List of publications Meinolf Geck

Diploma thesis, Ph.D. thesis, Habilitation:

- Eine Anwendung von MAPLE in der Darstellungstheorie der unitären Gruppen. Diplomarbeit, Lehrstuhl D für Mathematik, RWTH Aachen, 1987.
- Verallgemeinerte Gelfand-Graev Charaktere und Zerlegungszahlen endlicher Gruppen vom Lie-Typ. RWTH Aachen, Math.-Naturwiss. Fak./FB 1, Dissertation, 1990, 134 pp.
- Beiträge zur Darstellungstheorie von Iwahori-Hecke-Algebren. Habilitationsschrift, Aachener Beiträge zur Mathematik **11**, Verlag der Augustinus Buchhandlung, Aachen, 1995. x+171 pp., ISBN: 3-86073-420-2.

Co-Editor of Proceedings:

- (With R. W. Carter (eds.)) *Representations of reductive groups.* Publ. Newton Inst., Cambridge Univ. Press, Cambridge, 1998. viii+191 pp., ISBN: 0-521-64325-2.
- (With D. Testerman and J. Thévenaz (eds.)) *Group representation theory*, Presses Polytechniques et Universitaires Romandes, EPFL-Press, Lausanne, 2007. x+454 pp., ISBN: 978-0-8493-9243-6.

Books:

- (With G. Pfeiffer) *Characters of finite Coxeter groups and Iwahori–Hecke algebras.* London Math. Soc. Monographs, New Series **21**, Oxford University Press, New York 2000. xvi+446 pp., ISBN: 0-19-850250-8.
- *An introduction to algebraic geometry and algebraic groups.* Oxford Graduate Texts in Mathematics **10**, Oxford University Press, New York 2003. ix+307pp., ISBN: 0-19-852831-0.
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- *Algebra: Gruppen, Ringe, Körper – Mit einer Einführung in die Darstellungstheorie endlicher Gruppen.* Edition Delkhofen, 2014. vi+150pp., EAN 978-3936413-15-1.
- (With G. Malle), *The character theory of finite groups of Lie type: A guided tour*, Cambridge Studies in Advanced Mathematics **187**, Cambridge University Press, 2020. ix+394pp., ISBN: 9781108489621.

Software:

- (With G. Hiss, F. Lübeck, G. Malle, J. Michel and G. Pfeiffer), `CHEVIE` – A computer algebra system for computing and processing generic character tables for finite groups of Lie type and Hecke algebras; homepage at:

  `http://www.math.rwth-aachen.de/~CHEVIE`

  (See also publications [18], [67]).
- `PyCox` – A Python version of `CHEVIE-GAP` for (finite) Coxeter groups, version 1.6180 (2014); see `https://github.com/geckmf/PyCox` (and also publications [70], [78]).
- `ChevLie` – A `Julia` package for constructing Lie algebras and Chevalley groups, version 1.1 (2020); see `https://github.com/geckmf/ChevLie.jl` (and also publications [89], [91]).
- `NoFoMa` – A `GAP4` package for maximal vectors and normal forms of matrices, version 1.0 (2022); see `https://github.com/geckmf/NoFoMa` (and also publication [88]).

Articles:

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2. On the decomposition numbers of the finite unitary groups in non-defining characteristic. Math. Z. **207** (1991), 83–89.
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