List of Publications

Prof. Dr. Michael Huber

Books (peer-reviewed).

- M. Huber. *Combinatorial Designs for Authentication and Secrecy Codes*. Research Monograph, *Foundations and Trends® in Communications and Information Theory*, Now Publishers, Boston, Delft, 2010 (also as Journal Version, Vol. 5: No. 6, pp. 581–675). [URL] [Online Version]

- M. Huber. *Flag-transitive Steiner Designs*. Research Monograph, *Frontiers in Mathematics*, Birkhäuser, Basel, Berlin, Boston, 2009. [URL]

Articles (peer-reviewed).

- J. Bertram, P. Hauck, and M. Huber. An improved majority-logic decoder offering massively parallel decoding for real-time control in embedded systems. *IEEE Transactions on Communications*, Vol. 61, pp. 4808–4815, IEEE Press, Piscataway, NJ, 2013. [URL] [Preprint]

- A. Gruner and M. Huber. Low-density parity-check codes from transversal designs with improved stopping set distributions. *IEEE Transactions on Communications*, Vol. 61, pp. 2190–2200, IEEE Press, Piscataway, NJ, 2013. [URL] [Preprint]

- M. Huber. Efficient two-stage group testing algorithms for genetic screening. *Algorithmica*, Vol. 67, pp. 355–367, Springer, 2013. [URL] [Preprint]
  Conference version: M. Huber. Efficient two-stage group testing algorithms for DNA screening. *Proc. ICALP 2011 Group Testing Workshop (ICALP 2011 GT): Algorithms and Data Structures for selection, identification and encoding*, ETH Zürich, pp. 43–54, 2011. [URL] [Preprint]

- P. Hauck, M. Huber, J. Bertram, D. Brauchle, and S. Ziesche. Efficient majority-logic decoding of short-length Reed–Muller codes at information positions. *IEEE Transactions on Communications*, Vol. 61, pp. 930–938, IEEE Press, Piscataway, NJ, 2013. [URL] [Preprint]

- A. Lehrmann, M. Huber, A.C. Polatkan, A. Pritzkau, and K. Nieselt. Visualizing dimensionality reduction of systems biology data. *Data Mining and Knowledge Discovery*, Vol. 27, pp. 146–165, Springer, 2013. [URL] [Preprint]

- M. Huber. Perfect secrecy systems immune to spoofing attacks. *International Journal of Information Security*, Vol. 11, pp. 281–289, Springer, 2012. [URL] [Preprint]

- A. Gruner and M. Huber. New combinatorial construction techniques for low-density parity-check codes and systematic repeat-accumulate codes. *IEEE Transactions on Communications*, Vol. 60, pp. 2387–2395, IEEE Press, Piscataway, NJ, 2012. [URL] [Preprint]

- M. Huber. Information theoretic authentication and secrecy codes in the splitting model. *Proc. IEEE International Zurich Seminar on Communications (IZS) 2012*, ETH Zürich, pp. 87–90, 2012. [URL] [Preprint]

- M. Huber. Computational complexity of reconstruction and isomorphism testing for designs and line graphs. *Journal of Combinatorial Theory, Series A*, Vol. 118, pp. 341–349, Elsevier, 2011. [URL] [Preprint]

- M. Huber. Combinatorial bounds and characterizations of splitting authentication codes. *Cryptography and Communications*, Vol. 2, pp. 173–185, Springer, 2010. [URL] [Preprint]

- M. Huber. Constructing optimal authentication codes with perfect multi-fold secrecy. *Proc. IEEE International Zurich Seminar on Communications (IZS) 2010*, ETH Zürich, pp. 86–89, 2010. [URL] [Preprint]

- M. Huber. Almost simple groups with socle $L_n(q)$ acting on Steiner quadruple systems. *Journal of Combinatorial Theory, Series A*, Vol. 117, pp. 1004–1007, Elsevier, 2010. [URL] [Preprint]

- M. Huber. Block-transitive designs in affine spaces. *Designs, Codes and Cryptography*, Vol. 55, pp. 235–242, Springer, 2010. [URL] [Preprint]

- M. Huber. *Coding Theory and Algebraic Combinatorics*. In: I. Woungang et al. (eds.), *Selected Topics in Information and Coding Theory*, Vol. 7 of *Series on Coding Theory and Cryptology*, World Scientific, Singapore, pp. 121–158, 2010. [URL] [Preprint]

- M. Huber. On the existence of block-transitive combinatorial designs. *Discrete Mathematics & Theoretical Computer Science (DMTCS)*, Vol. 12, pp. 123–132, 2010. [URL] [Preprint]

- M. Huber. On the Cameron–Praeger conjecture. *Journal of Combinatorial Theory, Series A*, Vol. 117, pp. 196–203, Elsevier, 2010. [URL] [Preprint]

- M. Huber. Authentication and secrecy codes for equiprobable source probability distributions. *Proc. IEEE International Symposium on Information Theory (ISIT) 2009*, IEEE Press, Piscataway, NJ, pp. 1105–1109, 2009. [URL] [Preprint]

- M. Huber. Steiner t-designs for large t. In: J. Calmet et al. (eds.), *Mathematical Methods in Computer Science (Beth Festschrift)*, Vol. 5393 of *Lecture Notes in Computer Science*, Springer, Berlin, Heidelberg, New York, pp. 18–26, 2008. [URL] [Preprint]

- M. Huber. A census of highly symmetric combinatorial designs. *Journal of Algebraic Combinatorics*, Vol. 26, pp. 453–476, Springer, 2007. [URL] [Preprint]

- M. Huber. The classification of flag-transitive Steiner 4-designs. *Journal of Algebraic Combinatorics*, Vol. 26, pp. 183–207, Springer, 2007. [URL] [Preprint]

- M. Huber. The classification of flag-transitive Steiner 3-designs. *Advances in Geometry*, Vol. 5, pp. 195–221, de Gruyter, 2005. [URL] [Preprint]

- M. Huber. Classification of flag-transitive Steiner quadruple systems. *Journal of Combinatorial Theory, Series A*, Vol. 94, pp. 180–190, Elsevier, 2001. [URL] [Preprint]

Patent.

- J. Bertram, M. Huber and P. Hauck. *Anordnung und Verfahren zur Decodierung eines Datenworts mit Hilfe eines Reed-Muller-Codes*. Deutsches Patentamt, DE 102013001740B3, 2014. [URL]

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- M. Huber. *On Highly Symmetric Combinatorial Designs*. Habilitationsschrift, Univ. Tübingen (2005), Shaker Verlag, Aachen, 2006. [URL] [Preprint]

- M. Huber. *Klassifikationen fahnentransitiver Steiner Designs*. Dissertation, Univ. Tübingen, Tübingen, 2001. [URL]