Curriculum Vitae di **DONNA TESTERMAN**

Professore presso la EPFL di Losanna.

Esperto internazionale della struttura dei sottogruppi dei gruppi algebrici semisemplici, rappresentazioni di gruppi semisemplici e riduttivi finiti, proprietà di elementi nilpotenti.

*Attività varie recenti di ricerca e organizzazione conferenze*

- Workshop "Totally Disconnected Locally Compact Groups via Group Actions", Banff International Research Station, 15-20 Agosto 2021

- Scuola estiva al Mittag-Leffler Institute, su "Modern Theory of Group Actions and the Special Role of Finite Simple Groups", 3-7 Giugno 2019.

- Scuola estiva a Toblach su "Finite Groups and Related Geometrical structures", dal 28 Agosto al 8 Settembre 2017.

- Conferenza "The Third Young Algebraists' Conference", EPFL, 5-9 Giugno 2017.

- Workshop "Permutation Groups" al Banff International Research Station, 13-18 Novembre 2016.

- Semestre di ricerca "Local Representation Theory and Simple groups" al Bernoulli Center, dal 1 Luglio al 31 Dicembre 2016.

*Pubblicazioni*

Guralnick, Robert M.; Hiss, Gerhard; Testerman, Donna M. Special issue in memory of Kay Magaard [Introduction]. *J. Algebra 561 (2020),* 1–4.

Burness, Timothy C.; Testerman, Donna M. $A1$-type subgroups containing regular unipotent elements. *Forum Math. Sigma* 7 (2019), Paper No. e12, 61 pp.

Burness, Timothy C.; Testerman, Donna M. Irreducible subgroups of simple algebraic groups—a survey. *Groups St Andrews 2017 in Birmingham,* 230–260, London Math. Soc. Lecture Note Ser., 455, *Cambridge Univ. Press, Cambridge,* 2019.

Cavallin, Mikaël; Testerman, Donna M. A new family of irreducible subgroups of the orthogonal algebraic groups. *Trans. Amer. Math. Soc. Ser. B* 6 (2019), 45–79.

Testerman, Donna M.; Zalesski, Alexandre E. Irreducible representations of simple algebraic groups in which a unipotent element is represented by a matrix with a single non-trivial Jordan block. *J. Group Theory* 21 (2018), no. 1, 1–20.

Burness, Timothy C.; Marion, Claude; Testerman, Donna M. On irreducible subgroups of simple algebraic groups. *Math. Ann.* 367 (2017), no. 3-4, 1259–1309.

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Liebeck, Martin W.; Seitz, Gary M.; Testerman, Donna M. Distinguished unipotent elements and multiplicity-free subgroups of simple algebraic groups. *Pacific J. Math.* 279 (2015), no. 1-2, 357–382.

Testerman, D. M.; Zalesski, A. E. Subgroups of simple algebraic groups containing regular tori, and irreducible representations with multiplicity 1 non-zero weights. *Transform. Groups* 20 (2015), no. 3, 831–861.

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Magaard, Kay; Röhrle, Gerhard; Testerman, Donna M. On the irreducibility of symmetrizations of cross-characteristic representations of finite classical groups. *J. Pure Appl. Algebra* 217 (2013), no. 8, 1427–1446.

Testerman, Donna; Zalesski, Alexandre Irreducibility in algebraic groups and regular unipotent elements. *Proc. Amer. Math. Soc.* 141 (2013), no. 1, 13–28.

Malle, Gunter; Testerman, Donna Linear algebraic groups and finite groups of Lie type. Cambridge Studies in Advanced Mathematics, 133. *Cambridge University Press, Cambridge,* 2011. xiv+309 pp. ISBN: 978-1-107-00854-0

Lawther, R.; Testerman, D. M. Centres of centralizers of unipotent elements in simple algebraic groups. *Mem. Amer. Math. Soc.* 210 (2011), no. 988, vi+188 pp. ISBN: 978-0-8218-4769-5

Levy, Paul; McNinch, George; Testerman, Donna M. Nilpotent subalgebras of semisimple Lie algebras. *C. R. Math. Acad. Sci. Paris* 347 (2009), no. 9-10, 477–482.

McNinch, George J.; Testerman, Donna M. Nilpotent centralizers and Springer isomorphisms. *J. Pure Appl. Algebra* 213 (2009), no. 7, 1346–1363.

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Liebeck, Martin W.; Testerman, Donna M. Irreducible subgroups of algebraic groups. *Q. J. Math.* 55 (2004), no. 1, 47–55.

Proud, Richard; Saxl, Jan; Testerman, Donna Subgroups of type $A_1$ containing a fixed unipotent element in an algebraic group. *J. Algebra* 231 (2000), no. 1, 53–66.

Lawther, R.; Testerman, D. M. $A_1$ subgroups of exceptional algebraic groups. *Mem. Amer. Math. Soc.* 141 (1999), no. 674, viii+131 pp.

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Liebeck, Martin W.; Saxl, Jan; Testerman, Donna M. Simple subgroups of large rank in groups of

Lie type. *Proc. London Math. Soc. (3)* 72 (1996), no. 2, 425–457.

Testerman, Donna M. $A1$-type overgroups of elements of order $p$ in semisimple algebraic groups and the associated finite groups. *J. Algebra* 177 (1995), no. 1, 34–76.

Testerman, Donna M. Overgroups of unipotent elements in simple algebraic groups. *Groups, combinatorics & geometry (Durham, 1990),* 333–339, London Math. Soc. Lecture Note Ser., 165, *Cambridge Univ. Press, Cambridge,* 1992.

Testerman, Donna M. The construction of the maximal $A1$'s in the exceptional algebraic groups. *Proc. Amer. Math. Soc.* 116 (1992), no. 3, 635–644.

Seitz, Gary M.; Testerman, Donna M. Extending morphisms from finite to algebraic groups. *J. Algebra* 131 (1990), no. 2, 559–574.

Testerman, Donna M. A construction of certain maximal subgroups of the algebraic groups $E6$ and $F4$. *J. Algebra* 122 (1989), no. 2, 299–322.

Testerman, Donna M. A note on composition factors of Weyl modules. *Comm. Algebra* 17 (1989), no. 4, 1003–1016.

Testerman, Donna M. Irreducible subgroups of exceptional algebraic groups. *Mem. Amer. Math. Soc.* 75 (1988), no. 390, iv+190 pp.

*Didattica, a.a.2020-2021*

**Linear Algebra**
The purpose of the course is to introduce the basic notions of linear algebra and its applications.

**Lie Algebras**
We introduce finite dimensional semisimple complex Lie algebras and establish the classification theorem.

**Topics in the theory of reductive algebraic groups, Lie algebras, and representation theory I**
The topics addressed in this course are the structure theory of eductive algebraic groups, their associated Lie algebras, the related finite groups of Lie type, and the representation theory of all of these objects.

**Topics in the theory of reductive algebraic groups, Lie algebras, and representation theory II**
The topics addressed in this course are the structure theory of eductive algebraic groups, their associated Lie algebras, the related finite groups of Lie type, and the representation theory of all of these objects.