

Michael Müger

List of publications

Theses:

- {0} Die effektive Theorie für schwere Quarks und ihre Renormierung in Parameterdarstellung. (The effective theory of heavy quarks and its renormalization in parametric representation.) 91 pp. Unpublished diploma thesis in German. Technical University of Darmstadt, October 1992.
- {1} Superselection structure of quantum field theories in $1 + 1$ dimensions. 117pp. Doctoral dissertation. University of Hamburg, April 1997. DESY-preprint 97-073.
- {2} Catégories tensorielles, algèbres et champs quantiques. Habilitation à diriger des recherches. Université de Strasbourg, 2002.

Journal papers:

- {3} Quantum double actions on operator algebras and orbifold quantum field theories. Commun. Math. Phys. **181**, 137–181 (1998).
- {4} The superselection structure of massive quantum field theories in $1 + 1$ dimensions. Rev. Math. Phys. **10**, 1147–1170 (1998).
- {5} On charged fields with group symmetry and degeneracies of Verlinde’s matrix S . Ann. Inst. Henri Poincaré B (Phys. Théor.) **7**, 359–394 (1999).
- {6} On soliton automorphisms in massive and conformal theories. Rev. Math. Phys. **11**, 337–359 (1999).
- {7} Galois theory for braided tensor categories and the modular closure. Adv. Math. **150**, 151–201 (2000).
- {8} With Y. Kawahigashi and R. Longo: Multi-interval subfactors and modularity of representations in conformal field theory. Commun. Math. Phys. **219**, 631–669 (2001).
- {9} From subfactors to categories and topology I. Frobenius algebras in and Morita equivalence of tensor categories. J. Pure Appl. Alg. **180**, 81-157 (2003).
Selected by Thomson-ISI, publisher of the Science Citation Index, as ‘Fast breaking paper’ of the month April 2005 in the field of mathematics. See <http://www.esi-topics.com/fbp/2005/april05-MichaelMuger.html>.
- {10} From subfactors to categories and topology II. The quantum double of tensor categories and subfactors. J. Pure Appl. Alg. **180**, 159-219 (2003).

- {11} On the structure of modular categories. Proc. Lond. Math. Soc. **87**, 291-308 (2003).
- {12} Galois extensions of braided tensor categories and braided crossed G-categories. J. Alg. **277**, 256-281 (2004).
- {13} On the center of a compact group. Intern. Math. Res. Notes. **2004:51**, 2751-2756 (2004).
- {14} With L. Tuset and J. E. Roberts: Representations of algebraic quantum groups and reconstruction theorems for tensor categories. Alg. Repres. Theor. **7**, 517-573 (2004).
- {15} Conformal orbifold theories and braided crossed G-categories. Commun. Math. Phys. **260**, 727-762 (2005) and Commun. Math. Phys. **260**, 763 (2005) (erratum).
- {16} Monoids, embedding functors and quantum groups. With L. Tuset. Int. J. Math. **19**, 1-31 (2008).

Papers in proceedings or other books:

- {17} Disorder operators, quantum doubles, and Haag duality in 1+1 dimensions. *In: Proceedings of the NATO Advanced Study Institute on Quantum fields and quantum spacetime, Cargèse 1996.* Pp. 349–356. Plenum Press, New York 1997.
- {18} Conformal field theory and Doplicher-Roberts reconstruction. *In: R. Longo (ed.): Mathematical physics in mathematics and physics. Quantum and operator algebraic aspects.* Fields Inst. Commun. **30**, 297–319 (2001).
- {19} Abstract duality for symmetric tensor *-categories. (Appendix to: Hans Halvorson: 'Algebraic Quantum Field Theory'.) *In: J. Butterfield and J. Earman (eds.): "Handbook of the Philosophy of Physics", Vol. I, p. 865-922.* Elsevier, 2006.

Preprints:

- {20} Tensor categories: A selective guided tour. Notes for a lecture series given during the workshop "Groupes quantiques dynamiques et catégories de fusion" at CIRM (Luminy, April 14-18, 2008). (arXiv:0804.3587) No publication in this form intended.
- {21} On Superselection Theory of Quantum Fields in Low Dimensions. Invited lecture at the XVIth International Congress on Mathematical Physics, Prague, August 3-8, 2009. 7pp. To appear in the proceedings. (arXiv:0909.2537)

(The preprint numbers refer to the server at <http://arXiv.org>.)