

Frank De Clerck

List of published scientific publications.

Editor of books and special volumes.

1. Editor of *Finite Geometry and Combinatorics*, London Mathematical Society, Lecture Note Series 1991, Cambridge University Press, 1993, 412 pages (co-editors: A. Beutelspacher, F. Buekenhout, J. Doyen, J. W. P. Hirschfeld, J. A. Thas).
2. Editor of *A Tribute to J. A. Thas*, Bulletin of the Belgian Math. Soc., Simon Stevin, Vol 1. No 3 (1994) (with H. Van Maldeghem).
3. Editor of *Proceedings of the 3rd International Conference on Finite Geometry and Combinatorics at Deinze*, Bulletin of the Belgian Math. Soc., Simon Stevin, Vol 5. No 2-3 (1998), 475 pages (co-editors: A. Beutelspacher, A. Blokhuis, F. Buekenhout, J. Doyen, W. Haemers, J. W. P. Hirschfeld, J. A. Thas, H. Van Maldeghem).
4. Editor of *Generalized Polygons*, Proceedings of the Academy Contact Forum, 20 October 2000, Koninklijke Vlaamse Academie van België voor Wetenschappen en Kunsten, 2001, 204 pp (co-editors: L. Storme, J. A. Thas, H. Van Maldeghem).

Research papers on finite geometry

1. *Some applications of the fundamental characterization theorem of R. C. Bose to partial geometries*, Acad. Naz. Lincei, Rend. Cl. Sc. Fis., Mat e Nat. Series VII, Vol. LIX (1975), 86–90 (with J. A. Thas).
2. *Partial geometries satisfying the axiom of Pasch*, Simon Stevin, vol. 51 nr 3 (1977), 123–137 (with J. A. Thas).
3. *Partial geometries in finite projective spaces*, Archiv der Mathematik, vol. 30 nr. 5 (1978), 537–540 (with J. A. Thas).
4. *On the extension of restricted (r, λ) -designs*, Ars Combinatoria, vol. 7 (1979), 261–263 (with J. A. Thas).
5. *Partial geometries, a combinatorial survey*, Bulletin of the Belgian Mathematical Society (serie B), vol. 31 nr. 2 (1979), 135–145.
6. *The pseudo-geometric and geometric $(t, s, s - 1)$ -graphs*, Simon Stevin, vol. 53 nr 4 (1979), 301–317.
7. *An infinite class of partial geometries associated with the hyperbolic quadric in $\text{PG}(4n - 1, 2)$* , European Journal of Combinatorics 1 (1980), 323–326 (with J. A. Thas and R. H. Dye).

8. *The $\Gamma\Delta$ -regular graphs*, Discrete Mathematics, 41 (1982), 7–15 (with I. Debroey).
9. *The embedding of $(0, \alpha)$ -geometries in $\text{PG}(n, q)$, part I*, Annals of Discrete Math. 18 (1983), 229–240 (with J. A. Thas).
10. *The embedding of $(0, \alpha)$ -geometries in $\text{PG}(n, q)$, part II*, Discrete Math. 51 (1984), 283–292 (with J. A. Thas and I. Debroey).
11. *Substructures of Partial Geometries*, Quaderno 5 del Seminario di Geometrie Combinatorie, Università degli Studi de L’Aquila (1984), 16pp.
12. *Exterior sets with respect to the hyperbolic quadric in $\text{PG}(2n - 1, q)$* , in *Finite Geometries* (ed. C.A. Baker–L.M. Batten) Lect. Notes in Pure and Applied Math. 103, Marcel Dekker (1985), 83–90 (with J. A. Thas).
13. *A characterization of the partial geometry $T_2^*(K)$* , European Journal of Combinatorics, vol. 8 (1987), 121–127 (with M. De Soete and H. Gevaert).
14. *Flocks di un cono in $\text{PG}(3, q)$* , Quaderno 75 del Seminario di Geometrie Combinatorie, Rome (1987), 8pp.
15. *The classification of polarities in reducible projective spaces*, European Journal of Combinatorics, vol. 9 (1988), 245–247 (with F. Mazzocca).
16. *Translation partial geometries*, Annals of Discrete Math., vol. 37 (1988), 117–136 (with H. Gevaert and J. A. Thas).
17. *Flocks of a quadratic cone in $\text{PG}(3, q)$, $q \leq 8$* , Geometriae Dedicata, vol. 26 (1988), 215–230 (with H. Gevaert and J. A. Thas).
18. *Point sets in partial geometries*, in *Advances in Finite Geometries and Designs*, proceedings of *Third Isle of Thorns Conference on Finite Geometries and Designs* (ed. J.W.P. Hirschfeld, D.R. Hughes and J.A. Thas) Oxford Science Publ. (1991), 93–110 (with A. Del Fra and D. Ghinelli).
19. *Subplane covered nets and semipartial geometries*, Discrete Mathematics vol. 106/107 (1992), 127–134 (with N. L. Johnson).
20. *Partial geometries and quadrics*, Sankhyā, Special Volume 54, (1992) 137–145 (with V. D. Tonchev).
21. *Flocks of the Quadratic Cone in $\text{PG}(3, q)$, for q small*, The CAGe Reports, nr 8 (1992), 74 pp (with C. Herssens).
22. *Partial geometries and copolar spaces*, in *Combinatorics ’88*, Research and Lecture Notes in Mathematics, Mediterranean Press (1992), 267 – 280 (with H. Gevaert and J. A. Thas).

23. *Flocks and partial flocks of the quadratic cone in $\text{PG}(3, q)$* , in *Finite Geometry and Combinatorics* (ed. A. Beutelspacher, F. Buekenhout, F. De Clerck, J. Doyen, J. W. P. Hirschfeld, J. A. Thas), London Math. Soc. Lecture Note Ser. 191, Cambridge University Press, (1993), 379–393 (with C. Herssens and J. A. Thas).
24. *On linear representations of (α, β) -geometries*, European Journal of Combinatorics, vol. 15 (1994), 3-11 (with H. Van Maldeghem).
25. *On flocks of infinite quadratic cones*, Bulletin of the Belgian Math. Soc., Simon Stevin, Vol 1. No 3 (1994), 399–415 (with H. Van Maldeghem).
26. *Some classes of rank 2 geometries*, chapter 10 in *Handbook of Incidence Geometry* (ed. F. Buekenhout), North-Holland (1995), 433–476 (with H. Van Maldeghem).
27. *New partial geometries constructed from old ones*, Bulletin of the Belgian Math. Soc., Simon Stevin, vol. 5. No 2-3 (1998), 255–263.
28. *Near polygons from partial linear spaces*, Geometr. Dedicata, vol. 75 (1999), 287–300 (with B. De Bruyn).
29. *On linear representations of near hexagons*, Europ. J. Combinatorics, vol. 20 (1999), 45–60. (with B. De Bruyn).
30. *Partial geometries and the triality quadric*, J. Geometry, vol. 68 (2000), 34 – 47 (with M. Delanote).
31. *Two-weight codes, partial geometries and Steiner systems*, Des. Codes Cryptogr., vol. 21 (2000), 87–98 (with M. Delanote).
32. *Quasi-quadratics and related structures*, Australas. J. Combin. vol. 22 (2000), 151–166 (with Nicholas Hamilton, Christine M. O’Keefe and Tim Penttila).
33. *Perp-systems and partial geometries*, Adv. Geom., vol 2 (2002), 1–12 (with M. Delanote, N. Hamilton and R. Mathon).
34. *Full embeddings of (α, β) -geometries in projective spaces*, Europ. J. of Combinatorics, vol. 23 (2002), 635–646 (with S. Cauchie and N. Hamilton).
35. *Partial and semipartial geometries, an update*, Discrete Math. Vol. 267 (1-3) (2003), 75–86.
36. *Dual partial quadrangles embedded in $\text{PG}(3, q)$* , Adv. Geom., Special issue dedicated to Adriano Barlotti, (2003), 224–231 (with N. Durante and J. A. Thas).
37. *Affine semipartial geometries and projections of quadratics*, J. Comb. Ser. A, 103 (2003), 281–289 (with M. Brown and M. Delanote).

38. A characterization of the semipartial geometries $T_2^*(\mathcal{U})$ and $T_2^*(\mathcal{B})$, *Europ. J. of Combinatorics*, Vol. 25 (2004), 73–85 (with S. De Winter and J. A. Thas).
39. On $(0, \alpha)$ -geometries and dual semipartial geometries fully embedded in affine space, *Des. Codes Cryptogr.*, Vol. 32 (1-3) (2004), 103–110 (with M. Delanote).
40. Affine embeddings of $(0, \alpha)$ -geometries, *European Journal of Combinatorics*, Vol. 27 (2006) 74–78 (with N. De Feyter and J. A. Thas).
41. Distance-regular $(0, \alpha)$ -reguli, *Des. Codes Cryptogr.*, Vol 38 (2) (2006), 179-194 (with S. De Winter, E. Kuijken and C. Tonesi).
42. Two-intersection sets with respect to lines on the Klein quadric, *Bulletin of the Belgian Mathematical Society, Simon Stevin*, 12 (2006) 743-750 (with N. De Feyter and N. Durante).
43. A characterization of the sets of internal and external points of a conic, *European Journal of Combinatorics*, 28 (2007), 1910 - 1921 (with N. De Feyter).
44. Projections of quadrics in finite projective spaces of odd characteristic, *Innovations in Incidence Geometry*, Vol 3 (Spring 2006), 51-80 (with N. De Feyter).
45. On connected line sets of antiflag class $[0, \alpha, q]$ in $\text{AG}(n, q)$, *European Journal of Combinatorics* 29 (2008) 1427-1435 (with N. De Feyter).
46. A hemisystem of a nonclassical generalised quadrangle, *Designs, Codes and Cryptography*, 51 (2) (2009) 157 - 165 (with John Bamberg and Nicola Durante).
47. Intriguing sets in partial quadrangles, *Journal of Combinatorial Designs*, 19 (3) (2010), 217-245 (with John Bamberg and Nicola Durante).
48. A new characterization of projections of quadrics in finite projective spaces of even characteristic, to appear in *Discrete Mathematics* (with Nikias De Feyter).
49. A geometric construction of Mathons perp-system from four lines of $\text{PG}(5, 3)$, *Journal of Combinatorial Designs* 18 (6) (2010), 450–461 (with John Bamberg).
50. A geometric approach to Mathon maximal arcs, *Journal of Combinatorial Theory, A*118 (4) (2011) 1196-1211 (with Stefaan De Winter and Thomas Maes).
51. Singer 8-arcs of Mathon type in $\text{PG}(2, 2^7)$, to appear in *Designs, Codes and Cryptography*, (with Stefaan De Winter and Thomas Maes).

52. Partial flocks of the quadratic cone yielding Mathon maximal arcs, submitted to *Discrete Mathematics*, (with Stefaan De Winter and Thomas Maes).

Papers on Didactics of Mathematics.

1. *De computer, de leekracht en de leerling*, ICL-bijdragen nr 3, 120 pp, (1983-84) (with I. Debroey, A. Clement and J. Vanwelkenhuyzen) [The computer, the teacher and the pupil].
2. *Affiene, projectieve, euclidische en niet-euclidische meetkunde ... een doolhof?*, Wiskunde en Onderwijs Jg. 11 nr. 41 (1985), 71–106 (with A. Clement) [Affine, projective, Euclidean and non-Euclidean geometry, ... a jungle?].
3. *Sinus en cosinus (een geheugensteuntje)*, School en Computer, 3de jaargang nr 3, 8–10 + software (1985) (with A. Clement and E. Van den Mooter) [Sine and cosine (an aid)].
4. *Eindige Velden*, Wiskunde en Onderwijs Jg. 16 nr.61 (1990), 93–108 [Finite Fields].
5. *Test jzelf met 1001 VWO-vragen*, Wiskunde en Onderwijs Jg. 26 nr.104 (2000), 439–447 (with T. Beernaerts, P. Igodt, V. Ongenae and E. Staels) [Test yourselves with 1001 math-questions].
6. *USolv-IT: a web-platform for self-assessment by, and management of, a problems database*. Newsletter of the European Mathematical Society, 46, (2002) 27–28 (with P. Igodt).
7. *USolv-IT: a Web Platform for Multiple Choice Tests by Management of a Problems Database*. World Conference on Educational Multimedia, Hypermedia and Telecommunications 2003, 795–798 (with P. Igodt).