctors and applications**
Reference *Submitted*, preprint arXiv:1411.0500

In preparation

Authors **J. J. Gutiérrez** and D. White
Title **Encoding equivariant commutativity via operads**

Authors **J. J. Gutiérrez**, O. Röndigs, M. Spitzweck and P. A. Østvær
Title **On functorial (co)localizations of algebras over operads**

Author **J. J. Gutiérrez**
Title **Morita homotopy theory for enriched categories**

Presentations in congresses, workshops and meetings

- Title **On autoequivalences of the $(\infty, 1)$ -category of ∞ -operads.**
Homotopical Algebra Summer Days
- Place Institut de Matemàtica de la Universitat de Barcelona (Spain), 2014
- Title **On autoequivalences of the $(\infty, 1)$ -category of ∞ -operads.**
Category Theory 2014
- Place Cambridge University (United Kingdom), 2014
- Title **On solid and rigid monoids in monoidal categories.**
95th Peripatetic Seminar on Sheaves and Logic
- Place Masaryk University Brno (Czech Republic), 2014
- Title **On Ohkawa's theorem for combinatorial model categories.**
Higher Geometric Structures along the Lower Rhine III
- Place Universiteit Utrecht (The Netherlands), 2013
- Title **Solid and rigid monoids in monoidal categories.**
Homotopy Day
- Place Universitat de Barcelona (Spain), 2013
- Title **On Ohkawa's theorem for combinatorial model categories.**
Homotopical Methods in Algebra, Geometry and Topology
- Place Universitat Politècnica de Catalunya (Spain), 2013
- Title **A Dold-Kan type theorem for dendroidal sets.**
Higher Homotopy in Barcelona
- Place Universitat de Barcelona (Spain), 2012
- Title **Coreflective semilocalizing subcategories in triangulated categories with models.**
Large-Cardinal Methods in Homotopy
- Place Universitat de Barcelona (Spain), 2011
- Title **Generalized Ohkawa's theorem.**
Joint Mathematical Conference CSASC 2011
- Place University of Krems (Austria), 2011
- Title **Model structures for operads in symmetric spectra.**
Symposium on Homotopical Algebra and Categories
- Place Universidad de Murcia (Spain), 2011
- Title **Ohkawa's theorem for combinatorial model categories.**
Higher Homotopy in Seville
- Place Universidad de Sevilla (Spain), 2011
- Title **Transfer of algebras over operads along Quillen derived adjunctions.**
Workshop on Higher Homotopy
- Place London Metropolitan University (United Kingdom), 2011
- Title **Cellularization of structures in stable homotopy categories.**
Joint Mathematical Conference CSASC
- Place Charles University, Prague (Czech Republic), 2010
- Title **Are all localizing subcategories of stable homotopy categories coreflective?**
International Conference on K -Theory and Homotopy Theory
- Place Universidad de Santiago de Compostela (Spain), 2008

- Title **A model structure for coloured operads in symmetric spectra.**
Workshop on categories and its applications (SECA V)
- Place Pontevedra (Spain), 2008
- Title **Algebras over coloured operads and localization functors.**
HOCAT 2008. Homotopy Structures in Geometry and Algebra; Derived Categories, Higher Categories
- Place Centre de Recerca Matemàtica, Barcelona (Spain), 2008
- Title **Homological localizations of Eilenberg–Mac Lane spectra.**
II Young Topologists' Meeting
- Place Le Châtel (Switzerland), 2008
- Title **Localization of algebras over coloured operads, (Poster).**
XIV Topology Meeting
- Place Universidad de Granada (Spain), 2007
- Title **Localization of algebras over coloured operads.**
I Young Topologists' Meeting
- Place Le Châtel (Switzerland), 2007
- Title **Localization of algebras over operads.**
First Czech-Catalan Conference in Mathematics
- Place Charles University, Prague (Czech Republic), 2005
- Title **Localization functors preserve algebras over operads, (Poster).**
XI Topology Meeting
- Place Universidad de Barcelona (Spain), 2004
- Title **Localization in simplicial model categories.**
Workshop on categories and its applications (SECA I)
- Place Universidad de La Rioja (Spain), 2003
- Title **Homotopy categories of strict and homotopy modules, (Poster).**
2002 Barcelona Conference on Algebraic Topology
- Place Institut d'Estudis Catalans, Barcelona (Spain), 2002
- Title **Homotopical localizations of module spectra.**
EuroPhD Topology Conference
- Place Universitat Autònoma de Barcelona (Spain), 2001

Other presentations in seminars and colloquia

- Title **On autoequivalences of the $(\infty, 1)$ -category of ∞ -operads.**
Kollegseminar (Graduiertenkolleg Kombinatorische Strukturen in der Geometrie)
- Place Universität Osnabrück, 2014
- Title **On (co)localization of algebras over operads.**
Algebraic Topology Seminar
- Place Radboud Universiteit Nijmegen, 2013
- Title **Localization and preservation of structures in stable homotopy.**
Kolloquium Sommersemester 2012
- Place Institut für Mathematik, Universität Osnabrück, 2012
- Title **A generalization of Ohkawa's theorem for combinatorial model categories.**
Topology Seminar
- Place Universitat Autònoma de Barcelona, 2011
- Title **Algebras over coloured operads and (co)localization functors.**
Topology Seminar
- Place University of Oslo, 2010

- Title **Localization and preservation of structures in stable homotopy.**
Staff Colloquium
- Place Universiteit Utrecht, 2006
- Title **Strict modules and homotopy modules in stable homotopy.**
Geometry and Topology Seminar
- Place Universiteit Utrecht, 2006
- Title **Homotopy localizations of Eilenberg-Mac Lane spectra.**
Transpennine Topology Triangle
- Place University of Leicester, 2003
- Title **Homotopical localizations of module spectra.**
Topology Seminar
- Place University of Aberdeen, 2001

Other conferences attended

- 2011 Topological Quantum Field Theories, Universitat de Barcelona, IMUB (Spain)
- 2011 Categorical Aspects in Geometry and Topology, Universidad de Salamanca (Spain)
- 2011 XIX Topology Meeting, Universidad de Sevilla (Spain).
- 2010 Homotopy methods in geometry and algebra, Universidad de Sevilla (Spain).
- 2010 Thirteenth NRW Topology Meeting, University of Osnabrück (Germany).
- 2008 Categorical Groups, Universitat de Barcelona (Spain).
- 2008 Higher Operads Week, Centre de Recerca Matemàtica, Barcelona (Spain).
- 2008 Workshop on Topological and Differentiable Stacks, Centre de Recerca Matemàtica, Barcelona (Spain).
- 2008 Workshop on Algebra and Geometry of Groups and Classifying Spaces, Centre de Recerca Matemàtica, Barcelona (Spain).
- 2008 Advanced Course on Simplicial Methods in Higher Categories, Centre de Recerca Matemàtica, Barcelona (Spain).
- 2007 Workshop on Derived Categories, Centre de Recerca Matemàtica, Barcelona (Spain).
- 2007 IV Seminar on Categories and Applications, Universitat Autònoma de Barcelona (Spain)
- 2006 International Congress of Mathematics 2006, Madrid (Spain).
- 2006 Alpine Operad Workshop, Villars (Switzerland).
- 2005 Modern Foundations for Stable Homotopy Theory, Oberwolfach (Germany).
- 2005 Workshop in Homotopical Localization and the Calculus of Functors, Banff (Canada).
- 2004 Workshop on Structured Ring Spectra, Max Planck Institute for Mathematics, Bonn (Germany).
- 2003 Fields Institute Program on Homotopy Theory and its Applications, University of Western Ontario (Canada).
- 2003 First Joint Meeting RSME-AMS, Universidad de Sevilla (Spain).
- 2003 Homotopy Theory Network Conference, University of Aberdeen (United Kingdom).
- 2002 K -theory and arithmetic, Isaac Newton Institute, Cambridge (United Kingdom).
- 2002 Homotopy theory of geometric categories, Isaac Newton Institute, Cambridge (United Kingdom).
- 2002 Axiomatic and enriched homotopy theory, Isaac Newton Institute, Cambridge (United Kingdom).
- 2002 Workshop on Structured Ring Spectra and Applications, University of Glasgow (United Kingdom).

- 2001 Calculus of Functors, University of Aberdeen (United Kingdom).
 2001 Advanced Course on Proper Group Actions, Centre de Recerca Matemàtica, Barcelona (Spain).

Stays in internationally recognized centres

Guest stays

- 2015 Aix-Marseille Université (France)
 Topic Geometric realization of dendroidal sets via orientals of trees
 Length 1 week
- 2014 Institut für Mathematik der Universität Osnabrück (Germany)
 Topic Functorial colocalization of algebras and applications to motivic homotopy
 Length 1 week
- 2014 University of Kent (United Kingdom)
 Topic Bousfield localisations along Quillen bifunctors and applications
 Length 1 week
- 2013 Mathematical Institute of the University of Barcelona (Spain)
 Topic Ohkawa's theorem and model categories
 Length 1 week
- 2013 Isaac Newton Institute, Cambridge (United Kingdom)
 Topic Grothendieck–Teichmüller groups, deformation and operads
 Length 2 weeks
- 2010 University of Oslo (Norway)
 Topic Motivic homotopy theory and operads
 Length 1 week
- 2010 Universiteit Utrecht (The Netherlands)
 Topic Homotopy theory of dendroidal sets
 Length 2 months
- 2009 Universiteit Utrecht (The Netherlands)
 Topic Dold-Kan correspondence for dendroidal sets
 Length 1 week
- 2008 Universiteit Utrecht (The Netherlands)
 Topic Simplicial methods in higher categories
 Length 1 month

Postdoctoral stays

- 2007 Centre de Recerca Matemàtica, Barcelona (Spain)
 Topic Coloured operads and localization functors in enriched categories
 Length 24 months
- 2005 Universiteit Utrecht (The Netherlands)
 Topic Localization of operads in monoidal categories
 Length 12 months

Predocctoral stays

- 2003 University of Western Ontario (Canada)
 Topic Model categories and operads
 Length 1 month

- 2003 University of Sheffield (United Kingdom)
 Topic Strict and homotopy modules
 Length 2 months
- 2002 Isaac Newton Institute, Cambridge (United Kingdom)
 Topic Ph.D. preparation
 Length 2 months
- 2001 University of Aberdeen (United Kingdom)
 Topic Ph.D. preparation
 Length 2 months
- 2000 Hebrew University of Jerusalem (Israel)
 Topic Ph.D. preparation
 Length 1 month

Teaching experience

Radboud Universiteit Nijmegen

- 2014–2015 **Algebraic Topology**, *Dutch master math program*, (4 credits).
 Homotopy of maps, homotopy groups, CW-complexes
- Algebraic Topology II**, *Radboud master program*, (4 credits).
 Topological K -theory

Centre de Recerca Matemàtica and Universitat de Barcelona

- 2008–2011 **Organization of research seminars**,
 (My position during these years was in a research center with no teaching duties).
 Topological quantum field theories, Differential graded categories, Higher categories

Universitat de Barcelona

- 2006–2007 **Differential geometry of curves and surfaces**, *Third year course in Mathematics*,
 (4.5 credits).
 Curves, surfaces, intrinsic geometry
- Algebra**, *First year course in Computer Systems*, (4.5 credits).
 Linear algebra, vector spaces, determinants, endomorphism theory
- Discrete Mathematics**, *First year course in Computer Systems*,
 (3 credits).
 Modular arithmetic, combinatorics, graph theory
- 2004–2005 **Differential geometry of curves and surfaces**, *Third year course in Mathematics*,
 (4.5 credits).
 Curves, surfaces, intrinsic geometry
- Low-dimensional topology**, *Third year course in Mathematics*,
 (3 credits).
 Knot theory
- Discrete Mathematics**, *First year course in Computer Systems*,
 (4.5 credits).
 Modular arithmetic, combinatorics, graph theory
- 2003–2004 **Differential geometry**, *Fourth year course in Mathematics*, (2 credits).
 Differentiable manifolds, vector fields, riemannian geometry
- Discrete Mathematics**, *First year course in Computer Systems*, (4.5 credits).
 Modular arithmetic, combinatorics, graph theory
- Algebra**, *First year course in Computer Systems*, (1 credit).
 Linear algebra, vector spaces, determinants, endomorphism theory

- 2002–2003 **Differential geometry**, *Fourth year course in Mathematics*, (4.5 credits).
Differentiable manifolds, vector fields, riemannian geometry
- Differential geometry of curves and surfaces**, *Third year course in Mathematics*, (3 credits).
Curves, surfaces, intrinsic geometry
- Linear algebra**, *First year course in Mathematics*, (1 credit).
Systems of linear equations, determinants, endomorphism theory

Utrecht Universiteit

- 2005–2006 **Homological algebra**, *Master's Programme*.
Module theory, chain complexes, cohomology of groups, abelian categories

Universitat Autònoma de Barcelona

- 2001–2002 **Algebra I**, *Third year course in Mathematics*, (4.5 credits).
Groups, rings, modules
- Topology II**, *Fourth year course in Mathematics*, (1.5 credits).
Fundamental group, cellular complexes, covering spaces
- 2000–2001 **Algebra II**, *Fourth year course in Mathematics*, (1.5 credits).
Quadratic forms, abelian groups, endomorphism theory
- Topology I**, *Third year course in Mathematics*, (1.5 credits).
Topological spaces, separation and countability, compactness, connectedness

Universidad de La Rioja

- 1999–2000 **Basic mathematics**, *First year course in Business and Administration*, (6 credits).
Linear algebra, matrices, systems of equations, determinants
- Mathematics I**, *First year course in Industrial Engineering*, (4.5 credits).
Differential and integral calculus, numerical methods

Other merits

Research awards and prizes

- 2007 Josep Teixidor Prize for the best Ph.D. thesis in Mathematics (Institut d'Estudis Catalans)

Teaching accreditations (Catalan University Quality Assurance Agency)

- 2012 Tenured assistant professor
- 2008 Tenured-track lecturer
- 2007 Collaborating lecturer

Organizational activities

- 2013 Member of the organizing committee of the special session on Algebraic Topology and Geometry, 2nd Congress of Young Researchers RSME, Universidad de Sevilla (Spain)
- 2012 Member of the organizing committee of the Homotopical Algebra Summer Day, Universitat de Barcelona (Spain)
- 2012 Member of the organizing committee of the Higher Homotopy in Barcelona Workshop, Universitat de Barcelona (Spain)
- 2007 Member of the organizing committee of the Barcelona Topology Workshop 2007, Universitat Autònoma de Barcelona (Spain)
- 2004 Member of the organizing committee of the XI Spanish Topology Meeting, Universidad de Barcelona (Spain)

Activities in scientific services

2011–2012 Member of the Editorial Board of the Centre de Recerca Matemàtica
Referee for *Appl. Categ. Structures* and *Proc. Sympos. Pure Math.*
Reviewer for Mathematical Reviews