

PERSONAL INFORMATION

Norberto Gavioli



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Sex male | Date of birth 29/06/1964 | Nationality Italian

ACADEMIC POSITIONS

- 2000 - Associate professor of algebra
University of L'Aquila
- 1993 - 2000 Research Assistant
University of L'Aquila

EDUCATION AND TRAINING

- 1994 PhD
Trento, Università degli Studi
PhD in mathematics
- 1988 Degree
Milano, Università degli Studi
Degree in mathematics

ADDITIONAL INFORMATION

Publications

- Gustavo A. Fernández-Alcober, Norberto Gavioli, Elena Di Domenico (2022). GGS-groups over primary trees: branch structures. MONATSHFTE FÜR MATHEMATIK, ISSN: 0026-9255, doi: 10.1007/s00605-022-01705-1
- M. AVITABILE, A. CARANTI, N. GAVIOLI, V. MONTI, M. F. NEWMAN, E. A. O'BRIEN (in stampa). THIN SUBALGEBRAS OF LIE ALGEBRAS OF MAXIMAL CLASS. ISRAEL JOURNAL OF MATHEMATICS, ISSN: 1565-8511
- Gavioli, Norberto, Mann, Avinoam, Monti, Valerio (2022). The breadth-degree type of a finite p-group. JOURNAL OF ALGEBRA, vol. 592, p. 477-488, ISSN: 0021-8693, doi: 10.1016/j.jalgebra.2021.11.009
- Riccardo Aragona, Roberto Civino, Norberto Gavioli, Carlo Maria Scoppola (2022). Unrefinable partitions into distinct parts in a normalizer chain. DISCRETE MATHEMATICS LETTERS, vol. 8, p. 72-77, ISSN: 2664-2557, doi: 10.47443/dml.2021.0109
- rickardo aragona, roberto civino, norberto gavioli, carlo maria scoppola (2021). A Chain of Normalizers in the Sylow 2 -subgroups of the symmetric group on 2^n letters. INDIAN JOURNAL OF PURE & APPLIED MATHEMATICS, vol. 52, p. 735-746, ISSN: 0019-5588, doi: 10.1007/s13226-021-00190-w
- R. Aragona, R. Civino, N. Gavioli, M. Pugliese, An Authenticated Key Scheme over Elliptic Curves for Topological Networks, to appear in Journal

- of Discrete Mathematical Sciences and Cryptography, Online First, 1-20 (2021)
- Riccardo Aragona, Roberto Civino, Norberto Gavioli, Carlo Maria Scoppola (2021). Rigid commutators and a normalizer chain. MONATSHEFTE FÜR MATHEMATIK, ISSN: 0026-9255, doi: 10.1007/s00605-021-01514-y
 - Riccardo Aragona, Roberto Civino, Norberto Gavioli, Carlo Maria Scoppola (2021). A Chain of Normalizers in the Sylow p -subgroups of the symmetric group on n letters. INDIAN JOURNAL OF PURE & APPLIED MATHEMATICS, ISSN: 0019-5588
 - Gavioli, Norberto, Legarreta, Leire, Ruscitti, Marco, Scoppola, Carlo Maria (2019). On small waist pairs in pro- p groups. MONATSHEFTE FÜR MATHEMATIK, vol. 189, p. 263-272, ISSN: 0026-9255, doi: 10.1007/s00605-018-1213-8
 - Gavioli, Norberto, Legarreta, Leire, Ruscitti, Marco, Scoppola, Carlo Maria (2019). On small waist pairs in pro- p groups. MONATSHEFTE FÜR MATHEMATIK, vol. 189, p. 263-272, ISSN: 0026-9255, doi: 10.1007/s00605-018-1213-8
 - R. Aragona, R. Civino, N. Gavioli, C. M. Scoppola (2019). Regular subgroups with large intersection. ANNALI DI MATEMATICA PURA ED APPLICATA, ISSN: 0373-3114, doi: 10.1007/s10231-019-00853-w
 - Gavioli, Norberto, Gül, Şükran (2018). Metabelian thin Beauville p -groups. JOURNAL OF GROUP THEORY, vol. 21, p. 351-363, ISSN: 1433-5883, doi: 10.1515/jgth-2017-0040
 - Gavioli N, Monti V, Scoppola C M (2013). Profinite groups with finite virtual length. JOURNAL OF THE AUSTRALIAN MATHEMATICAL SOCIETY, vol. 95, p. 343-355, ISSN: 1446-7887, doi: 10.1017/S144678871300027X
 - Gavioli N, Monti V, Scoppola C M (2012). Pro- p groups with waists. JOURNAL OF ALGEBRA, vol. 351, p. 130-137, ISSN: 0021-8693, doi: 10.1016/j.jalgebra.2011.11.022
 - GAVIOLI N, LEIRE LEGARRETA, CARMELA SICA, MARIA TOTA (2010). On the Number of Normalizers and Conjugacy Classes of Normalizers. INTERNATIONAL JOURNAL OF ALGEBRA, vol. 4, p. 1169-1175, ISSN: 1312-8868
 - BARNEA Y, GAVIOLI N, JAIKIN-ZAPIRAIN A, MONTI V, SCOPPOLA C (2009). Pro- p -groups with few normal subgroups. JOURNAL OF ALGEBRA, vol. 321, p. 429-449, ISSN: 0021-8693, doi: 10.1016/j.jalgebra.2008.10.012
 - GAVIOLI N, MONTI VALERIO, SCOPPOLA CARLO MARIA (2007). Soluble Normally Constrained pro- p -groups. JOURNAL OF GROUP THEORY, vol. 10, p. 321-345, ISSN: 1433-5883, doi: 10.1515/JGT.2007.026
 - GAVIOLI N, LEGARRETA L, SICA C, TOTA M (2006). On the number of conjugacy classes of normalisers in a finite p -group. BULLETIN OF THE AUSTRALIAN MATHEMATICAL SOCIETY, vol. 73, p. 219-230, ISSN: 0004-9727, doi: 10.1017/S000497270003879X
 - GAVIOLI N, MONTI V (2002). Ideally constrained Lie algebras. JOURNAL OF ALGEBRA, vol. 253, p. 31-49, ISSN: 0021-8693, doi: 10.1016/S0021-8693(02)00057-1
 - GAVIOLI N, MONTI VALERIO, YOUNG DAVID S. (2001). Metabelian thin Lie algebras. JOURNAL OF ALGEBRA, vol. 241, p. 102-117, ISSN: 0021-8693, doi: 10.1006/jabr.2001.8752
 - DALLA VOLTA F., GAVIOLI N (2001). Minimal counterexamples to a conjecture of Hall and Paige. ARCHIV DER MATHEMATIK, vol. 77, p. 209-214, ISSN: 0003-889X
 - GAVIOLI N, V. PANNONE (1999). Frobenius partitions in extraspecial groups. GEOMETRIAE DEDICATA, vol. 74, p. 313-323, ISSN: 0046-5755, doi: 10.1023/A:1005091820610
 - GAVIOLI N, A. MANN, V. MONTI, A. PREVITALI, C.M. SCOPPOLA (1998). Groups of prime power order with many conjugacy classes. JOURNAL OF

ALGEBRA, vol. 202, p. 129-141, ISSN: 0021-8693, doi: 10.1006/jabr.1997.7222

- F. DALLA VOLTA, GAVIOLI N (1997). On the admissibility of some linear and projective groups in odd characteristic. GEOMETRIAE DEDICATA, vol. 66, p. 245-254, ISSN: 0046-5755, doi: 10.1023/A:1004924402272
- GAVIOLI N (1997). Subgroups of finite solvable groups inducing the same permutation character. TRANSACTIONS OF THE AMERICAN MATHEMATICAL SOCIETY, vol. 349, p. 2969-2980, ISSN: 0002-9947, doi: 10.1090/S0002-9947-97-01696-6
- C. TAMBURINI, J. S. WILSON, GAVIOLI N (1994). On the (2-3)-generation of some classical groups. JOURNAL OF ALGEBRA, vol. 168, p. 353-370, ISSN: 0021-8693, doi: 10.1006/jabr.1994.1234
- A. CARANTI, GAVIOLI N, S. MATTAREI (1994). Subgroups of finite p-groups inducing the same permutation character. COMMUNICATIONS IN ALGEBRA, vol. 22, p. 877-895, ISSN: 0092-7872, doi: 10.1080/00927879408824882
- F. DALLA VOLTA, GAVIOLI N (1993). Complete mappings in some linear and projective groups. ARCHIV DER MATHEMATIK, vol. 61, p. 111-118, ISSN: 0003-889X, doi: 10.1007/BF01207458

Main research interests

1988-1989

- Monoidal bicategories over a topos

1990-2000

- finite p-groups automorphisms (Gaschutz conjecture)

- Complete mappings in finite groups (Hall and Paige conjecture)

- Linear groups generation

- Subgroups of finite groups inducing the same permutation characters (p-groups and solvable groups)

Since 2000

- Just infinite pro-p-groups

- Modular Lie algebras

- Finite p-groups

- Permutation groups

- Algebraic aspects of Cryptography

Referee for several international journals

Other activities

2007 - 2010 Member of steering committee of the project IDEM (GARR) for an Italian infrastructure of federated authentication <http://progetto-idem.idem.garr.it/chisiamo.php>

2010 -- member of GARR task force for the ICT4 University initiative.

2007 -- 2012 pro-rector for quality assurance policies

2012 -- 2015 member of the academic senate

2016 -- Local coordinator for math. olympiads training activities

2016 -- . Math Olympiads Department activity coordinator

2016 -- Coordinator of the laboratories of the Department of Engineering and Information Sciences and Mathematics

2018 -- Member of the national De Componendis Cifris initiative - MathCifris section manager <https://www.decifris.it/attivita>

2018 -- 2020 Participation to Cyber Trainer project -- POR FESR Abruzzo 2014-2020

2019 . Member of the board of directors of the ExMERGE Center of

Excellence (University of L'Aquila)

http://exemerge.disim.univaq.it/?page_id=96

2019 - OR5 coordinator (cyberscurity) of the Emerge project

http://exemerge.disim.univaq.it/?page_id=342

2020 – Head of the Cryptography and Codes group of the Italian

Mathematical Union. [https://umi.dm.unibo.it/gruppi-umi-2/gruppo-umi-](https://umi.dm.unibo.it/gruppi-umi-2/gruppo-umi-crittografia-e-codici/)

[crittografia-e-codici/](https://umi.dm.unibo.it/gruppi-umi-2/gruppo-umi-crittografia-e-codici/) e <https://sites.google.com/view/crittografiaecodici/home>

2021 – Chair of the scientific board of the cryptography and codes

conference 2021 <https://sites.google.com/view/crittografiaecodici/convegno-annuale>

Member of the teaching staff of the research doctorate in *Matematica e Modelli* of the University of L'Aquila

National Interest Research Projects

1999 - Algebre di Lie graduate e pro-p-gruppi di ampiezza finita

2001 - Algebre di Lie graduate, algebre loop e pro-p-gruppi

2003 - Algebre loop, periodicità, rappresentazioni e pro-p-gruppi

2006 - Algebre di Lie, pro-p-gruppi e crittografia

2008 - Gruppi, algebre di Lie e applicazioni

2015 - Group theory and applications

Teachings

Several courses among which:

Algebra, Algebra III, Algebra Superiore, Algebra Concreta, Matematica

Discreta, Analisi Numerica I, Istituzioni di Matematica,

Combinatoria e Crittografia (A.A. 2013-14, 2014-2015, 2015-16 2016-17, 2017-18),

Combinatoria nella Protezione dell'Informazione (A.A. 2012-13)

Main Seminars and Conferences

- Convegno nazionale di topologia settembre 1988 - Sorrento - V-matrices over a Topos
- Gruppen und Topologische Gruppen, Freiburg, 1992, "Coppie di sottogruppi di p-gruppi finiti che inducono lo stesso carattere di permutazione".
- CIRM character theory, Trento 1993, "Complete mappings in some linear and projective groups".
- Padova March 1994, "Coppie di sottogruppi di gruppi risolubili niti che inducono lo stesso carattere di permutazione"(su invito)
- Roma 1993, 1994 some seminars in the group theory cycle.
- Aachen (Oct. '95) RWTH - Lehrstuhl D fur Mathematik, "Subgroups inducing the same monomial characters".
- Firenze June 1996, "p-gruppi con molte classi di coniugio" (invitation).
- Wurzburg, June 1996, "p-groups with many conjugacy classes".
- L'Aquila Oct. 1996, Convegno di calcolo simbolico del GNSAGA, Aspetti Computazionali in Algebra Geometria e Logica, "Automorsmi di p-gruppi".
- Firenze, convegno 40% algebra, Feb.1998 "Frobenius partitions in Extraspecial groups".
- Galway (Eire), Groups in Galway , May 1998, "Frobenius partitions in linear groups of nilpotency class 2".
- Convegno SIMAI, June 1998 Taormina - "GAP: a public software for (non commutative) algebra"
- Padova, Convegno di teoria dei gruppi, Feb. 1999 "Algebre di Lie graduate idealmente costrette".
- Galway (Eire) Sept. 1999, Seminar at the Math Department: "Ideally constrained Lie algebras".

- Bialystok (Polonia) June 2001 - Rings and Group Rings - Main conference: "Solvable thin Lie algebras and prop-p-groups".
- Trento, Sept. 2001, "Periodicità di algebre di Lie e pro-p-gruppi risolubili costretti"
- Brescia Oct. 2001, Group Theory Workshop. "Verso una classificazione dei prop-p-gruppi thin risolubili".
- Lecce, Feb. 2002, "Algebre di Lie just innite e pro-p-gruppi" (invited).
- Como, June 2003, "Periodicità in algebre di Lie e pro-p-gruppi" (invited).
- Salerno, July 2003, "Algebre di Lie e pro-p-gruppi periodici" (invited).
- Ischia Group Theory 2004, "Just infinite Lie algebras and pro-p groups".
- Roma Convegno INDAM Apr. 2005 "Just infinite pro-p-groups", talk: "Wreath Lie algebras"
- Pisa Domus Galilaeana, Apr. 2005 Organization of the conference *p-gruppi finiti: antichi problemi nuove tecniche*.
- Milano-Bicocca, Nov. 2007 Lie algebras and Applications, "Wreath products and induced representations, a Kaloujnine Krasner like theorem for restricted Lie algebras".
- Ischia Group Theory 2008, Pro p-groups with few normal subgroups
- Trento Nov. 2008 Lie methods in Group Theory, "Induced modules for modular Lie algebras".
- Trento June 2013 - Group Theory in Trento 2013 - Pro-p Groups of Finite Virtual Length
- Salerno Nov. 2014 - GTG - More on p-groups of small breadth
- Wroclav September 2018 - UMI-SIMAI-PTM joint meeting- The breadth-degree type of a finite p-group
- Cremona June 2019 - Semigroups and Groups, Automata, Logics - Regular subgroups with large intersection
- Pavia September 2019 - Congresso UMI 2109 - The breadth-degree type of a finite p-group
- Invited online conference "Thin subalgebras of Lie algebras of maximal class" - Ischia Online Group Theory Conference (GOTHIC)
- Organization of workshop "Algebra4Cryptography 2019" – Università dell'Aquila, 10-11 ottobre 2019.
<https://www.disim.univaq.it/didattica/getres.php?resid=4868&lid=it&did=4>
- Organization of workshop "Crittografia nella Vita Reale" – Università dell'Aquila, 14 May 2019.
- Chair of the scientific board of the conference "Crittografia e teoria dei codici 2021" <https://sites.google.com/view/crittografiaecodici/convegno-annuale>

According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016, I hereby express my consent to process and use my data provided in this CV

L'Aquila,
Apr. 19, 2022

