

Room Squares

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Bibliography

- Anderson, Ian. 1999. “On the Construction of Balanced Room Squares.” *Discrete Mathematics* 197: 53–60.
- Archbold, J. W. 1970. “A Combinatorial Problem of T. G. Room.” *Mathematika* 7.
- Archbold, J. W., and N. L. Johnson. 1958. “A Construction for Room Squares and Application in Experimental Design.” *Ann. Math. Statist.* 29.
- Berlekamp, E. R., and F. K. Hwang. 1972. “Constructions for Balanced Howell Rotations for Bridge Tournaments.” *J. Combinatorial Theory, Series A* 12.
- Bose, RC. 1947. “On a Resolvable Series of Balanced Incomplete Block Designs.” *Sankhyā: The Indian Journal of Statistics*, 249–56.
- Bruck, RH. 1963. “What Is a Loop.” *Studies in Modern Algebra* 2: 59–99.
- Byleen, K. 1970. “On Stanton and Mullin’s Contruction of Room Squares.” *Ann. Math. Statist.* 41.
- Chong, B. C., and K. M. Chan. 1974. “On the Existence of Normalized Room Squares.” *Nanta Math.* 7.
- Constable, R. L. 1974. “Positions in Room Squares.” *Utilitas Math.* 5.
- Conway, J. H., and R. Guy. 2012. *The Book of Numbers*. Springer New York. <https://books.google.co.uk/books?id=rfLSBwAAQBAJ>.
- Dillon, J. F., and R. A. Morris. 1973. “A Skew Room Square of Side 257.” *Utilitas Math.* 4.
- Dinitz, J. H., and D. R. Stinson. 1992. *Contemporary Design Theory: A Collection of Surveys*. Wiley Series in Discrete Mathematics and Optimization. Wiley. <https://books.google.co.uk/books?id=nDiEFrSwvGgC>.
- . 1987. “A Hill-Climbing Algorithm for the Construction of One-Factorizations and Room Squares.” *SIAM Journal on Algebraic Discrete Methods* 8 (3): 430–38. <https://doi.org/10.1137/0608035>.
- Gross, K. B. 1974a. “Equivalence of Room Designs I.” *J. Combinatorial Theory* 16.
- . 1974b. “Equivalence of Room Designs II.” *J. Combinatorial Theory* 17.
- Gross, K. B., R. C. Mullin, and W. D. Wallis. 1973. “The Number of Pairwise Orthogonal Symmetric Latin Squares.” *Utilitas Math.* 4.

- Horton, J. D. 1970. "Variations on a Theme by Moore." *Proceedings First Louisiana Conference on Combinatorics, Graph Theory and Computing*, 146–66.
- . 1971. "Quintuplication of Room Squares." *Aequationes Math.* 7.
- Horton, J. D., R. C. Mullin, and R. G. Stanton. 1971. "A Recursive Construction for Room Designs." *Aequationes Math.* 6.
- Hwang, F. K. 1970. "Some More Contributions on Constructing Balanced Howell Rotations." *Proc. Second Chapel Hill Conf. On Combin. Math. And Its Appl.*, 307–23.
- Hwang, F. K., Qin De Kang, and Jia En Yu. 1984. "Complete Balanced Howell Rotations for $16k + 12$ Partnerships." [https://doi.org/10.1016/0097-3165\(84\)90078-5](https://doi.org/10.1016/0097-3165(84)90078-5).
- Lawless, J. F. 1971. *Pairwise Balanced Designs and the Construction of Certain Combinatorial Systems. Proceedings of the Second Louisiana Conference on Combinatorics*. Baton Rouge: Graph Theory; Computing.
- Lindner, Charles C. 1972. "An Algebraic Construction for Room Squares." *SIAM J. Appl. Math.* 22.
- Lindner, Charles C., and N. S. Mendelsohn. 1973. "Construction of Perpendicular Steiner Quasigroups." *Aequationes Math.* 9.
- Mendelsohn, N. S. 1970. "Orthogonal Steiner Systems." *Aequationes Math.* 5.
- . 1971. "Latin Squares Orthogonal to Their Transposes." *J. Combinatorial Theory, Series A* 11.
- Mullin, R. C. 1972. "On the Existence of a Room Design of Side F4." *Utilitas Math.* 1.
- Mullin, R. C., and E. Nemeth. 1969a. "A Counterexample to a Direct Product Construction of Room Squares." [https://doi.org/10.1016/S0021-9800\(69\)80021-9](https://doi.org/10.1016/S0021-9800(69)80021-9).
- . 1969b. "A Counter-Example to a Multiplicative Construction of Room Squares." *J. Combinatorial Theory* 7.
- . 1969c. "An Existence Theorem for Room Squares." *Canad. Math. Bull.* 12: 493–97.
- . 1969d. "On Furnishing Room Squares." [https://doi.org/10.1016/S0021-9800\(69\)80022-0](https://doi.org/10.1016/S0021-9800(69)80022-0).
- . 1970a. *A Construction for Self-Orthogonal Latin Squares from Certain Room Squares. Proceedings of the First Louisiana Conference on Combinatorics*. Baton Rouge: Graph Theory; Computing.
- . 1970b. "On the Non-Existence of Orthogonal Steiner Triple Systems of Order 9." *Canad. Math. Bull.* 13.
- Mullin, R. C., and W. D. Wallis. 1971. "On the Existence of Room Squares of Order $4n$." *Aequationes Math.* 6.
- . 1975. "The Existence of Room Squares." *Aequationes Mathematicae* 13 (1): 1–7. <https://doi.org/10.1007/BF01834113>.
- Nemeth, E. 1969. "Study of Room Squares." PhD Thesis, University of Waterloo.
- O'Shaughnessy, C. D. 1968. "A Room Design of Order 14." *Canad. Math. Bull.* 11.
- . 1972. "On Room Squares of Order $6m+2$." *J. Combinatorial Theory, Series A* 13.

- Parker, E. T., and A. N. Mood. 1955. "Some Balanced Howell Rotations for Duplicate Bridge Sessions." *Amer. Math. Monthly* 62.
- Room, T. G. 1955. "A New Type of Magic Square." *Math. Gazette* 39.
- Schellenberg, P. J. 1973. "On Balanced Room Squares and Complete Balanced Howell Rotations." *Aequationes Mathematicae* 9 (1): 75–90.
- Schellenberg, P. J. 1973. "On Balanced Room Squares and Complete Balanced Howell Rotations." *Aequationes Math.* 9.
- Shah, K. R. 1970. "Analysis of Room's Square Design." *Ann. Math. Statist.* 41.
- Stanton, R. G., and J. D. Horton. 1972. "A Multiplication Theorem for Room Squares." *J. Combinatorial Theory* 12.
- Stanton, R. G., and Joseph Douglas Horton. 1972. "A Multiplication Theorem for Room Squares." *Journal of Combinatorial Theory, Series A* 12 (3): 322–25.
- Stanton, R. G., and R. C. Mullin. 1968. "Construction of Room Squares." *Ann. Math. Statist.* 39.
- . 1970. *Techniques for Room Squares. Proceedings of the First Louisiana Conference on Combinatorics*. Baton Rouge: Graph Theory; Computing.
- . 1972. "Room Quasigroups and Fermat Primes." *J. Algebra* 20.
- Wallis, W. D. 1972a. "A Doubling Construction for Room Squares." *Discrete Math.* 3.
- . 1972b. "Duplication of Room Squares." *J. Austral. Math. Soc.* 14.
- . 1972c. "On Archbold's Construction of Room Squares." *Utilitas Math.* 2.
- . 1973a. "A Family of Room Subsquares." *Utilitas Math.* 4.
- . 1973b. "On One-Factorization of Complete Graphs." *J. Austral. Math. Soc.* 16.
- . 1973c. "On the Existence of Room Squares." *Aequationes Math.* 9.
- . 1973d. "Room Squares of Side Five." *Delta* 3.
- . 1973e. "Room Squares with Sub-Squares." *J. Combinatorial Theory* 15.
- . 1974. "Solution of the Room Square Existence Problem." *Journal of Combinatorial Theory, Series A* 17 (3): 379–83.
- Wallis, W. D., A. P. Street, and J. S. Wallis. 2006. *Combinatorics: Room Squares, Sum-Free Sets, Hadamard Matrices*. Lecture Notes in Mathematics. Springer Berlin Heidelberg. <https://books.google.co.uk/books?id=cTN8CwAAQBAJ>.
- Weisner, L. 1964. "A Room Design of Order 10." *Canad. Math. Bull.* 7.
- Yu, J. E., and F. K. Hwang. 1988. "The Existence of Symmetric Skew Balanced Starters for Odd Prime Powers." [https://doi.org/10.1016/S0195-6698\(88\)80040-4](https://doi.org/10.1016/S0195-6698(88)80040-4).