Gabriel Navarro

CURRICULUM VITAE

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PERSONAL:

Born: December 29, 1964 in Valencia, SPAIN.
Citizenship: Spanish
Home Address: Jose Faus 19, 46023 Valencia, SPAIN

EDUCATION:

Ph.D. Universitat de València, SPAIN 1989
M.A. Universitat de València, SPAIN 1987

CURRENT POSITION:

Catedrático de Algebra, Universitat de València, 2005–present.

AREA OF SPECIALIZATION:

Representation Theory of Finite Groups

EMPLOYMENT:

Mathematical Sciences Research Institute, Berkeley, 2018.
Mathematical Sciences Research Institute, Berkeley, Graduate Summer School, 2016.
University of Southern California, Researcher, Spring 2014.
Ohio State University, Distinguished Long Term Visitor, Spring 2013.
University of Wisconsin, Visiting Professor, Spring Semester 2011.
Mathematical Sciences Research Institute, Berkeley, Researcher, Spring 2008.
Universitat de València, SPAIN, Catedrático de Algebra, 2005–present.
Universitat de València, SPAIN, Profesor de Universidad, 1994–2005.
University of Florida, Visiting Professor, 2004-2005.
University of Wisconsin, Visiting Professor, 2000-2001.
Ohio University, Visiting Professor, Spring Quarter 1996.

HONORS, AWARDS:

Simons Fellow, Newton Institute, Cambridge, 2022.
Plenary Speaker: Clay Research Conference, Modular Representation Theory (Oxford, UK), 2019.
Fellow of the American Mathematical Society, Class of 2015.
Plenary Speaker: John Conway Conference (Princeton, US), 2015.
Académico correspondiente de la Real Academia de Ciencias Española, (Spanish Royal Academy of Sciences), 2014.
First Distinguished EMS Speaker, European Mathematical Society, 2011.
Plenary Speaker: 50 Years of Chevalley's Seminar (CIRM, Marseille, France), 2014.
Plenary Speaker: DFG Priority Program, Representation Theory, (Soltau, Germany), 2014.
Plenary Speaker: Brauer's Problems: Fifty years on. (Manchester, UK), 2013.
Plenary Speaker, First Joint Meeting EMS (European Math Society)-RSME (Real Sociedad Matemática Española), Bilbao, 2011.
Plenary Speaker, First Join Meeting of the Spanish Royal Society of Mathematics, Valencia, 2005.
Academic supernumerari de l'Institut d'Estudis Catalans (Catalan Academy of Sciences), 2005.
Postdoctoral Fulbright Fellowship, MSRI Berkeley; UW Madison. 1990-1991.
Primer Premio Nacional de Matemáticas (1987).

PH. D. STUDENTS:

1. Maria José Felipe (1994) (now Catedrática at UPV, Politechnical University of Valencia, SPAIN).
2. Antonio Beltrán (1997) (now Catedrático at University Jaume I, SPAIN).
3. Lucia Sanus (1999) (now Professor at the University of Valencia, SPAIN).
4. Pablo Centella (2010).
5. Selena Marinelli (2011), University of Pisa.
6. Joan Tent (2012) (now contratado doctor at the University of Valencia, SPAIN).
7. Carolina Vallejo (2016) (University of Florence).
8. Noelia Rizo (2018) (now postdoc at the University of Valencia, SPAIN)).
9. Josep Miquel Martinez (2023) (now postdoc at the University of Florence).

SOME TALKS:

1. Cambridge University, Newton Institute, 2022.
2. Oberwolfach, Germany, 2020.
3. Clay Research Conference, Oxford, UK, 2019.
4. MSRI, Berkeley, USA, 2018.
5. Princeton University, Conway Conference, 2015.
6. CIRM, France, 50 Years of the Chevalley Seminar, 2014.
7. London Algebra Colloquium, London, 2013.
8. Joint Mathematics AMS meeting, San Diego, US, 2013.
9. Oxford University, 2012.
10. The University of Chicago, 2012.

SELECTED PAPERS:

1. G. Malle, G. Navarro, A. Schaeffer-Fry, P. H. Tiep, Brauer's Height Zero Conjecture, Brauer's Height Zero Conjecture, Ann. of Math. 200 (2024), 557–608.

2. G. Navarro, L. Rusthorfer, P. H. Tiep, C. Vallejo, The field of values of the height zero characters, Advances in Mathematics **443** (2024) 109589, 25 pages.

3. G. Navarro, A McKay bijection for projectors, Rev. Mat. Iberoam. **38** (2022), no. 3, 1013–1028.

4. G. Navarro, P. H. Tiep, The fields of values of characters of degree not divisible by p, Forum of Mathematics, Pi **9**, (2021), 1–29.

5. G. Malle, G. Navarro, Brauer's Height Zero Conjecture for Principal Blocks, J. reine angew. Math. **778** (2021), 119–125.

6. G. Navarro, B. Spath, C. Vallejo, A reduction theorem for the Galois-McKay conjecture, Trans. Amer. Math. Soc., **373**, 9, (2020), 6157–6183.

7. G. Navarro, P. H. Tiep, Sylow Subgroups, exponents, and character values, Trans. Amer. Math. Soc., **372**, 6, (2019), 4263–4291.

8. I. M. Isaacs, M. W. Liebeck, G. Navarro, P. H. Tiep, Fields of values of odd-degree irreducible characters, Advances in Mathematics **354** (2019) 106757, 26pp.

9. E. Giannelli, A. Kleshchev, G. Navarro, P. H. Tiep, Restriction of odd degree characters and natural correspondences, International Mathematics Research Notices, **20**, (2017), 6089–6118 .

10. G. Navarro, B. Spath, P. H. Tiep, Coprime Actions and Correspondences of Brauer characters, Proc. Lond. Math. Soc. (3) **114** (2017), no. 4, 589–613.

11. G. Navarro, P. H. Tiep, Representations of odd degree, Math. Ann. **365** (3) (2016), 1155–1185.

12. G. Navarro, P.H. Tiep, Real Groups and Sylow 2-subgroups, Advances in Mathematics **299** (2016), 331-360.

13. G. Navarro, P. H. Tiep, B. Späth, On fully ramified Brauer characters, Advances in Mathematics **257** (2014) 248–265.

14. G. Navarro, B. Späth, On Brauer's Height Zero Conjecture, J. Eur. Math. Soc. **16**, 695–747 (2014).

15. G. Navarro, P. H. Tiep, Characters of relative p'-degree over normal subgroups, Ann. of Math, **178**, (2013), 1135–1171.

16. G. Navarro, P. H. Tiep, Brauer's height zero conjecture for the 2-blocks of maximal defect, J. Reine Angew. Math. **669** (2012), 225-247.

17. G. Malle, G. Navarro, Blocks with equal height zero degrees, Trans. Amer. Math. Soc. **363** (2011), no. 12, 6647-6669.

18. G. Navarro, P. H. Tiep, A reduction theorem for the Alperin weight conjecture, Invent. Math. **184** (2011), no. 3, 529-565.

19. G. Navarro, P. H. Tiep, Degrees of rational characters of finite groups, Adv. Math. **224** (2010), no. 3, 1121-1142.

20. G. Navarro, P. H. Tiep, Rational irreducible characters and rational conjugacy classes in finite groups, Trans. Amer. Math. Soc. **360** (2008), no. 5, 2443-2465.

21. M. Isaacs, G. Malle, G. Navarro, A reduction theorem for the McKay conjecture, Invent. Math. **170** (2007), no. 1, 33-101.

22. G. Navarro, P. H. Tiep, Rational Brauer characters, Math. Ann. **335** (2006), no. 3, 675–686.

23. G. Navarro, The McKay conjecture and Galois automorphisms, Ann. of Math. (2) **160** (2004), no. 3, 1129-1140.

24. M. Isaacs, G. Navarro, New refinements of the McKay conjecture for arbitrary finite groups, Ann. of Math. (2) **156** (2002), no. 1, 333-344.

25. G. Navarro, Vertices for characters of p-solvable groups, Trans. Amer. Math. Soc. **354** (2002), no. 7, 2759-2773.

26. G. Navarro, T. R. Wolf, Character degrees and blocks of finite groups, J. Reine Angew. Math. **531** (2001), 141-146.

27. G. Navarro, Brauer characters relative to a normal subgroup, Proc. London Math. Soc. (3) **81** (2000), no. 1, 55-71.

28. G. Navarro, Constituents of the product of characters in odd order groups. J. Reine Angew. Math. **461** (1995), 1–11.

BOOKS:

1. *Characters and Blocks of Finite Groups*, Cambridge University Press, 1998.
2. *Un curso de Algebra*, Publicacions Universitat de València, 2002.
3. *Un curso de Números*, Publicacions Universitat de València, 2006.
4. *Character theory of finite groups,* Papers from the International Conference in honor of I. Martin Isaacs held at the Universitat de València, Valencia, June 3–5, 2009. Edited by Mark L. Lewis, Gabriel Navarro, Donald S. Passman and Thomas R. Wolf. Contemporary Mathematics, **524**. American Mathematical Society, Providence, RI, 2010.
5. *Character theory and the McKay conjecture*, Cambridge University Press, 2018.

OTHER:

Editor: Revista Matemática Complutense, RACSAM.

Reviewer: European Research Council (ERC), Cambridge University Press, Springer, Mathematical Reviews, Guggenheim Foundation, National Security Agency (USA), Engineering and Physical Sciences Research Council (EPSRC, UK), ANECA (Spain), ANEP (Spain), ICM 2006.

Coorganizer of Conferences: Princeton University 2023; Isaacs Newton Institute 2022; Representations of Finite Groups, Banff, 2011, 2014, 2017; Isaacs International Conference on Character Theory of Finite Groups, Valencia, 2009; Representations of Finite Groups, Oberwolfach, 2015, 2019, 2023; MSRI, Berkeley, 2016 (Graduate Summer School); MSRI, Semester on Representation Theory, 2018; Local Representations of Finite Groups, École Polytechnique Fédérale de Lausanne, December 2016.

Service: Adjunto Algebra (ANEP, 2012-2014); Comité de dirección de Consolider i-Math, 2009-2011; Jurado Premio Rubio de Francia; Jurado Becas La Caixa Post-Grado América del Norte (2014); Scientific Committee Meeting RSME 2015, 2017; Scientific Committee RSME/SSM 2020, Ikerbasque fellowships.

Referee: Annals of Mathematics, Inventiones Mathematicae, Advances of Mathematics, Crelle, Duke Journal of Mathematics, Transactions of the American Mathematical Society; Journal of Algebra; Proceedings of the London Mathematical Society; Proceedings of the American Mathematical Society, etc.

Gabriel Navarro has published more than 220 papers in significant well-established international journals. He has given more than 100 talks in Europe, US, India, Vietnam and Japan.

ACHIEVEMENTS. In 2024 Navarro contributed to solve one of the fundamental conjectures in the representation theory of finite groups: the Brauer's Height Zero Conjecture. Formulated in 1955 by one of the most prominent mathematicians in the XX century, Richard Brauer, it has remained unsolved until now. This work has even reached the popular media:

https://phys.org/news/2024-10-breakthrough-mathematician-problems.html

This paper is the fourth paper by Navarro published in the Annals of Mathematics. He is one of the two Spanish mathematicians that have this record.

In 2023, M. Cabanes and B. Späth completed the proof of another major conjecture in the field, the McKay conjecture. The road to prove this conjecture is the one designed by Navarro in his paper (Inventiones 2008). There are several articles on the media being prepared about this achievement.

Navarro was the first EMS (European Mathematical Society) distinguished speaker. According to the EMS "An EMS Distinguished Speaker is a prestigious appointment, awarded by the EMS to an internationally renowned researcher."

Navarro is one of the five Spanish mathematicians that are fellows of the American Mathematical Society (together with X. Cabré, J. Sanz–Serna, J. L. Vázquez and L. Vega).

Navarro's book "Blocks and Characters of Finite Groups" is the most cited item in the AMS subject 20C20, Modular Representations and Characters, according to MathScinet.