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Full Professor

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1 Education background

Ph.D. in Applied Mathematics. 2003

Title: Improving Evaluation Codes

San Diego State University (SDSU). Technical University of Catalonia (UPC, *Universitat Politècnica de Catalunya*).

Advisors: Michael E. O'Sullivan (SDSU) and Sebastià Xambó Descamps (UPC).

Degree in Mathematics. UPC. 1998

2 Official certificates

Full Professor Accreditation (ANECA-Government of Spain) 2015

Advanced Research Accreditation - Full Professor (AQU Catalunya) 2012

Accreditation - Tenured Assistant Professor (ANECA-Government of Spain) 2007

Research Accreditation - Tenured Assistant Professor (AQU Catalunya) 2007

Tenure-Track Lecturer (AQU Catalunya) 2004

Collaborating Lecturer (AQU Catalunya) 2004

3 Merits in research and teaching

Research

Merits of Research Certificate (CNEAI) 2003-2008, 2009-2014, 2015-2020

Merits of Research Certificate (AQU Catalunya) 2001-2006, 2007-2012, 2013-2018

Merit of Research Quality (Universitat Rovira i Virgili (URV)), that "identifies the staff with a research activity with a quality impact that is significantly higher than the international mean in the specific area". 2012

Teaching

Merit of Teaching Certificates (CNEAI) 2005, 2010, 2015, 2020

Merit of Teaching Certificates (AQU Catalunya) 1998-2004, 2005-2009, 2010-2014, 2015-2019

Academic Activity Award (URV) 2010-2011, 2011-2012, 2012-2013, 2013-2014
(award earned by those URV faculty members with above-average performance)

4 University service

Secretary of the academic committee of the Doctorate Program of Computer Science and Mathematics of Security, at URV, Since 2017.

Coordinator of the degree on Physics and Mathematics, Universitat Rovira i Virgili, September 2019 to September 2023.

Head of the Mathematics Section, Universitat Rovira i Virgili, October 2020 to March 2023.

Member of the committee developing the new degree on Computer Science, Universitat Rovira i Virgili, 2007 to 2008.

Responsible of the permanent colloquia at the Department of Computer Science and Mathematics, Universitat Rovira i Virgili, <http://deim.urv.cat/serveisiactivitats/deiminaris/>, September 2008 to October 2022.

5 Positions held

Maternity leaves in 2010, 2011 and 2013.

Full Professor 2021-present

School of Engineering, URV, *Universitat Rovira i Virgili*.

Tenured Associate Professor 2010-2021

School of Engineering, URV, *Universitat Rovira i Virgili*.

Tenured Assistant Professor 2008-2010

School of Engineering, URV.

Tenure-Track Lecturer	2007-2008
School of Engineering, URV.	
Tenure-Track Lecturer	2004-2007
School of Engineering UAB, <i>Universitat Autònoma de Barcelona</i> .	
Assistant professor	2003-2004
School of Engineering, UAB.	
Assistant professor	2003
School of Computer Sciences, UPC.	
Assistant professor	1998-1999
School of Engineers, UPC.	

6 Publications

6.1 Books as author

- [B4] M. Bras Amorós, O. Farràs Ventura: *Matemàtica Discreta 2*. Eina-E 29, Publicacions de la URV, May 18, 2022. ISBN: 978-84-1365-004-3.
- [B3] M. Bras-Amorós, T. Giménez: *Els Números Canten. Cançons i Canterelles de Nombres*. Editorial de Música Boileau, Barcelona, 2017. ISBN: 978-84-17199-07-4.
- [B2] M. Bras-Amorós, J. Rifà-Coma: *Finite arithmetic and coding theory*. Universitat Oberta de Catalunya, 2015. ISBN:
- [B1] M. Bras-Amorós, J. Rifà-Coma: *Matemàtica Discreta II. Aritmètica i Teoria de la Codificació*. Eina-E 10, Publicacions de la URV, 2012. ISBN: 978-84-8424-207-9.

6.2 Books as editor

- [B1] M. Bras-Amorós, T. Høholdt (Eds), *Applied Algebra, Algebraic Algorithms and Error-Correcting Codes* (proceedings). Lecture Notes in Computer Science, Springer, vol. 5527, June 2009. ISSN: 0302-9743.

6.3 Books as translator

- [T1] Translation to English of the book R. Nolla, R. Massip: *Periodic Tilings at Casa Castellarnau* (Mosaics Periòdics a la Casa Castellarnau), Institut Pons d'Icart, Museu d'Història de Tarragona, 2013.

6.4 Invited book chapters

- [C2] M. Bras-Amorós, *Numerical Semigroups and Codes*, Algebraic Geometry Modeling in Information Theory, World Scientific, E. Martínez-Moro (ed.) 2013. ISBN: 978-981-4335-75-1
- [C1] M. E. O'Sullivan, M. Bras-Amorós, *The Key Equation for One-Point Codes*, Chapter 3 of *Advances in Algebraic Geometry Codes*, World Scientific, E. Martínez-Moro, C. Munuera, D. Ruano (eds.), vol. 5, pp. 99-152, 2008. ISBN 978-981-279-400-0

6.5 ISI JCR journal articles

- [J42] M. Bras-Amorós, A.S. Castellanos, L. Quoos, *The Isometry-Dual Property in Flags of Many-Point Algebraic Geometry Codes*, SIAM Journal on Applied Algebra and Geometry, Accepted, 2023. ISSN: 2470-6566.
- [J41] M. Bras-Amorós, *On the seeds and the great-grandchildren of a numerical semigroup*, Mathematics of Computation, Accepted, 2023. ISSN: 0025-5718.
- [J40] H. Pérez-Rosés, M. Bras-Amorós, J.M. Serradilla-Meriner, *Greedy Routing in Circulant Networks*, Graphs and Combinatorics, Springer, vol. 38, n. 86 June 2022. ISSN: 0911-0119.
- [J39] M. Bras-Amorós, A.S. Castellanos, L. Quoos, *The Isometry-Dual Property in Flags of Two-Point Algebraic Geometry Codes*, IEEE Transactions on Information Theory, vol. 68, n. 2, pp. 828–838 February 2022. ISSN: 0018-9448.
- [J38] J. Domingo-Ferrer, K. Muralidhar, M. Bras-Amorós, *General Confidentiality and Utility Metrics for Privacy-Preserving Data Publishing Based on the Permutation Model*, IEEE Transactions on Dependable and Secure Computing, vol. 18, n. 5, pp. 2505-2517, September-October, 2021. ISSN: 1545-5971.
- [J37] M. Bras-Amorós, H. Pérez-Rosés, J.M. Serradilla-Meriner, *Quasi-Ordinarization Transform of a Numerical Semigroup*, Symmetry, MDPI, vol. 13, n. 6, 1084, June 2021. ISSN: 2073-8994.
- [J36] M. Bras-Amorós, M. Gotti, *Atomicity and Density of Puiseux Monoids*, Communications in Algebra, Taylor and Francis, vol. 49, n. 4, pp. 1560-1570, 2021. ISSN: 0092-7872.

- [J35] M. Bras-Amorós, I. Duursma, E. Hong, *Isometry-Dual Flags of AG Codes*, Designs, Codes and Cryptography, Springer, vol. 88, pp. 1617-1638 August 2020.ISSN: 0925-1022.
- [J34] A. Sepúlveda Castellanos, M. Bras-Amorós, *Weierstrass Semigroup at $m+1$ Rational Points in Maximal Curves which Cannot Be Covered by the Hermitian Curve*, Designs, Codes and Cryptography, Springer, vol. 88, pp. 1595-1616, August 2020.ISSN: 0925-1022.
- [J33] M. Bras-Amorós, J. Fernández-González, *The Right-Generators Descendant of a Numerical Semigroup*, Mathematics of Computation, vol. 89, n. 324, pp. 2017-2030, July 2020.ISSN: 0025-5718.
- [J32] M. Bras-Amorós, *Increasingly Enumerable Submonoids of R : Music Theory as a Unifying Theme*, The American Mathematical Monthly, Mathematical Association of America, vol. 127, n. 1, pp. 33-44, January 2020.ISSN: 0002-9890.
- [J31] M. Bras-Amorós, *Ideals of Numerical Semigroups and Error-Correcting Codes*, Symmetry, MDPI, vol. 11, n. 11, 1406, November 2019.ISSN: 2073-8994.
- [J30] M. Bras-Amorós, *Tempered Monoids of Real Numbers, the Golden Fractal Monoid, and the Well-Tempered Harmonic Semigroup*, Semigroup Forum, Springer, vol. 99, n. 2, pp. 496-516, November 2019.ISSN: 0037-1912.
- [J29] M. Bras-Amorós, M. E. O'Sullivan, *The Symmetric Key Equation for Reed-Solomon Codes and a New Perspective on the Berlekamp-Massey Algorithm*, Symmetry, MDPI, vol. 11, n. 11, 1357, November 2019.ISSN: 2073-8994.
- [J28] M. Bras-Amorós, J. Fernández-González, *Computation of Numerical Semigroups by Means of Seeds*, Mathematics of Computation, American Mathematical Society, vol. 87, n. 313, pp. 2539-2550, September 2018.ISSN: 0025-5718.
- [J27] M. Bras-Amorós, *A Decoding Approach to Reed-Solomon Codes from Their Definition*, American Mathematical Monthly, Mathematical Association of America, vol. 125, n. 4, pp. 320-338, March 2018.ISSN: 0002-9890.
- [J26] M. Bras-Amorós, M. Pujol, *Side Lengths of Equiangular Polygons (as Seen by a Coding Theorist)*, American Mathematical Monthly, Mathematical Association of America, vol. 122, n. 5, pp. 476-478, May 2015.ISSN: 0002-9890.
- [J25] M. Bras-Amorós, K. Lee, A. Vico-Oton, *New Lower Bounds on the Generalized Hamming Weights of AG Codes*, IEEE Transactions on Information Theory, vol. 60, n. 10, pp. 5930-5937, October 2014.ISSN: 0018-9448.
- [J24] K. Lee, M. Bras-Amorós, M. E. O'Sullivan, *Unique Decoding of General AG Codes*, IEEE Transactions on Information Theory, vol. 60, n. 4, pp. 2038-2053, April 2014.ISSN: 0018-9448.
- [J23] K. Stokes, M. Bras-Amorós, *Linear, Non-Homogeneous, Symmetric Patterns and Prime Power Generators in Numerical Semigroups Associated to Combinatorial Configurations*, Semigroup Forum, Springer, vol. 88, n. 1, pp. 11-20, February 2014.ISSN: 0037-1912.
- [J22] M. Bras-Amorós, A. Vico-Oton, *On the Geil-Matsumoto Bound and the Length of AG Codes*, Designs, Codes and Cryptography, Springer, vol. 70, n. 1-2, pp. 117-125, January 2014.ISSN: 0925-1022.
- [J21] M. Bras-Amorós, P. A. García-Sánchez, A. Vico-Oton, *Nonhomogeneous Patterns on Numerical Semigroups*, International Journal of Algebra and Computation, World Scientific, vol. 23, n. 6, pp. 1469-1483, September 2013.ISSN: 0218-1967.
- [J20] M. Bras-Amorós, *The Ordinarization Transform of a Numerical Semigroup and Semigroups with a Large Number of Intervals*, Journal of Pure and Applied Algebra, Elsevier, vol. 216, n. 11, pp. 2507-2518, November 2012.ISSN:0022-4049.
- [J19] K. Lee, M. Bras-Amorós, M. E. O'Sullivan, *Unique Decoding of Plane AG Codes via Interpolation*, IEEE Transactions on Information Theory, vol. 58, n. 6, pp. 3941-3950, June 2012.ISSN: 0018-9448.
- [J18] M. Bras-Amorós, K. Stokes, *The Semigroup of Combinatorial Configurations*, Semigroup Forum, Springer, vol. 84, n. 1, pp. 91-96, January 2012.ISSN: 0037-1912.
- [J17] M. Bras-Amorós, J. Domingo-Ferrer, A. Vico-Oton, *Co-citations and Relevance of Authors and Author Groups*, International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems, World Scientific., vol. 19, pp. 127-139, September 2011.ISSN: 0218-4885.
- [J16] K. Stokes, M. Bras-Amorós, *Associating a Numerical Semigroup to the Triangle-Free Configurations*, Advances in Mathematics of Communications, American Institute of Mathematical Sciences, vol. 5, n. 2, pp. 351-371, May 2011.ISSN: 1930-5346.
- [J15] M. Bras-Amorós, J. Domingo-Ferrer, V. Torra, *A Bibliometric Index Based on the Collaboration Distance Between Cited and Citing Authors*, Journal of Informetrics, Elsevier, vol. 5, n. 2, pp. 248-264, April 2011.ISSN: 1751-1577.

- [J14] K. Stokes, M. Bras-Amorós, *Optimal Configurations for Peer-to-Peer User-Private Information Retrieval*, Computers and Mathematics with Applications, Elsevier, vol. 59, n. 4, pp. 1568-1577, February 2010. ISSN: 0898-1221.
- [J13] M. Bras-Amorós, S. Bulygin, *Towards a Better Understanding of the Semigroup Tree*, Semigroup Forum, Springer, vol. 79, n. 3, pp. 561-574, December 2009. ISSN: 0037-1912.
- [J12] J. Domingo-Ferrer, M. Bras-Amorós, Q. Wu, J. Manjón, *User-Private Information Retrieval Based on a Peer-to-Peer Community*, Data and Knowledge Engineering, Elsevier, vol. 68, n. 11, pp. 1237-1252, November 2009. ISSN: 0169-023X.
- [J11] M. Bras-Amorós, *On Numerical Semigroups and the Redundancy of Improved Codes Correcting Generic Errors*, Designs, Codes and Cryptography, Springer, vol. 53, n. 2, pp. 111-118, November 2009. ISSN: 0925-1022.
- [J10] M. Bras-Amorós, *Bounds on the Number of Numerical Semigroups of a Given Genus*, Journal of Pure and Applied Algebra, Elsevier, vol. 213, n. 6, pp. 997-1001, June 2009. ISSN: 0022-4049.
- [J9] M. Bras-Amorós, M. E. O'Sullivan, *Redundancies of Correction-Capability-Optimized Reed-Muller Codes*, Discrete Applied Mathematics, Elsevier, vol. 156, n. 15, pp. 3005-3010, August 2008. ISSN: 0166-218X.
- [J8] M. Bras-Amorós, *Fibonacci-Like Behavior of the Number of Numerical Semigroups of a Given Genus*, Semigroup Forum, Springer, vol. 76, n. 2, pp. 379-384, March 2008. ISSN: 0037-1912.
- [J7] M. Bras-Amorós, M. E. O'Sullivan, *Duality for Some Families of Correction Capability Optimized Evaluation Codes*, Advances in Mathematics of Communications, American Institute of Mathematical Sciences, vol. 2, n. 1, pp. 15-33, February 2008. ISSN: 1930-5346.
- [J6] M. Bras-Amorós, A. de Mier, *Representation of Numerical Semigroups by Dyck Paths*, Semigroup Forum, Springer, vol. 75, n. 3, pp. 676-681, December 2007. ISSN: 0037-1912.
- [J5] M. Bras-Amorós, M. E. O'Sullivan, *The Order Bound on the Minimum Distance of the One-Point Codes Associated to the Garcia-Stichtenoth Tower of Function Fields*, IEEE Transactions on Information Theory, vol. 53, n. 11, pp. 4241-4245, November 2007. ISSN: 0018-9448.
- [J4] M. Bras-Amorós, M. E. O'Sullivan, *On Semigroups Generated by Two Consecutive Integers and Improved Hermitian Codes*, IEEE Transactions on Information Theory, vol. 53, n. 7, pp. 2560-2566, July 2007. ISSN: 0018-9448.
- [J3] M. Bras-Amorós, *Algebraic-Geometry Codes, One-Point Codes and Evaluation Codes*, Designs, Codes and Cryptography, Springer, vol. 43, n. 2-3, pp. 137-145, June 2007. ISSN: 0925-1022.
- [J2] M. Bras-Amorós, *A Note on Numerical Semigroups*, IEEE Transactions on Information Theory, vol. 53 n. 2, pp. 821-823, February 2007. ISSN: 0018-9448.
- [J1] M. Bras-Amorós, M. E. O'Sullivan, *The Correction Capability of the Berlekamp-Massey-Sakata Algorithm with Majority Voting*, Applicable Algebra in Engineering, Communication and Computing, Springer, vol. 17 n. 5, pp. 315-335, October 2006. ISSN: 0938-1279.
- [J0] M. Bras-Amorós, P. A. García-Sánchez, *Patterns on Numerical Semigroups*, Linear Algebra and its Applications, Elsevier, vol. 414, pp. 652-669, April 2006. ISSN: 0024-3795.
- [J0] M. Bras-Amorós, *Acute Semigroups, the Order Bound on the Minimum Distance and the Feng-Rao Improvements*, IEEE Transactions on Information Theory, vol. 50 n. 6, pp. 1282-1289, June 2004. ISSN: 0018-9448.

6.6 Other journal articles (non-ISI JCR)

- [J46] K. Stokes, M. Bras-Amorós, *A Survey on the Use of Combinatorial Configurations for Anonymous Database Search*, Advanced Research in Data Privacy, Studies in Computational Intelligence, Springer, vol. 567, pp. 407-419, 2015. ISSN: 1860-949X.
- [J45] K. Stokes, M. Bras-Amorós, *Patterns in Semigroups Associated with Combinatorial Configurations*, Contemporary Mathematics 629, American Mathematical Society, pp. 323-334, 2014. ISSN 1098-3627 (online); ISSN 0271-4132 (print).
- [J44] M. Bras-Amorós, J. Domingo-Ferrer, *On Overlappings of Digitized Lines and Shared Steganographic File Systems*, Transactions on Data Privacy, vol. 1, n. 3, pp. 131-139, December 2008. ISSN: 1888-5063.
- [J43] M. Bras-Amorós, J. González, P. Guitart, J. Serra, F. García, *Sign and Magnitude Refinement Encoding for Lossy-to-Lossless Image Compression*, WSEAS Transactions on Signal Processing, vol. 2, n. 1, pp. 229-236, November 2005. ISSN: 1790-5022.

6.7 Proceedings in Springer, Elsevier or IEEE

- [P10] M. Bras-Amorós, C. Marín Rodríguez, *New Eliahou Semigroups and Verification of the Wilf Conjecture for Genus up to 65*, Lecture Notes in Artificial Intelligence, Modeling Decisions for Artificial Intelligence, V. Torra, Y. Narukawa (eds.), Springer, vol. 12898, pp.17-27. September 20, 2021.ISSN: 0302-9743.
- [P9] M. Bras-Amorós, *Ordinarization of Numerical Semigroups*, Electronic Notes in Discrete Mathematics, vol. 38, pp. 187-193, European Conference on Combinatorics, Graph Theory and Applications (EuroComb 2011), org. Rényi Institute, Budapest, Hungary, Elsevier, August 2011 to September 2011.ISSN: 1571-0653.
- [P8] M. Bras-Amorós, J. Domingo-Ferrer, V. Torra, *A Bibliometric Index Based On Collaboration Distances*, Lecture Notes in Artificial Intelligence, Modeling Decisions for Artificial Intelligence, V. Torra, Y. Narukawa (eds.), Springer, vol. 6408, pp. 5-6. October 2010.ISSN: 0302-9743.
- [P7] M. Bras-Amorós, M. E. O'Sullivan, *From the Euclidean Algorithm for Solving a Key Equation for Dual Reed-Solomon Codes to the Berlekamp-Massey Algorithm*, Lecture Notes in Computer Science, Applied Algebra, Algebraic Algorithms and Error-Correcting Codes, M. Bras-Amorós, T. Høholdt (eds.), Springer, vol. 5527, pp. 32-42, June 2009.ISSN: 0302-9743.
- [P6] J. Domingo-Ferrer, M. Bras-Amorós, *A Shared Steganographic File System With Error Correction*, Lecture Notes in Artificial Intelligence, Modeling Decisions for Artificial Intelligence, V. Torra, Y. Narukawa (eds.), Springer, vol. 5285, pp. 227-238. October 2008.ISSN: 0302-9743.
- [P5] J. Domingo-Ferrer, M. Bras-Amorós, *Peer-to-Peer Private Information Retrieval*, Lecture Notes in Computer Science, Privacy in Statistical Databases, J. Domingo-Ferrer, Yucel Saygin (eds.), Springer, vol. 5262, pp. 315-323. September 2008.ISSN: 0302-9743.
- [P4] M. Bras-Amorós, M. E. O'Sullivan, *Extended Norm-Trace Codes with Optimized Correction Capability*, Lecture Notes in Computer Science, Applied Algebra, Algebraic Algorithms and Error-Correcting Codes, P. V. Kumar, T. Høholdt, H. Janwa (eds.), Springer, vol. 4851, pp. 337-346, December 2007.ISSN: 0302-9743.
- [P3] M. Bras-Amorós, J. González, P. Guitart, J. Serra, F. García, *Still Image Compression Through Exhaustive Two-Valued Shape-Adaptive Searches*, IEEE Proceedings of the Data Compression Conference, p. 441, March 2006.ISSN: 1068-0314, ISBN-13: 978-0-7695-2545-8, ISBN-10: 0-7695-2545-8.
- [P2] M. Bras-Amorós, P. Guitart, J. González, J. Serra, F. García, *BISK Scheme Applied to Sign Encoding and Magnitude Refinement*, Lecture Notes in Artificial Intelligence, Advanced Concepts for Intelligent Vision Systems, Springer, vol. 3708, pp. 442-451, September 2005.ISSN: 0302-9743, ISBN: 3-540-29032-X.
- [P1] M. Bras-Amorós, *Improvements to Evaluation Codes and New Characterizations of Arf Semigroups*, Lecture Notes in Computer Science, Applied Algebra, Algebraic Algorithms and Error-Correcting Codes, M. Fossorier, T. Høholdt, A. Poli (eds.), Springer, vol. 2643, pp. 204-215, May 2003.ISSN: 0302-9743.

6.8 Other proceedings

- [P29] M. Bras-Amorós, *Different tree approaches to the problem of counting numerical semigroups by genus*, Proceedings of the 11th International Conference on Random and Exhaustive Generation of Combinatorial Structures, CEUR Workshop Proceedings, Ed. Luca Ferrari, Malvina Vamvakari, vol. 2113, pp. 7-11, Athens, Greece June 18-20, 2018.ISSN: 1613-0073.
- [P28] M. Bras-Amorós, K. Lee, A. Vico-Oton, *Semigroup Ideals, Intervals of Gaps, and Generalized Hamming Weights of AG Codes*, Proceedings of the Academy Contact Forum "Galois Geometries and Applications", The Royal Flemish Academy of Belgium for Science and the Arts, pp. 69-78 2014.
- [P27] M. Bras-Amorós, A. Vico-Oton, *On the Geil-Matsumoto Bound*, Workshop on Computational Security, Centre de Recerca Matemàtica, pp. 51-54, November 2011.
- [P26] K. Stokes, M. Bras-Amorós, *Combinatorial structures for an anonymous database search protocol*, Workshop on Computational Security, Centre de Recerca Matemàtica, pp. 19-30, November 2011.
- [P25] M. Bras-Amorós, A. Vico-Oton, *On the Geil-Matsumoto Bound*, Third International Castle Meeting on Coding Theory and Applications, J. Borges and M. Villanueva (eds.), Servei de Publicacions Universitat Autònoma de Barcelona, pp. 75-80, September 2011.ISBN: 978-84-490-2688-1
- [P24] K. Stokes, M. Bras-Amorós, *On Query Self-Submission in Peer-to-Peer User-Private Information Retrieval*, Proceedings of the 4th International Workshop on Privacy and Anonymity in the Information Society, PAIS 2011, Uppsala, Sweden, March 2011.ISBN: 978-1-4503-0611-9
- [P23] M. Bras-Amorós, A. Vico-Oton, *On the Size of the Colluder Set in Fingerprinting Attacks*, XI Reunión Española sobre Criptología y Seguridad de la Información, RECSI 2010, Universitat Rovira i Virgili, Tarragona, September 2010.ISBN: 978-84-693-3304-4.

- [P22] M. Bras-Amorós, K. Stokes, M. Greferath, *Problems Related to Combinatorial Configurations with Applications to P2P-User Private Information Retrieval*, 19th International Symposium on Mathematical Theory of Networks and Systems, MTNS 2010, pp. 1267-1271, Budapest, Hungarian Academy of Sciences, Hungary, July 2010. ISBN: 978-963-311-370-7.
- [P21] M. Bras-Amorós, K. Stokes, *On the Existence of Combinatorial Configurations*, Proceedings of the 3rd International Workshop on Optimal Network Topologies, IWONT 2010, Iniciativa Digital Politècnica, UPC, pp. 145-167, June 2010. ISBN: 978-84-7653-565-3.
- [P20] M. Bras-Amorós, J. Domingo-Ferrer, K. Stokes, *Configuraciones Combinatóricas y Recuperación Privada de Información por Pares*, Nuevos Avances en Criptografía y Codificación de la Información, Real Sociedad Matemática Española, pp. 19-28, February 2009. ISBN: 978-84-8409-277-3.
- [P19] M. Bras-Amorós, J. Domingo-Ferrer, *On Overlappings of Digital Straight Lines*, Actas de las VI Jornadas de Matemática Discreta y Algorítmica, J. M. Miret (ed.), pp. 187-194, July 2008. ISBN: 978-84-8409-263-6.
- [P18] M. Bras-Amorós, *Bounding the Number of Numerical Semigroups of a Given Genus by Means of Generating Trees*, Actas de las VI Jornadas de Matemática Discreta y Algorítmica, J. M. Miret (ed.), pp. 179-185, July 2008. ISBN: 978-84-8409-263-6.
- [P17] M. Bras-Amorós, J. González, P. Guitart, J. Serra, F. García, *On Sign Encoding and Magnitude Refinement of Still Images*, WSEAS International Conference on Remote Sensing, vol. 1, B. Huang, H. J. Bloom, J. J. Puschell (eds.), pp. 23-28, November 2005. ISBN: 960-8457-37-8.
- [P16] M. Bras-Amorós, *Addition Behavior of a Numerical Semigroup*, Publications de la Société Mathématique de France, Arithmetic, Geometry and Coding Theory, vol. 11 series 2005, Y. Aubry, G. Lachaud, M. Tsfasman (eds.), pp. 21-28, 2005. ISSN: 1285-2783, ISBN: 2-85629-175-9.
- [P15] J. Serra, J. González, P. Guitart, M. Bras-Amorós, *Evaluation of 1D, 2D, and 3D SPIHT Coding Technique for Remote Sensing*, Image and Signal Processing for Remote Sensing X, L. Bruzzone (ed.), Society of Photo-optical Instrumentation Engineers (SPIE), vol. 5573, pp. 273-283, November 2004. ISSN: 0277-786X, ISBN: 0-8194-5520-2.
- [P14] M. Bras-Amorós, *Patterns on Numerical Semigroups*, Actas de los Encuentros de Álgebra Computacional y Aplicaciones, 9th edition, L. González-Vega and T. Recio (eds.), Universidad de Cantabria, Santander, Spain, pp. 53-58, July 2004. ISBN: 84-688-6988-04.
- [P13] M. Bras-Amorós, *Analysis of one-point Goppa codes from the Weierstrass semigroup perspective*, Tagungsbericht 53/2003 Kodierungstheorie, Mathematisches Forschungsinstitut Oberwolfach, p. 12, December 2003.
- [P12] M. Bras-Amorós, J.M. Brunat, R. Ferré, E. Fossas, F. Martínez, X. Muñoz, C. Padró, F. Puerta, J. Quer, J. Saludes, J. Villar and S. Xambó, *Codis Espacials i Temporals*, GEMT BCN 2001, UPC, pp. 35-44, July 2001. ISSN: 84-699-6876-9.
- [P11] S. Xambó-Descamps, M. Bras-Amorós, *Omega Decoders for Goppa Codes*, Actas del Sexto Encuentro de Álgebra Computacional y Aplicaciones, 6th edition, A. Montes (ed.), Servei de Publicacions, UPC, Barcelona, pp. 129-142, September 2000. ISBN: 84-699-3037-0.

6.9 Submitted preprints

- [S3] M. Bras-Amorós: *Asymptotic Logarithmic Behavior of Numerical Semigroups*, 2021.
- [S2] M. Bras-Amorós, G. Moskowicz, V. Ponomarenko: *Construction of an Endgame Rulebook for Sylver Coinage Using Trees of Numerical Semigroups*, Experimental Mathematics, Taylor and Francis, 2023.
- [S1] M. Rosas-Ribeiro and M. Bras-Amorós: *Infinite Chains in the Tree of Numerical Semigroups*, Journal of Pure and Applied Algebra, 2023.

7 List of scientific visitors during the last 5 years

- Kwankyu Lee, Chosun University, Korea.
- Daniel Marín Aragón, Universidad de Cádiz.
- Luciane Quoos, Universidade Federal do Rio de Janeiro, Brazil, 2023.
- Alonso S. Castellanos, Universidade Federal de Uberlândia, Brazil, 2023.

8 Presence in scientific databases

- According to Publons/ISI-WOK:

Publication in Web of Science:	57
Sum of the Times Cited:	487 by 296 citing articles
h-index:	13
Last Updated:	September 22, 2023

- According to MathSciNet:

Earliest Indexed Publication:	2003
Total Publications:	46
Total Citations:	312 in 175 publications
Unique Citing Authors:	201
Last Updated:	September 22, 2023

- According to Scopus:

Documents by author	56
Total citations	502 by 312 documents
h-index	13
Last Updated:	September 22, 2023

- According to Google Scholar:

	All	Since 2018
Citations	1024	411
h-index	18	11
i10-index	25	12
Last Updated	September 22, 2023	

9 Code repositories and software tutorials

1. M. Bras-Amorós: Contribution to Microsoft-GitHub.
<https://github.com/mbrasamoros/drawsgtree>,
Drawsgtree: a tool for visualizing properties in the semigroup tree, 2022.
2. M. Bras-Amorós: Contribution to Microsoft-GitHub.
<https://github.com/mbrasamoros/seeds-algorithm>,
Implementation of the seeds algorithm, 2022.
3. M. Bras-Amorós, J. Fernández-González: Contribution to Microsoft-GitHub.
<https://github.com/mbrasamoros/RGD-algorithm>,
The right-generators descendant of a numerical semigroup, 2019.
4. M. Bras-Amorós: First official tutorial of SageMath in Catalan.
<https://doc.sagemath.org/html/ca/intro/index.html>,
Introducció al Sage, 2012 to 2018.
5. M. Bras-Amorós and Alonso S. Castellanos: Introdução ao MAGMA, 2020.
6. M. Bras-Amorós: Introducció al MAGMA, 2007.

10 Plenary and invited courses and talks

10.1 Plenary talks

1. M. Bras-Amorós, *TBA*. International Meeting on Numerical Semigroups, Jerez de la Frontera, Cádiz, Spain, July 8, 2024 to July 12, 2024.
2. M. Bras-Amorós, *The Isometry-Dual Property for One-Point and Two-Point AG Codes*. II Workshop em Corpos Finitos e Aplicações, Brazil, September 20-24, 2021.
3. M. Bras-Amorós, *Numerical semigroups, fractal division, the golden ratio and music*. Modeling Decisions for Artificial Intelligence (MDAI), Umeå Universitet, Sweden, September 27-30, 2021.
4. M. Bras-Amorós, *Different tree approaches to the problem of counting numerical semigroups by genus*. Random and Exhaustive Generation of Combinatorial Structures (GASCom 2018, <http://gascom2018.hua.gr/>), Harokopio University in Athens, Greece, June 18-20, 2018.
5. J. Domingo-Ferrer, M. Bras-Amorós, *Configurations, Set Intersection and Peer-to-Peer Privacy*. 25th International Workshop on Combinatorial Algorithms (IWOCOA 2014), Duluth, Minnesota, University of Minnesota Duluth, University of Wisconsin - Superior, October 15, 2014.

6. M. Bras-Amorós, *From Coding Theory to Several Different Communication Scenarios. Applied linear Algebra over Finite Fields*. Annual Meeting of the GAMM Activity Group on Applied and Numerical Linear Algebra, Barcelona, July 15, 2014.
7. M. Bras-Amorós, *From the Euclidean Algorithm for Solving a Key Equation for Dual Reed-Solomon Codes to the Berlekamp-Massey Algorithm*. Workshop on Coding and Cryptography, Claude Shannon Institute, Cork, Ireland, May 18, 2009.
8. M. Bras-Amorós, *Results on Numerical Semigroups with Applications to Algebraic Geometry Codes*, Iberian Meeting on Numerical Semigroups, Universidade do Porto, Porto, Portugal, March 17, 2008.

10.2 Special invited talks

1. M. Bras-Amorós, *Numerical Semigroups and Music*, Conference on Rings and Factorizations 2023, Institut für Mathematik und Wissenschaftliches Rechnen, Universität Graz, Austria, July 10, 2023.
2. M. Bras-Amorós, *Numerical semigroups and algebraic-geometry codes* 15th ALGA (Commutative Algebra and Algebraic Geometry), Instituto de Matemática Pura e Aplicada (IMPA), Rio de Janeiro, Brazil, February 8, 2023.

10.3 Plenary courses

1. M. Bras-Amorós, *Numerical Semigroups and Codes*. CIMPA Research School on Algebraic Methods in Coding Theory, Ubatuba, Sao Paulo, Brazil, July 2-15, 2017.
2. M. Bras-Amorós, *Semigroups, Codes and Privacy Applications*. S3CM: Algebraic Geometry Modeling and Information Theory, Universidad de Valladolid en Soria, July 12-16, 2010.

10.4 Invited round tables

1. Round table about “Algebra applied to Communications” (leads Ignacio Luengo, UCM): Gilles Barthe (IMDEA Software), Maria Bras-Amorós (URV), Diego Hernández Gallardo (Fábrica Nacional de Moneda y Timbre), Aplicaciones Industriales del Álgebra Computacional (AICA 2013), Depto. de Álgebra de la UCM, November 8, 2013.

10.5 Conference talks not included in 6.7, 6.8, 10.1, 10.2

1. M. Bras-Amorós, *TBA*, Congreso Bienal de la RSME, Special Session on Discrete Mathematics, Pamplona, Spain, January 22, 2024 to January 26, 2024.
2. M. Bras-Amorós, *On the seeds and the great-grandchildren of a numerical semigroup*, International Meeting on Numerical Semigroups, Rome, Italy, June 13, 2022.
3. M. Bras-Amorós, A. S. Castellanos, L. Quoos, *The Isometry-Dual Property for One-Point and Two-Point AG Codes*, V Encuentro Conjunto de la Sociedad Matemática Mexicana (SMM) y la Real Sociedad Matemática Española (RSME), virtual meeting, June 14-18, 2021.
4. M. Bras-Amorós, *Numerical Semigroups and Music*, XIII Summer Workshop in Mathematics, Institute of Exact Sciences, Universidade de Brasília, Brazil, February 10, 2021.
5. M. Bras-Amorós, *On Numerical Semigroups*, Special Session on Factorization and Arithmetic Properties of Integral Domains and Monoids, AMS Spring Central and Western Joint Sectional Meeting, University of Hawaii at Manoa, Honolulu, USA, March 23, 2019.
6. M. Bras-Amorós, Iwan Duursma, Euijin Hong, *Isometry-Dual Flags of AG Codes*, Codes, Cryptology and Curves, Celebrating the influence of Ruud Pellikaan, Technische Universiteit Eindhoven, March 7, 2019.
7. M. Bras-Amorós, *On the Inheritance of the Isometry-Dual Property under Puncturing AG Codes*, Congreso Bienal de la Real Sociedad Matemática Española 2019, Santander, February 8, 2019.
8. M. Bras-Amorós, *Submonoids of $\mathbb{R}$ of order type ω . Music theory as a unifying scenario*, II Joint Meeting Spain-Brazil in Mathematics, Universidad de Cádiz, December 11, 2018.
9. M. Bras-Amorós, *On the Inheritance of the Isometry-Dual Property under Puncturing AG Codes*, INDAM International Meeting on Numerical Semigroups, Cortona, Italy, September 3, 2018.
10. M. Bras-Amorós, J. Fernández-González, *Seeds of Numerical Semigroups*, Foundations of Computational Mathematics, FoCM 2017, Workshop on Graph Theory and Combinatorics, Barcelona, July 13, 2017.
11. M. Bras-Amorós, *Numerical Semigroups in Musical Data*, Meeting of the Catalan, Spanish, Swedish Math Societies (CAT-SP-SW-MATH), Umeå, June 14, 2017.

12. M. Bras-Amorós, *Un algoritmo de computación de semigrupos numéricos*, Congreso de la Real Sociedad Matemática Española, Zaragoza, Spain, February 2, 2017.
13. M. Bras-Amorós, J. Fernández-González, *Seeds of numerical semigroups*, International Meeting on Numerical Semigroups, Levico Terme, Italy, July 5, 2016.
14. M. Bras-Amorós, *Peer-to-peer private information retrieval and combinatorial configurations*, Interdisciplinary Workshop on Data Privacy, Maynooth, September 28, 2015.
15. M. Bras-Amorós, *Semigroup ideals and generalized Hamming weights*, Congreso de la Real Sociedad Matemática Española, Granada, Spain, February 2, 2015.
16. M. Bras-Amorós, *Ordinarization Transform of a Numerical Semigroup*, International Meeting on Numerical Semigroups, Cortona, Italy, September 9, 2014.
17. M. Bras-Amorós, *New Lower Bounds on the Generalized Hamming Weights of AG Codes*, Academy Contact Forum “Galois Geometries and Applications”, organized by The Royal Flemish Academy of Belgium for Science and the Arts, Brussels, Belgium, October 5, 2012.
18. M. Bras-Amorós, A. Vico-Oton, *The Maximal Gap of an Ideal and the Feng-Rao Numbers*, Iberian Meeting on Numerical Semigroups, University of Trás-os-Montes e Alto Douro, Vila Real, July 2012.
19. M. Bras-Amorós, *Recuento de Semigrupos por el Género*, II Encuentro Conjunto de la Sociedad Matemática Mexicana y la Real Sociedad Matemática Española, Torremolinos, Spain, January 17-20, 2012.
20. M. Bras-Amorós, *Sistema Anónimo de Búsquedas por Pares frente a Servidores*, VI International Conference on Non Associative Algebra and its Applications, Zaragoza, Spain, November 1-5, 2011.
21. M. Bras-Amorós, *Counting Numerical Semigroups by Genus*, Jornada Joves Investigadors de la Societat Catalana de Matemàtiques, Barcelona, October 14, 2011.
22. M. Bras-Amorós, *On Numerical Semigroups and Algebraic Codes*. XVIII Latin American Algebra Colloquium, São Paulo, org. Universidade de São Paulo, Instituto Nacional de Ciência e Tecnologia de Matemática (INCTMat), Brazil, August 6, 2009.
23. M. Bras-Amorós, *The Semigroup of Combinatorial Configurations*. International Conference on Semigroups and Related Topics, Universidade do Porto, Porto, Portugal, July 2009.
24. M. Bras-Amorós, *Results on Numerical Semigroups with Applications to Algebraic Geometry Codes*, Iberian Meeting on Numerical Semigroups, Universidade do Porto, Porto, Portugal, March 17, 2008.
25. M. Bras-Amorós, *Optimized Evaluation Codes Guaranteeing Correction of Generic Errors*. 4th Workshop on Coding and Systems, Universitat d’Alacant, Universitat Miguel Hernández d’Elx, March 13, 2008.
26. M. Bras-Amorós, *On Numerical Semigroups and Their Applications to Algebraic Geometry Codes*. II Thematic Seminar Algebraic Geometry, Coding and Computing, Universidad de Valladolid, Segovia, Spain, October 10, 2007.
27. M. Bras-Amorós, *Acute Numerical Semigroups and the Order Bound on the Minimum Distance*. Arithmétique, Géométrie et Théorie des Codes, Institut de Mathématiques de Luminy, CIRM, Marseille, France, May 23, 2003.

10.6 Invited talks in permanent colloquia

1. TBA, Virtual seminar series ACCESS: Algebraic Coding and Cryptography on the East coast Seminar Series, USA, December 5, 2023.
2. *Semigrupos Numéricos*, Instituto de Matemática, Universidade Federal do Rio de Janeiro, UFRJ, Brazil, February 13, 2023. Inviting Professor: Dr. Luciane Quoos.
3. *Tempered Monoids of Real Numbers, the Golden Fractal Monoid, and the Well-Tempered Harmonic Semigroup*, Centro de Matemática da Universidade do Porto, Portugal July 6, 2022. Inviting Professor: Dr. Manuel Delgado.
4. *Asymptotic Logarithmic Behavior of Numerical Semigroups*, Algebra Seminar PPMAT-UFU, Universidade Federal de Uberlândia, UFU, Uberlândia, Brazil, April 30, 2021. Inviting Professor: Dr. Alonso S. Castellanos.
5. *Numerical Semigroups and Music*, Mathematics research seminar at Queen’s University, Belfast, Northern Ireland, March 12, 2021. Inviting Professor: Dr. Florian Pausinger.
6. *Numerical Semigroups and Music*, Mathematics & Statistics Colloquium, Maynooth University, Maynooth, Ireland, October 21, 2020. Inviting Professor: Dr. Oliver Mason.
7. *Numerical Semigroups*, Sessão Pão de Queijo, Faculdade de Matemática, Universidade Federal de Uberlândia, Brazil, January 13, 2020. Inviting Professor: Dr. Alonso Sepúlveda Castellanos.
8. *Tempered Monoids of Real Numbers, the Golden Fractal Monoid, and the Well-Tempered Harmonic Semigroup*, Mathematics Colloquium, San Diego State University, USA, August 1, 2019. Inviting Professor: Dr. Christopher O’Neill.

9. *Numerical Semigroups*, Mathematics Colloquium, San Diego State University, USA, July 19, 2019. Inviting Professor: Dr. Christopher O'Neill.
10. *Semigrupos Numéricos*, Ateneo del Instituto de Matemáticas, Universidad de Valladolid, June 20, 2019. Inviting Professor: Dra. Begoña Cano Urdiales.
11. *On numerical semigroups*, Graduiertenkolleg "Facets of Complexity/Facetten der Komplexität", Technische Universität Berlin, Institut für Mathematik, Berlin, January 21, 2019. Inviting Professor: Dr. Torsten Mütze.
12. *Semigrupos métricos, semigrupos fractales y su relación con el número áureo y justificación matemática de la división de la octava musical en 12 partes en el temperamento igual*, Seminario de Álgebra, Geometría Algebraica y Singularidades, Tenerife, June 11, 2018. Inviting Professor: Dra. Evelia García-Barroso.
13. *Harmonical data from a mathematical perspective*, Seminar on Discrete Mathematics, University of Salzburg, Austria, May 15, 2017. Inviting Professor: Dr. Clemens Fuchs.
14. *Numerical Semigroups and Algebraic Codes*. Arbeitsgemeinschaft in Codierungstheorie und Kryptographie, Universität Zürich, Switzerland, April 14, 2010. Inviting Professor: Dr. Joachim Rosenthal.
15. *Weierstrass Semigroups and Algebraic Geometry Codes*. Seminari de Geometria Algebraica UB-UPC, Universitat de Barcelona, June 13, 2008. Inviting Professors: Dra. Marta Casanellas, Dra. Maria Alberich.
16. *Codes and Privacy*. Encuentro Interconsolider Consolider "ARES" y Consolider "i-MATH", Interactions towards secure communication, Centro Internacional de Encuentros Matemáticos, Castro Urdiales, May 15, 2008.
17. *Correction Capability Optimized Evaluation Codes*. Seminario de Geometría Algebraica y Singularidades (GAS), Universidad de Valladolid, October 11, 2007.
18. *Numerical Semigroups and Their Applications*. Seminari de Combinatòria, Teoria de Grafs i Aplicacions, Universitat Politècnica de Catalunya, February 1, 2007.
19. *On the Redundancy and Generating Matrices of Evaluation Codes* (joint work with Michael E. O'Sullivan). Mathematics and Statistics Colloquia, SDSU, USA, August 23, 2006.
20. *Improving Evaluation Codes*. Combinatorics and Digital Communications Colloquium, UAB, April 21, 2004.
21. *Teoría de Códigos y Teoría de Semigrupos*. Seminario del Departamento de Álgebra, Universidad de Granada, Spain, November 10, 2003. Inviting Professor: Dr. Pedro A. García-Sánchez.
22. *On Improvements to Evaluation Codes*. EIDMA Seminar Coding, Crypto and Information Theory, Euler Institute for Discrete Mathematics and Its Applications, Technische Universiteit Eindhoven, Holland, March 14, 2003. Inviting Professor: Dr. Ruud Pellikaan.
23. *Optimizing Parameters for Evaluation Codes* (joint work with Michael E. O'Sullivan). Mathematics and Statistics Colloquia, SDSU, USA, December 16, 2002.

11 Conference boards

11.1 General chair

1. International School on Coding Theory and Applications. Universitat Rovira i Virgili, Tarragona, February 11-14, 2013.
2. Applied Algebra, Algebraic Algorithms and Error-Correcting Codes. Universitat Rovira i Virgili, Tarragona, June 8-12, 2009.

11.2 Organization of special sessions

1. *Numerical semigroups and applications*. Special session at the Joint Meeting of the Swedish, Spanish and Catalan Mathematical Societies Umeå, Sweden, June 12-15, 2017.
2. *El paper del joc en les matemàtiques. El paper de les matemàtiques en el joc*. Special session at the Toy Museum of Catalonia. With the participation of Maria Antònia Canals, Mequè Edo, Guido Ramellini, Quim Tarradas. Figueres, Spain, November 15, 2014.
3. *Matemáticas de la Teoría de la Información*. Special session of the Congreso de la Real Sociedad Matemática Española 2013, Santiago de Compostela, Spain, January 21-25, 2013.

11.3 Scientific committees

1. International meeting on numerical semigroups. Cortona. Italy, 2022.
2. XVI Reunión Española sobre Criptología y Seguridad de la Información (RECSI). Lleida, April 14-16, 2021.

3. XV Reunión Española sobre Criptología y Seguridad de la Información (RECSI). Universidad de Granada, October 3-5, 2018.
4. XIV Reunión Española sobre Criptología y Seguridad de la Información (RECSI). Universitat de les Illes Balears, Menorca, October 26-28, 2016.
5. XIII Reunión Española sobre Criptología y Seguridad de la Información (RECSI). Universitat d'Alacant, Alacant, September 2-5, 2014.
6. XII Reunión Española sobre Criptología y Seguridad de la Información (RECSI). Mondragon Unibertsitatea, Donostia, September 4-7, 2012.
7. III Jornadas de la Red Temática de Matemáticas en la Sociedad de la Información (MatSI). Centre de Recerca Matemàtica, Bellaterra, November 25, 2011.
8. 3rd International Castle Meeting on Coding Theory and Applications. Universitat Autònoma de Barcelona, Cardona, September 11-15, 2011.
9. VII International Workshop on Coding and Cryptography (WCC). Institut National de Recherche en Informatique et en Automatique (INRIA), Paris, April 11-15, 2011.
10. XI Reunión Española sobre Criptología y Seguridad de la Información (RECSI). Universitat Rovira i Virgili, Tarragona, September 7-10, 2010.
11. Iberian Meeting on Numerical Semigroups, Universidad de Granada, Granada, February 3-5, 2010.
12. 2nd International Castle Meeting on Coding Theory and Applications. Universidad de Valladolid, Castillo de la Mota, Valladolid, September 15-19, 2008. Lecture Notes in Computer Science 5228, ISBN: 0302-9743.

11.4 Organizing committees

1. III Jornadas de la Red Temática de Matemáticas en la Sociedad de la Información (MatSI). Bellaterra, November 25, 2011.
2. Privacy in Statistical Databases 2010. UNESCO Chair in Data Privacy, Corfu, Greece, September 22-24, 2010. Lecture Notes in Computer Science 6344, ISBN: 0302-9743.
3. Iberian Meeting on Numerical Semigroups, Universidad de Granada, Granada, February 3-5, 2010.
4. Soria Summer School on Computational Mathematics, Algebraic Coding Theory. Universidad de Valladolid, Campus de Soria, July 2-11, 2008.
5. Sexto Encuentro de Álgebra Computacional y Aplicaciones. Universitat Politècnica de Catalunya, Barcelona, September 6-8, 2000.

12 Funded research projects

12.1 Projects as principal investigator

1. M. Bras-Amorós, A.S. Castellanos, L. Quoos, *CIRM - Research in Residence program N. 2931*. Institut de Mathématiques de Luminy, CIRM, Marseille, France, December 4, 2023 to December 15, 2023.
<https://conferences.cirm-math.fr/2931.html>
2. **Challenges in Algebraic Codes and Information Theory based Cryptography for the digital communication environment (ACITHEC)**, Ministerio de Ciencia e Innovación, Government of Spain. PID2021-124928NB-I00, September 01, 2022 to August 31, 2025, 3 years, 174.240 euros, 17 researchers, PI Maria Bras-Amorós and Oriol Farràs Ventura.
3. **Non-cryptographic secure and private data management in Multiclouds (Sec-MCloud)**, Ministerio de Economía y Competitividad, Government of Spain. TIN2016-80250-R, December 30, 2016 to December 29, 2020, 4 years, 52.200 euros, 12 researchers, PI Maria Bras-Amorós and David Sánchez Ruenes.
4. **In cloud we trust? improving trust in the cloud via security, privacy, reliability, and integrity (ICWT)**. Ministerio de Economía y Competitividad, Government of Spain. TIN2012-32757, January 1, 2013 to December 31, 2015, 103.615,20 euros, 11 researchers, PI Maria Bras-Amorós.
5. **Peer-to-peer User-Private Information Retrieval (RIPUP)**. Ministerio de Ciencia e Innovación, Government of Spain, TIN2009-11689, October 1, 2009 to September 30, 2012, 83.853,00 euros, 6 researchers, PI Maria Bras-Amorós.
6. **Peer-to-peer User-Private Information Retrieval (RIPUP)**. AIRE Grant for Incorporation to Research, Universitat Rovira i Virgili, 2009 AIRE-08, July 1, 2009 to December 31, 2011, 6.000,00 euros. PI Maria Bras-Amorós.
7. **Applied Algebra, Algebraic Algorithms, and Error Correcting Codes**. Ayudas Complementarias, Ministerio de Ciencia e Innovación, Government of Spain, MTM2009-06811-E/MTM, 2009, June 1, 2008 to December 31, 2009, 6.000,00 euros. PI Maria Bras-Amorós.

8. *Applied Algebra, Algebraic Algorithms, and Error Correcting Codes*. ARCS grant for conference organization, Government of Catalonia, 2008ARCS100168, 2008, 6.000,00 euros. PI Maria Bras-Amorós.
9. *Applied Algebra, Algebraic Algorithms, and Error Correcting Codes*. OCO grant for conference organization, Universitat Rovira i Virgili, 2009 OCO-43, 2009, 1.940,72 euros. PI Maria Bras-Amorós.

12.2 International projects

1. *CLARUS: A Framework for User-Centred Privacy and Security in the Cloud* (Horizon 2020, project no. H2020-644024). 2015 to 2017. Principal investigator at URV: Josep Domingo-Ferrer. Total funding: Euro 4,193,548.00. Funding at URV: Euro 603,750.00.
2. *CANVAS: Constructing an Alliance for Value-driven Cybersecurity* (Horizon 2020, project no. H2020-700540). 2016 to 2019. Principal investigator at URV: Josep Domingo-Ferrer. Total funding: Euro 1,000,000.00. Funding at URV: Euro 112,300.00.
3. National Science Foundation Directorate for Computer and Information Science and Engineering, *Decoding of Algebraic Geometry Codes: Theoretical Analysis, Efficient Algorithms, Practical Implementation*, National Science Foundation, USA, CCF-0916492. July 2009 to June 2012, Principal investigator: M. E. O'Sullivan. \$ 223.974,00. Other partners K. Lee (Chosun University, Korea), M. Bras-Amorós, E. Popovici (University College Cork, Ireland).

12.3 Projects with other principal investigators

1. **GDPR-compliant consumer oriented IOT (CONSENT)**. Ministerio de Ciencia e Innovación, Government of Spain, RTI2018-095094-B-C21, Since July 14, 2021, Principal investigators: Josep Domingo-Ferrer, Jordi Castellà-Roca, 164.138,00 euros.
2. **Advanced Research on Information Security and Privacy (ARES)**. Ministerio de Educación y Ciencia, Government of Spain, Programa Consolider, CSD2007-0004, October 1, 2007 to September 30, 2012, Principal investigator: Josep Domingo-Ferrer, 5.428.000,00 euros.
3. **Interactive compression and transmission of high-resolution images. Applications to remote sensing, geographic information systems and telemedicine (INCO)**. Ministerio de Educación y Ciencia, Government of Spain, TSI2006-14005-C02-01, October 1, 2006 to September 30, 2009, Principal investigator: Joan Serra Sagristà, 159.841,00 euros.
4. **Wavelet-based hyperspectral image compression for applications to remote sensing and geographic information systems (WAVEGIS)**. Ministerio de Ciencia y Tecnología, Government of Spain, TIC2003-08604-C04-01, December 1, 2003 to November 30, 2006, Principal investigator: Joan Serra Sagristà, 156.760,00 euros.
5. **Development of a new computer system for structure design and optimal analysis based on the finite elements method and on advanced techniques of symbolic computation (ANDES)**. Ministerio de Educación y Cultura, Government of Spain, TIC99-0762-C02-01, December 31, 1999 to December 31, 2001, Principal investigator: Sebastià Xambó Descamps, 24.600,00 euros.
6. *Excellence network Consolider "ARES"*. Programa Redes de Excelencia, Ministerio de Economía y Competitividad, Government of Spain, TIN2015-70054-REDC, 2015 to 2018, Principal investigator: Josep Domingo-Ferrer. 51.500,00 euros.
7. *MATSI. Matemáticas en la Sociedad de la Información*. Programa Redes de Investigación, Ministerio de Ciencia e Innovación, Government of Spain, Co-funded by the European Union, RED2022-134306-T, June 1, 2023 to June 1, 2024, Principal investigator: Diego Napp (Universitat d'Alacant), 19.000,00 euros.
8. *MATSI: Excellence network on mathematics of the information society*. Programa Redes de Excelencia, Ministerio de Economía y Competitividad, Government of Spain, MTM2015-69138-REDT, December 1, 2015 to June 30, 2018, Principal investigator: Pino Caballero Gil (Universidad de La Laguna), 30.000,00 euros.
9. *MATSI: Thematic network on mathematics of the information society*. Programa de acciones complementarias a proyectos de investigación fundamental no orientada. Ministerio de Ciencia e Innovación, Government of Spain, MTM2011-13856-E, December 20, 2011 to December 19, 2012, Principal investigator: Jorge Luis Villar Santos (UPC), 6.000,00 euros.
10. *MATSI: Thematic network on mathematics of the information society*. Ministerio de Educación y Ciencia, Government of Spain, MTM2008-03268-E, October 1, 2008 to September 30, 2009, Principal investigator: Josep M. Miret Biosca, 8.000,00 euros.
11. *MATSI: Thematic network on mathematics of the information society*. Ministerio de Educación y Ciencia, Government of Spain, MTM2006-28247-E, October 1, 2007 to September 30, 2008, Principal investigator: Josep M. Miret Biosca, 6.000,00 euros.
12. *EACA: Thematic network on symbolic computation*. Ministerio de Educación y Ciencia, Government of Spain, MTM2004-21958-E, September 1, 2005 to September 1, 2006, Principal investigator: Tomás Recio, 6.000,00 euros.
13. *Consolidated Catalan research group*. Government of Catalonia, 2021 SGR 00115 January 1, 2022 to December 31, 2024, Principal investigator: Josep Domingo-Ferrer. 60.000,00 euros.

14. *Consolidated Catalan research group*. Government of Catalonia, 2017 SGR 00705, January 1, 2017 to December 31, 2019, Principal investigator: Josep Domingo-Ferrer. 20.000,00 euros.
15. *Consolidated Catalan research group*. Government of Catalonia, 2014 SGR 537, January 1, 2014 to December 31, 2016, Principal investigator: Josep Domingo-Ferrer. 50.000,00 euros.
16. *Consolidated Catalan research group*. Government of Catalonia, 2009 SGR 1135, October 1, 2009 to October 30, 2013, Principal investigator: Josep Domingo-Ferrer. 46.800,00 euros.
17. *Consolidated Catalan research group*. Government of Catalonia, 2005 SGR 00319, October 1, 2005 to October 30, 2009, Principal investigator: Josep Rifà Coma.
18. *CRISES. Security and Privacy*. Programa de Foment de l'Activitat de la Recerca, Universitat Rovira i Virgili, 2016PFR-URV-B2-30, January 1, 2017 to June 30, 2018, Principal investigator: Josep Domingo-Ferrer. 26.232,62 euros.
19. *CRISES. Security and Privacy*. Programa de Foment de l'Activitat de la Recerca, Universitat Rovira i Virgili, 2015PFR-URV-B2-30, January 1, 2015 to December 31, 2017, Principal investigator: Josep Domingo-Ferrer. 23.178,00 euros.
20. *CRISES. Security and Privacy*. Programa de Foment de l'Activitat de la Recerca, Universitat Rovira i Virgili, 2014PFR-URV-B2-30, January 1, 2014 to December 31, 2016, Principal investigator: Josep Domingo-Ferrer. 17.724,33 euros.
21. *CRISES. Security and Privacy*. Programa de Foment de l'Activitat de la Recerca, Universitat Rovira i Virgili, 2010PFR-URV-B2-11, January 1, 2010 to December 31, 2016, Principal investigator: Josep Domingo-Ferrer. 94.227,00 euros.
22. *Semana Europea del código URV 2019: actitud STEM*. Ayudas para el fomento de la cultura científica, tecnológica y de la innovación. Fundación Española para la Ciencia y la Tecnología, Ministerio de Ciencia e Innovación, FCT-18-13496, June 2019 to February 2020, Principal coordinator: Carles Lozano Romaguera. 5.000, 00 euros.
23. *DIDACMAT: Didàctica de les Matemàtiques*. Projectes d'Innovació Docent 2015-2016 de l'Institut de Ciències de l'Educació de la Universitat Rovira i Virgili , A11/15, September 1, 2015 to August 31, 2016, Principal investigator: Carme Julià Ferré. 1.550 euros.
24. *Equipment of the infrastructure for a cluster*. Government of Catalonia, 2005PEIR0050/26, December 15, 2005 to December 15, 2006, Principal investigator: Josep Rifà Coma, 30.000,00 euros.

13 Scientific leadership

1. Project Director of the 2020-2021 San Diego State University Mathematics Research Experience for Undergraduates. Summer 2021. CANCELLED.
2. Principal Investigator of the Spanish network MatSI (Red Temática de Matemáticas en la Sociedad de la Información). Coordinator of 35 research groups in Spain. July 2018 to September 2022.
3. Coordinators board of the Spanish network MatSI (Red Temática de Matemáticas en la Sociedad de la Información). December 2015 to June 2018.
4. Leader of the research group COPRICA (Codes, Privacy, and Algebraic Combinatorics), Universitat Rovira i Virgili. Since 2011.
5. Coordinators board of the Spanish network MatSI (Red Temática de Matemáticas en la Sociedad de la Información). November 2009 to December 2013.
6. Leader of the research subgroup SPGICI (Spatial Partitioning) within GICI (Group on Interactive Compression of Images), Universitat Autònoma de Barcelona. 2005 to 2007.

14 Ph.D.'s

14.1 Ph.D. advising

1. Klara Stokes: *Combinatorial Structures for Anonymous Database Search*, Universitat Rovira i Virgili, October 18, 2011.
2. Albert Vico Oton: *Collected Results on Semigroups, Graphs and Codes*, Universitat Rovira i Virgili, October 22, 2012.
3. José Miguel Serradilla Merinero. Ongoing.
4. Raquel Pascual Dueñas. Ongoing.
5. Mariana Rosas. Ongoing.
6. María de los Ángeles Cuevas. Ongoing.

14.2 Ph.D. committees since 2014

1. Guadalupe Márquez Campos (adv. José María Tornero Sánchez), *Cálculo de invariantes combinatorios de semigrupos numéricos y aplicaciones*, Universidad de Sevilla. March 3, 2014.
2. Stefano Martin (adv. Olav Geil, Diego Ruano), *Applications of the footprint and the Feng-Rao bounds*. Aalborg University, Denmark. December 8, 2014.
3. Matheus Bernardini de Souza (adv. Fernando Torres), *Counting numerical semigroups by genus and even gaps and some generalizations. Patterns on numerical semigroups*. Universidade Estadual de Campinas (UNICAMP), Brazil. February 22, 2017.
4. Abeba Nigussie Turi (adv. Josep Domingo-Ferrer, David Sánchez-Ruenes), *Co-Utility in the Digital Economy: Conciliating Individual Freedom and Common Good in the Information Society*. Universitat Rovira i Virgili. May 31, 2017.
5. Michael Olugbenga Bamiloshin (adv. Oriol Farràs-Ventura), *Common Information Techniques For The Study Of Matroid Representation And Secret Sharing Schemes* Universitat Rovira i Virgili. July 8, 2021.
6. Brikena Vroni (adv. Joan-C. Lario), *A Census for Curves and Surfaces with Diophantine Stability over Finite Field*, Universitat Politècnica de Catalunya. October 2021.
7. Ashneet Khandpur Singh, (adv. Alberto Blanco Justicia, Josep Domingo Ferrer), *Fairness and Robustness in Machine Learning*, Universitat Rovira i Virgili, April 218, 2023.

15 Technology and knowledge transfer

1. Collaboration agreement with the Toy Museum of Catalonia. October 2017 to August 2018. Principal investigator at URV: Maria Bras-Amorós, principal investigator at the Toy Museum of Catalonia: Eva Pascual Miró.
2. Collaboration agreement with the company Metriplika S.L. August 2011 to December 2012. Principal investigator at URV: Maria Bras-Amorós, principal investigator at Metriplika: Enric Quintero.
3. *eVerification/2, Verificación electrónica para sistemas de votación electrónica presencial*. Acción Estratégica de Telecomunicaciones y Sociedad de la Información (AVANZA), Ministerio de Industria, Turismo y Comercio, TSI-020100-2011-39, 2011 to 2013. Coordinated by the company SCYTL Secure Electronic Voting, SL. Principal investigator at URV: Jordi Castellà-Roca. 47.526,72 euros (URV).
4. *Audit Transparency Voting Process*. Ministerio de Ciencia e Innovación, Government of Spain, Programa INNPACTO, IPT-430000-2010-31, June 28, 2010 to December 31, 2012. Coordinated by the company SCYTL Secure Electronic Voting, SL. Principal investigator at URV: Jordi Castellà-Roca. Involved companies: Scytli, Gematic, Kinetical mobility solutions. 212.422,00 euros as a subvention + 1.637.816,75 euros as a loan (212.422,00 euros as a subvention for the CRISES-URV group).
5. *SECloud, investigación y desarrollo de una plataforma SEgura para aplicaciones Cloud computing*. Ministerio de Industria, Turismo y Comercio, Government of Spain, Programa Avanza Competitividad I+D+I, TSI-020302-2010-153, April 30, 2010 to December 31, 2012. Coordinated by the company COM 2002 SL. Principal investigator at URV: Jordi Castellà-Roca. Involved companies: Nexica, Kinamik, Compartia, Cetaqua, Bdigital, Staitec. 522.638,83 euros as a subvention + 1.117.081,62 euros as a loan (78.265,00 euros as a subvention for the CRISES-URV group). <http://www.secloud.es/>
6. *eVerification, Verificación electrónica para sistemas de votación electrónica presencial*. Acción Estratégica de Telecomunicaciones y Sociedad de la Información (AVANZA), Ministerio de Industria, Turismo y Comercio, TSI-020100-2009-720, April 2009 to December 2010. Coordinated by the company SCYTL Secure Electronic Voting, SL. Principal investigator at URV: Jordi Castellà-Roca. 124.380,00 euros (URV). <http://crises-deim.urv.cat/everification>

16 Research stays

1. Institut de Mathématiques de Luminy, CIRM, Marseille, *CIRM - Research in Residence program N. 2931* with A.S. Castellanos and L. Quoos, France, December 4, 2023 to December 15, 2023. <https://conferences.cirm-math.fr/2931.html>
2. Universidade Federal do Rio de Janeiro, Brazil, February 11-18, 2023. *Research stay in collaboration with Prof. Luciane Quoos and Prof. Alonso Sepúlveda Castellanos*.
3. Universidade do Porto, Portugal, June 30, 2022 to July 8, 2022. *Research stay in collaboration with Prof. Manuel Delgado*.

4. Universidade Federal do Rio de Janeiro, Universidade Federal de Uberlândia, Brazil, January 11, 2020 to January 22, 2020. *Research stay in collaboration with Prof. Luciane Quoos, and Prof. Alonso Sepúlveda Castellanos.*
5. Department of Mathematics and Statistics, San Diego State University, California, USA. July 15, 2019 to August 4, 2019. *Research stay in collaboration with Prof. Michael E. O'Sullivan and Prof. Christopher O'Neill.*
6. Department of Mathematics Education, Chosun University Gwangju, Korea. January 24, 2016 to February 1, 2016. *Postdoctoral stay in collaboration with Kwankyu Lee.*
7. Department of Mathematics and Statistics, San Diego State University, California, USA. August 20, 2012 to September 4, 2012. *Postdoctoral stay in collaboration with Michael E. O'Sullivan.*
8. Department of Microelectronic Engineering, Coláiste na hOllscoile Corcaigh (University College Cork), Ireland. July 26-30, 2010. *Research meeting with Emanuel Popovici (UCC), Christian Spagnol (UCC), Shraddha Srivastava (UCC), Michael E. O'Sullivan (SDSU), Kwankyu Lee (Chosun University, Korea).*
9. Research meeting in Barcelona, July 19-26, 2010. *Collaboration with Michael E. O'Sullivan (SDSU), Kwankyu Lee (Chosun University, Korea).*
10. Department of Mathematics and Statistics, San Diego State University, California, USA. January 6-29, 2010. *Postdoctoral stay in collaboration with Michael E. O'Sullivan.*
11. Department of Mathematics and Statistics, San Diego State University, California, USA. January 12, 2009 to February 2, 2009. *Postdoctoral stay in collaboration with Michael E. O'Sullivan.*
12. Dipartimento di Sistemi e Informatica, Università degli Studi di Firenze, Florence, Italy. August 4-12, 2008. *Postdoctoral stay in collaboration with Prof. Renzo Pinzani and Prof. Elena Barucci.*
13. Department of Mathematics and Statistics, San Diego State University, California, USA. January 8-30, 2008. *Postdoctoral stay in collaboration with Michael E. O'Sullivan.*
14. Department of Mathematics and Statistics, San Diego State University, California, USA. June 1, 2007 to September 30, 2007. *Postdoctoral stay in collaboration with Michael E. O'Sullivan.*
15. Departamento de Álgebra, Universidad de Granada, Spain. February 5-12, 2007. *Collaboration with Pedro A. García-Sánchez and José Carlos Rosales.*
16. Department of Mathematics and Statistics, San Diego State University, California, USA. July 27, 2006 to September 5, 2006. *Collaboration with Michael E. O'Sullivan.*
17. Departamento de Álgebra, Universidad de Granada, Spain. September 8-14, 2004. *Collaboration with Pedro A. García-Sánchez.*
18. Departamento de Álgebra, Universidad de Granada, Spain. November 8-15, 2003. *Collaboration with Pedro A. García-Sánchez.*
19. Department of Mathematics and Computing Science, Technische Universiteit Eindhoven, Holland. March 9-15, 2003. *Collaboration with Ruud Pellikaan.*
20. Department of Mathematics and Statistics, San Diego State University, California, USA. June 22, 2002 to December 22, 2002. *Pre-doctoral research stay under supervision of Michael E. O'Sullivan.*
21. Department of Mathematics and Statistics, San Diego State University, California, USA. February 27, 2001. *Pre-doctoral research stay under supervision of Michael E. O'Sullivan.*

17 Personal grants

Ramón y Cajal Programme. Ministerio de Educación y Ciencia, Government of Spain. July 2007.

Post-doctoral grant. Government of Catalonia. June 2007 to September 2007.

Pre-doctoral grant (FI). Government of Catalonia. February 1999 to December 2002.

Grant for collaboration with the Departament de Matemàtica Aplicada 2. UPC. Government of Spain. 1997 to 1998

18 Evaluation boards

Evaluator of Proyectos I+D+i del Plan Nacional, 2014, 2017, 2021, 2023.

Evaluator of Proyectos Prueba de Concepto del Plan Nacional, 2022.

Evaluator of Ramón y Cajal Program Candidates, Agencia Estatal de Investigación, 2020, 2022.

Evaluator of Juan de la Cierva Scholarship Candidates, Agencia Estatal de Investigación, 2020, 2022.

Evaluation of candidates for the program of postdoctoral scholarships of Fundació "La Caixa", 2015, 2021, 2022, 2023.