

# Daniele Bartoli

## *Curriculum Vitae*

### Personal Information

Birth date 22/09/1985  
Birth place Molfetta (BA)  
Place of Residence Foligno (PG)  
Actual Position Associate Professor  
Dipartimento di Matematica e Informatica  
Università degli studi di Perugia

Contact information Dipartimento di Matematica e Informatica  
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ResearcherID: M-4701-2016

### Research interests

1. Algebraic Geometry in positive characteristic:
  - automorphisms of curves [4];
  - maximal curves [85,75,69,87];
2. Algebraic varieties [27, 29, 49];
3. Construction and classification of objects in finite projective and affine spaces over Galois fields:
  - complete arcs in projective planes [2,5,6,8,9,15,21,25,54];
  - complete caps [1,3,7,13,19,22,35,37,38,39,42,47];
  - complete  $(n, k)$ -arcs [12,30,36,41,95];
  - complete arcs in higher dimensional spaces [20];
  - saturating sets [8,11,62];
  - semiovals [14,28,57];
  - semiarcs [17];
  - blocking sets.
4. Coding Theory:
  - functional codes [16,18,58];
  - AG codes [45,53,51,56,59, 75,84];
  - quantum codes [3,19,1A,84];

- additive codes [24];
  - subspace codes [26,40,78];
  - covering codes [10,23,32,62, 68];
  - locally recoverable codes [73];
  - minimal codes [60,81,86,94,96].
5. Permutation Polynomials over finite fields [31,34,43,44,52,50,63, 76,91,79,93,83];
  6. Value set of polynomials [74]
  7. Planar Polynomials in characteristic two and their generalizations [61,64,80];
  8. Planar Polynomials in odd characteristic [67,90];
  9. Scattered linear sets, scattered polynomials and their generalizations [47,48,72,77,92,88,89];
  10. Moore exponents sets [65];
  11. Semifields [33,46].
  12. Graph Theory:
    - Metric dimension of graphs [55,71,66].
  13. Number Theory:
    - Diophantine Equations [70].

## Education

2-2012 *Phd in Mathematics*

Università degli Studi di Perugia

Title: *Construction and Classification of Geometrical Structures*

Advisors: G. Faina, S. Marcugini, F. Pambianco

9-2008 *Master Degree in Mathematics*

Università degli Studi di Perugia

Title: *Codici Quantici e Loro Proprietà Geometriche*

Advisors: G. Faina, S. Marcugini, F. Pambianco

9-2006 *Bachelor Degree in Mathematics*

Università degli Studi di Perugia

Title: *Archi e calotte completi nello spazio proiettivo  $n$ -dimensionale sopra un campo di Galois e loro interpretazione come codici lineari*

Advisors: G. Faina, S. Marcugini, F. Pambianco

*Summer Schools:*

- “Summer Doctoral School 2009 Groebner bases, Geometric codes and Order Domains”, 8–13 June 2009, Trento.

## Awards

2018 MDPI Young Mathematician Award.

<https://www.mdpi.com/about/announcements/1453>

2017 Elsevier Mathematical Sciences Sponsorship Fund 2017 (Project “Finite Geometry and Algebraic Codes”).

2015 “Early Career Attendees support” for SIAM 2015, NIMS, Daejeon, South Korea.

2015 “Fund Professor F. Wuytack Research Credits 2014-2015 - 2nd Semester”.

2014 Kirkman Medal 2014, form *Institute of Combinatorics and its Applications*,

[https://en.wikipedia.org/wiki/Institute\\_of\\_Combinatorics\\_and\\_its\\_Applications](https://en.wikipedia.org/wiki/Institute_of_Combinatorics_and_its_Applications)

## Editorial Board

2019- Ars Combinatoria (Associate Editor).

2020 Ars Combinatoria (Managing Editor).

2019- Advances in Mathematics of Communications (Associate Editor).

## Positions

30/11/2021– Associate Professor  
Dipartimento di Matematica e Informatica  
Università degli studi di Perugia

30/11/2018–29/11/2021 Assistant Professor (RTD B)  
Dipartimento di Matematica e Informatica  
Università degli studi di Perugia

01/09/2015–31/08/2018 Researcher (RTD A)  
Dipartimento di Matematica e Informatica  
Università degli studi di Perugia

01/07/2014–31/08/2015 Marie-Curie fellow (Marie-Curie Intra-European Fellowship, “Finite and Algebraic Geometry for Error correction”, project number 626511)  
Department of Mathematics  
Ghent University, Belgium

3/6/2013–1/6/2014 Post-Doc position “Applicazioni della geometria combinatoria alla costruzione di codici quantici” (Regione Umbria - FSE)  
Dipartimento di Matematica e Informatica  
Università degli studi di Perugia

15/3/2012–14/3/2013 Post-Doc position “Codici quantici e codici con alta capacità di correzione”  
Dipartimento di Matematica e Informatica  
Università degli studi di Perugia

## Research activities

### Invited talks

- 5–9/07/2021 British Combinatorial Conference. Durham, GB (online). *Hasse-Weil type theorems and relevant classes of polynomial functions.*
- 27–28/05/2021 CryptTO Conference 2021. Torino, Italy (online). *Functions with low  $c$ -differential uniformity.*
- 9–13/7/19 SIAM Conference on Applied Algebraic Geometry, Bern, Switzerland. *More on exceptional scattered polynomials.*
- 21–24/5/19 Fields Institute Carleton Finite Fields Workshop. Carleton University, Ottawa, Canada. *Applications of curves over finite fields to polynomial problems.*
- 31/1/2019 – 3/2/19 Finite geometry workshop 2019. Szeged, Hungary. *Applications of curves over finite fields to polynomial problems.*
- 15–16/10/18 3rd Number Theory Meeting. Torino, Italy. *Permutation polynomials over finite fields.*
- 16–20/5/18 Antalya Algebra Days XX. Şirince-Izmir, Turkey. *Permutation polynomials over finite fields.*
- 2/11/2015 Coding Theory and Cryptography IV. Bruxelles, Belgium. *Algebraic methods in Projective Geometry.*
- 2–7/8/2015 SIAM Conference on Applied Algebraic Geometry. Daejeon, South Korea. *The covering problem for linear codes and algebraic curves over finite fields.*
- 27/5/2011 Colloquium on Galois Geometry. Gent, Belgium. *On arcs and caps in projective spaces.*

### Contributed talks

- 1/12/2021 Hasse-Weil type theorems and relevant classes of polynomial functions, Seminario congiunto UMI-Gruppo Crittografia e Codici e Iniziativa De Componendis Cifris Gruppo MathCifris (online).
- 3–7 / 06 / 2019  $\mathbb{F}_q$ 14, Vancouver, Canada. *More on exceptional scattered polynomials.*
- 28–31 / 05 / 2019 CanaDAM. Vancouver, Canada. *More on exceptional scattered polynomials.*
- 3–9 / 06 / 2018 Combinatorics 2018. Arco, Italy. *Exceptional scattered polynomials.*
- 10–16 / 09 / 2017 Finite Geometries 2017 - Fifth Irsee Conference. Irsee, Germany.  $\mathbb{F}_{p^2}$ -maximal curves with many automorphisms are Galois-covered by the Hermitian curve.

- 5–9 / 06 / 2017 Fq13. Gaeta, Italy. *AG codes from the GK and the GGS curves.*
- 24–28 / 05 / 2017 Ninth shanghai conference on combinatorics. Shanghai, China. *AG codes from the GK and the GGS curves.*
- 29 / 05 – 4 / 06 / 2016 Combinatorics 2016. Maratea, Italy. *On monomial permutation polynomials.*
- 5–9 / 05 / 2015 GAC Workshop 2016 - Geometric and Algebraic Combinatorics Workshop. Pécs, Hungary. *On monomial permutation polynomials.*
- 4–6 / 11 / 2015 DARNEC'15. Istanbul, Turkey. *Algebraic curves and Random Network Codes.*
- 17–19 / 09 / 2015 Giornate di Geometria. Caserta, Italy. *Algebraic curves and Random Network Codes.*
- 7–11 / 09 / 2015 XX Congresso UMI. Siena, Italy. *The second and the third smallest arrangements of hyperplanes in finite projective spaces.*
- 13–17 / 07 / 2015 Fq12. Saratoga Springs, USA. *Algebraic curves and Random Network Codes.*
- 8–11 / 07 / 2015 The Fields-TIMC Workshop on Functions and Geometries over Finite Fields. Ottawa, Canada. *Algebraic curves and Random Network Codes.*
- 21–27 / 06 / 2015 8th Slovenian Conference on Graph Theory. Kranjska Gora, Slovenia. *Resolving sets in affine planes.*
- 13–17 / 04 / 2015 WCC 2015 - The Ninth International Workshop on Coding and Cryptography. Paris, France. *The second and the third smallest arrangements of hyperplanes in finite projective spaces.*
- 15–20 / 03 / 2015 Alcoma 2015. Kloster Banz, Germany. *Complete  $(k, 3)$ -arcs from quartic curves.*
- 2–7 / 02 / 2015 Workshop on algebraic curves and function fields over a finite field. Perugia, Italy. *Near-MDS codes from algebraic curves.*
- 14–20 / 09 / 2014 Finite Geometries 2014 - Fourth Irsee Conference. Irsee, Germany. *Small complete arcs in projective spaces.*
- 1–6 / 06 / 2014 Combinatorics 2014. Gaeta, Italy. *Probabilistic methods and complete caps.*
- 10–14 / 06 / 2013 Finite Geometry Conference and Workshop. Szeged, Hungary. *Small complete caps and saturating sets in Galois spaces II.*
- 9–15 / 09 / 2012 Combinatorics 2012. Perugia, Italy. *New types of estimate for the smallest size of complete arcs in  $PG(2, q)$ .*
- 15–21 / 06 / 2012 ACCT 2012. Pomorie, Bulgaria. *New upper bounds and new types of estimate for the smallest size of complete arcs in  $PG(2, q)$ .*
- 13–14 / 02 / 2012 Giornate di Geometria. Vicenza, Italy. *Functional codes and Quantum codes.*

3 / 05 / 2010	BCRYPT PhD Day. UCL Crypto Group Louvain-la-Neuve, Belgium. <i>Complete arcs in projective planes.</i>
27 / 06 – 3 / 07 / 2010	Combinatorics 2010. Verbania, Italy. <i>Geometric construction of quantum codes.</i>
16 / 12 / 2009	Primo Convegno del Laboratorio di Matematica Computazionale Sauro Tulipani. Perugia, Italy. <i>Un approccio algoritmico ai codici quantici.</i>
25–29 / 05 / 2009	Galois Geometries and Applications 2009. Gent, Belgium. <i>New Quantum Caps in <math>PG(4, 4)</math>.</i>

### Referee for

- 2018- Advances in Mathematics of Communications;
- 2016- Afrika Matematika;
- 2014- Algebra and Discrete Mathematics;
- 2020- Applicable Algebra in Engineering, Communication and Computing;
- 2021- Bulletin of the London Mathematical Society;
- 2018- Combinatorica;
- 2021- Computers and Electrical Engineering;
- 2013- Designs, Codes, and Cryptography;
- 2013- Discrete Mathematics;
- 2018- European Journal of Combinatorics;
- 2013- Finite Fields and Their Applications;
- 2018- IEEE Transactions in Information Theory;
- 2020- IEEE Communications Letters;
- 2018- Indian Journal of Mathematics;
- 2019- Information Processing Letters;
- 2020- Journal of Algebra;
- 2020- Journal of Algebraic Combinatorics;
- 2020- Journal of Combinatorial Designs;
- 2017- Journal of Combinatorial Optimization;
- 2015- Journal of Geometry.

## Articles

### Journal Papers

1. D. BARTOLI, A. A. DAVYDOV, S. MARCUGINI, F. PAMBIANCO. *The minimum order of complete caps in  $PG(4, 4)$* , Advances in Mathematics of Communications **5**, (2011) 37–40. (SCIMAGO: Q2)
2. D. BARTOLI, A. A. DAVYDOV, G. FAINA, S. MARCUGINI, F. PAMBIANCO. *On sizes of complete arcs in  $PG(2, q)$* , Discrete Mathematics **312**(3), (2012) 680–698. (SCIMAGO: Q1)
3. D. BARTOLI, G. FAINA, S. MARCUGINI, F. PAMBIANCO. *New quantum caps in  $PG(4, 4)$* , Journal of Combinatorial Designs **20**(10), (2012) 448–466. (SCIMAGO: Q1)
4. N. ANBAR, D. BARTOLI, S. FANALI, M. GIULIETTI. *On the size of the automorphism group of a plane algebraic curve in positive characteristic*. Journal of Pure and Applied Algebra **217** (7), (2013) 1224–1236. (SCIMAGO: Q1)
5. D. BARTOLI, A. A. DAVYDOV, G. FAINA, S. MARCUGINI, F. PAMBIANCO. *New upper bounds on the smallest size of a complete arc in a finite Desarguesian projective plane*, Journal of Geometry **104**(1), (2013) 11–43. (SCIMAGO: Q3)
6. D. BARTOLI, A.A. DAVYDOV, S. MARCUGINI, F. PAMBIANCO. *A 3-cycle construction of complete arcs sharing  $(q + 3)/2$  points with a conic*, Advances in Mathematics of Communications **7**(3), (2013) 319–334. (SCIMAGO: Q2)
7. D. BARTOLI, G. FAINA, M. GIULIETTI. *Small complete caps in three-dimensional Galois spaces*, Finite Fields and Their Applications **24**, (2013) 184–191. (SCIMAGO: Q1)
8. D. BARTOLI, G. FAINA, S. MARCUGINI, F. PAMBIANCO. *On the minimum size of complete arcs and minimal saturating sets in projective planes*, Journal of Geometry **104**(3), (2013) 409–419. (SCIMAGO: Q3)
9. D. BARTOLI, G. FAINA, S. MARCUGINI, F. PAMBIANCO, A.A. DAVYDOV. *A new algorithm and a new type of estimate for the smallest size of complete arcs in  $PG(2, q)$* , Electronic Notes Discrete Mathematics **40**, (2013) 27–31. (SCIMAGO: Q3)
10. F. PAMBIANCO, A.A. DAVYDOV, D. BARTOLI, M. GIULIETTI, S. MARCUGINI. *A note on multiple coverings of the farthest-off points*, Electronic Notes Discrete Mathematics **40**, (2013) 289–293. (SCIMAGO: Q3)
11. F. PAMBIANCO, D. BARTOLI, G. FAINA, S. MARCUGINI. *Classification of the smallest minimal 1-saturating sets in  $PG(2, q)$ ,  $q \leq 23$* , Electronic Notes Discrete Mathematics **40**, (2013) 229–233. (SCIMAGO: Q3)
12. D. BARTOLI, S. MARCUGINI, F. PAMBIANCO. *The non-existence of some NMDS codes and the extremal sizes of complete  $(n, 3)$ -arcs in  $PG(2, 16)$* , Designs, Codes and Cryptography **72**(1), (2014) 129–134. (SCIMAGO: Q2)
13. N. ANBAR, D. BARTOLI, M. GIULIETTI, I. PLATONI. *Small Complete Caps from Singular Cubics*, Journal of Combinatorial Designs **22**(10), (2014) 409–424. (SCIMAGO: Q2)
14. D. BARTOLI. *On the Structure of Semiovals of Small Size*, Journal of Combinatorial Designs **22**(12), (2014) 525–536. (SCIMAGO: Q2)
15. D. BARTOLI, A.A. DAVYDOV, G. FAINA, A.A. KRESHCHUK, S. MARCUGINI, F. PAMBIANCO, I. TKACHENKO. *Upper bounds on the smallest size of a complete arc in  $PG(2, q)$  under a certain probabilistic conjecture*, Problems of Information Transmission **50**(4), (2014) 320–339. (SCIMAGO: Q2)

16. D. BARTOLI, M. DE BOEK, S. FANALI, L. STORME. *On the functional codes defined by quadrics and Hermitian varieties*. *Designs, Codes and Cryptography* **71**(1), (2014) 21–46. (SCIMAGO: Q2)
17. D. BARTOLI, G. FAINA, G. KISS, S. MARCUGINI, F. PAMBIANCO. *2-semiarcs in  $PG(2, q)$ ,  $q \leq 13$* , *Ars Combinatoria* **117**, (2014) 435–462. (SCIMAGO: Q3)
18. D. BARTOLI, L. STORME. *On the functional codes arising from the intersections of algebraic hypersurfaces of small degree with a non-singular quadric*, *Advances in Mathematics of Communications* **8**(3), (2014) 271–280. (SCIMAGO: Q2)
19. J. BIERBRAUER, D. BARTOLI, G. FAINA, S. MARCUGINI, F. PAMBIANCO, Y. EDEL. *The structure of quaternary quantum caps*, *Designs, Codes and Cryptography* **72**(3), (2014) 733–747. (SCIMAGO: Q2)
20. D. BARTOLI, M. GIULIETTI, I. PLATONI. *On the covering radius of MDS codes*, *IEEE Transactions on Information Theory* **61**(2), (2015) 801–811. (SCIMAGO: Q1)
21. D. BARTOLI, A. A. DAVYDOV, G. FAINA, S. MARCUGINI, F. PAMBIANCO. *New types of estimates for the smallest size of complete arcs in a finite Desarguesian projective plane*, *Journal of Geometry* **106**(1), (2015) 1–17. (SCIMAGO: Q3)
22. N. ANBAR, D. BARTOLI, M. GIULIETTI, I. PLATONI. *Small Complete Caps from Singular Cubics, II*, *Journal of Algebraic Combinatorics* **41**(1), (2015) 185–216. (SCIMAGO: Q1)
23. D. BARTOLI, A.A. DAVYDOV, M. GIULIETTI, S. MARCUGINI, F. PAMBIANCO. *Multiple Coverings of the Farthest-off Points with Small Density from Projective Geometry*, *Advances in Mathematics of Communications* **9**(1), (2015) 63–85. (SCIMAGO: Q2)
24. D. BARTOLI, J. BIERBRAUER, G. FAINA, S. MARCUGINI, F. PAMBIANCO. *The nonexistence of an additive quaternary  $[15,5,9]$ -code*, *Finite Fields and Their Applications* **36**, (2015) 29–40. (SCIMAGO: Q1)
25. D. BARTOLI, A.A. DAVYDOV, G. FAINA, A.A. KRESHCHUK, S. MARCUGINI, F. PAMBIANCO. *Upper bounds on the smallest size of a complete arc in a finite Desarguesian projective plane based on computer search*, *Journal of Geometry* **107**(1), (2016) 89–117. (SCIMAGO: Q3)
26. D. BARTOLI, F. PAVESE. *A note on Equidistant Subspace Codes*, *Discrete Applied Mathematics* **198**, (2016) 291–296. (SCIMAGO: Q2)
27. D. BARTOLI, L. STORME. *The second and the third smallest arrangements of hyperplanes in finite projective spaces*, *Finite Fields and Their Applications* **37**, (2016) 225–239. (SCIMAGO: Q1)
28. D. BARTOLI, G. KISS, S. MARCUGINI, F. PAMBIANCO. *On the spectrum of sizes of semiovals contained in the Hermitian curve*, *European Journal of Combinatorics* **52**(A), (2016) 223–233. (SCIMAGO: Q1)
29. D. BARTOLI, A. SBOUI, L. STORME. *Bounds on the number of rational points of algebraic hypersurfaces over finite fields, with applications to projective Reed-Muller codes*, *Advances in Mathematics of Communications* **10**(2), (2016) 355–365. (SCIMAGO: Q2)
30. D. BARTOLI, M. GIULIETTI, G. ZINI. *Complete  $(k, 3)$ -arcs from quartic curves*, *Designs, Codes and Cryptography* **79**(3), (2016) 487–505. (SCIMAGO: Q2)
31. D. BARTOLI, M. GIULIETTI, G. ZINI. *On monomial complete permutation polynomials*, *Finite Fields and Their Applications* **41**, (2016) 132–158. (SCIMAGO: Q1)



32. D. BARTOLI, A.A. DAVYDOV, M. GIULIETTI, S. MARCUGINI, F. PAMBIANCO. *Further results on multiple coverings of the farthest-off points*, Advances in Mathematics of Communications **6**(3), (2016) 613–632. (SCIMAGO: Q2)
33. D. BARTOLI, J. BIERBRAUER, G. KYUREGHYAN, M. GIULIETTI, S. MARCUGINI, F. PAMBIANCO. *A family of semifields in characteristic 2*, Journal of Algebraic Combinatorics **45**(2), (2017) 455–473. (SCIMAGO: Q1)
34. D. BARTOLI, M. GIULIETTI, L. QUOOS, G. ZINI. *Complete permutation polynomials from exceptional polynomials*, Journal of Number Theory **176**, (2017) 46–66. (SCIMAGO: Q1)
35. D. BARTOLI, S. MARCUGINI, F. PAMBIANCO. *A construction of small complete caps in projective spaces*, Journal of Geometry **108**(1), (2017) 215–246. (SCIMAGO: Q3)
36. D. BARTOLI, S. MARCUGINI, F. PAMBIANCO. *On the completeness of plane cubic curves over finite fields*, Designs, Codes and Cryptography **83**(2), (2017) 233–267. (SCIMAGO: Q2)
37. D. BARTOLI, S. MARCUGINI, A. MILANI, F. PAMBIANCO. *Completeness of the 95256-cap in  $PG(12, 4)$* , Electronic Notes Discrete Mathematics **57**, (2017) 27–32. (SCIMAGO: Q3)
38. D. BARTOLI, A.A. DAVYDOV, G. FAINA, S. MARCUGINI, F. PAMBIANCO. *Conjectural upper bounds on the smallest size of a complete cap in  $PG(N, q)$ ,  $N \geq 3$* , Electronic Notes Discrete Mathematics **57**, (2017) 15–20. (SCIMAGO: Q3)
39. D. BARTOLI, A.A. DAVYDOV, ALEXEY A. KRESHCHUK, S. MARCUGINI, F. PAMBIANCO. *Upper bounds on the smallest size of a complete cap in  $PG(3, q)$  and  $PG(4, q)$* , Electronic Notes Discrete Mathematics **57**, (2017) 21–26. (SCIMAGO: Q3)
40. D. BARTOLI, M. BONINI, M. GIULIETTI. *Constant dimension codes from Riemann-Roch spaces*, Advances in Mathematics of Communications **11**(4), (2017) 705–713. (SCIMAGO: Q2)
41. D. BARTOLI, P. SPEZIALI, G. ZINI. *Complete  $(k, 4)$ -arcs from quintic curves*, Journal of Geometry **108**(3), (2017) 985–1011. (SCIMAGO: Q3)
42. D. BARTOLI, G. FAINA, S. MARCUGINI, F. PAMBIANCO. *Complete caps in  $AG(N, q)$  with both  $N$  and  $q$  odd*, Journal of Combinatorial Designs **25**(9), (2017) 419–425. (SCIMAGO: Q2)
43. D. BARTOLI, G. ZINI. *On permutation trinomials of type  $x^{2p^s+r} + x^{p^s+r} + \lambda x^r$* , Finite Fields and Their Applications **49**, (2018) 126–131. (SCIMAGO: Q1)
44. D. BARTOLI, M. GIULIETTI. *Permutation polynomials, fractional polynomials, and algebraic curves*, Finite Fields and their Applications **51**, (2018) 1–16. (SCIMAGO: Q1)
45. D. BARTOLI, M. MONTANUCCI, G. ZINI. *Multi-point AG codes on the GK curve*, Designs, Codes and Cryptography **86**(1), (2018) 161–177. (SCIMAGO: Q2)
46. D. BARTOLI, J. BIERBRAUER, G. FAINA, S. MARCUGINI, F. PAMBIANCO. *A family of semifields in odd characteristic*, Designs, Codes and Cryptography **86**(3), (2018) 611–621. (SCIMAGO: Q2)
47. D. BARTOLI, M. GIULIETTI, G. MARINO, O. POLVERINO. *Maximum scattered linear sets and complete caps in Galois spaces*, Combinatorica, **38**(2), (2018) 255–278. (SCIMAGO: Q1)
48. D. BARTOLI, Y. ZHOU, *Exceptional scattered polynomials*, Journal of Algebra **509**, (2018) 507–534. (SCIMAGO: Q1)
49. A. AGUGLIA, D. BARTOLI, L. STORME, Zs. WEINER, *A characterization of Hermitian varieties as codewords*, Electronic Journal of Combinatorics **25**(1) #P1.71 (2018). (SCIMAGO: Q2)

50. D. BARTOLI, *On a conjecture about a class of permutation trinomials*, Finite Fields and their Applications **52**, (2018) 30–50. (SCIMAGO: Q1)
51. D. BARTOLI, L. QUOOS, G. ZINI, *Algebraic Geometric Codes on many points from Kummer Extensions*, Finite Fields and their Applications **52**, (2018) 319–335. (SCIMAGO: Q1)
52. D. BARTOLI, L. QUOOS. *Permutation polynomials of the type  $x^r g(x^s)$  over  $\mathbb{F}_{q^{2n}}$* , Designs Codes and Cryptography **86**(8), (2018) 1589–1599. (SCIMAGO: Q2)
53. D. BARTOLI, M. MONTANUCCI, G. ZINI. *AG codes and AG quantum codes from the GGS curve*, Designs, Codes and Cryptography **86**(10), (2018) 2315–2344. (SCIMAGO: Q2)
54. D. BARTOLI, A.A. DAVYDOV, S. MARCUGINI, F. PAMBIANCO (2016), *On the Smallest Size of an Almost Complete Subset of a Conic in  $PG(2, q)$  and Extendability of Reed-Solomon Codes*, Problems of Information Transmission, **54**(2), (2018) 101–115. (SCIMAGO: Q2)
55. D. BARTOLI, G. KISS, T. HEGÉR, M. TAKÁTS. *On the metric dimension of affine planes, biaffine planes and generalized quadrangles*. Australasian Journal of Combinatorics **72**(2) (2018), 226–248.
56. D. BARTOLI, A.M. MASUDA, M. MONTANUCCI, L. QUOOS CONTE. *Pure gaps on curves with many rational places*, Finite Fields and their Applications **53**, (2018) 287–308. (SCIMAGO: Q1)
57. D. BARTOLI, F. PAVESE. *Blocking semiovals in  $PG(2, q^2)$ ,  $q$  odd, admitting  $PGL(2, q)$  as an automorphism group*, Finite Fields and their Applications **54**, (2018) 315–334. (SCIMAGO: Q1)
58. D. BARTOLI, M. GIULIETTI, M. MONTANUCCI. *Linear codes from Denniston maximal arcs*, Designs, Codes and Cryptography, **87**(4), (2019) 795–806. (SCIMAGO: Q2)
59. D. BARTOLI, M. BONINI. *Minimum weight codewords in dual Algebraic-Geometric codes from the Giulietti-Korchmáros curve*, Designs, Codes and Cryptography **87**(6), (2019) 1433–1445 (SCIMAGO: Q2)
60. D. BARTOLI, M. BONINI. *Minimal linear codes in odd characteristic*, IEEE Transactions on Information Theory **65**(7), (2019) 4152–4155. (SCIMAGO: Q1)
61. D. BARTOLI, K.-U. SCHMIDT. *Low-degree planar polynomials over finite fields of characteristic two*, J. Algebra **535**, (2019) 541–555. (SCIMAGO: Q1)
62. D. BARTOLI, A.A. DAVYDOV, M. GIULIETTI, S. MARCUGINI, F. PAMBIANCO. *New Bounds for Linear Codes of Covering Radii 2 and 3*, Cryptography and Communications **11**, 903–920 (2019). (SCIMAGO: Q1)
63. D. BARTOLI. *Permutation trinomials over  $\mathbb{F}_{q^3}$* , Finite Fields and their Applications **61**, (2020) 101597.
64. D. BARTOLI, M. TIMPANELLA. *A family of planar binomials in characteristic 2*, Finite Fields and their Applications **63**, (2020) 101651.
65. D. BARTOLI, Y. ZHOU. *Asymptotics of Moore exponent sets*, Journal of Combinatorial Theory, Series A, **175**, (2020) 105281.
66. D. BARTOLI, G. KISS, S. MARCUGINI, F. PAMBIANCO. *Resolving sets for higher dimensional projective spaces*, Finite Fields and their Applications, **67**, 101710 (2020).
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### Book Papers

- [1A] D. BARTOLI, J. BIERBRAUER, S. MARCUGINI, F. PAMBIANCO. *Geometric Constructions of quantum codes*. Error-Correcting Codes, Cryptography and Finite Geometries **523**, 149–154, A.A. Bruen and D. Wehlau. ISBN/ISSN: 9780821849569, (2010).

### Submitted Papers

1. D. BARTOLI, M. GIULIETTI, M. TIMPANELLA. *Two-to-one functions from Galois extensions*, submitted.
2. D. BARTOLI, G. MICHELI, G. ZINI, F. ZULLO.  *$r$ -fat linearized polynomials over finite fields*, submitted.
3. D. BARTOLI, N. DURANTE. *On the classification of low-degree ovoids of  $Q(4, q)$* , submitted.
4. D. BARTOLI, M. TIMPANELLA, *On a conjecture on APN permutations*, submitted.
5. D. BARTOLI, G. ZINI, F. ZULLO, *Linear maximum rank distance codes of exceptional type*, submitted.
6. D. BARTOLI, M. TIMPANELLA, *Investigating rational perfect nonlinear functions*, submitted.
7. D. BARTOLI, M. CALDERINI, O. POLVERINO, F. ZULLO, *On the infiniteness of a family of APN functions*, submitted.
8. D. BARTOLI, M. BORELLO, *Small Strong Blocking Sets by Concatenation*, submitted.

9. D. BARTOLI, M. CALDERINI, C. RIERA, P. STĂNICĂ, *Low  $c$ -differential uniformity for functions modified on subfields*, submitted.
10. D. BARTOLI, M. GIULIETTI, G. PERARO, G. ZINI, *On monomial generalized almost perfect nonlinear functions*, submitted.

### Extended Abstracts

1. D. BARTOLI, M. CALDERINI, C. RIERA, P. STĂNICĂ (2021). *Low  $c$ -differential uniformity for functions modified on subfields*. The 6th International Workshop on Boolean Functions and their Applications (BFA) 2021.
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