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Egotist: a person more interested in himself than in me.
Ambrose Bierce (1842-1914)

1. Education

- *Ph.D. Mathematics,* State University of New York at Buffalo, 1998
  Thesis: *Chromos, Boolean Functions and Avalanche Characteristics*
  Advisor: Professor Thomas W. Cusick, Ph.D.
- *Doctorate in Algebra*, Institute of Mathematics of the Romanian Academy, 1998
  Advisor: Acad. Dr. Doc. Nicolae Popescu
- *Master of Arts:* Bucharest University, Romania, 1992
- *Research Interests*: Number Theory, Cryptography, Coding Theory, Combinatorics, Finite Fields, Boolean Functions, Valuation Theory, Class Field Theory, Theoretical Computer Science

2. Professional experience

- *Tenured Professor* (2010-present)*,* Naval Postgraduate School, Department of Applied Mathematics
- *Associate Professor* (2006-2010), Naval Postgraduate School, Department of Applied Mathematics
- *Distinguished Research Professor* (2004-2007), Auburn University Montgomery, Department of Mathematics
- *Tenured Associate Professor of Mathematics,* 2003-2006, AUM, Department of Mathematics
- *Assistant Professor of Mathematics,* 1999-2003, AUM, Department of Mathematics
- *Associate Researcher,* 1992-present, Institute of Mathematics of Romanian Academy, Bucharest, Romania
- *Co-Director of the Sciences Computer Lab*, November 2000-May 2002
- *Visiting Lecturer,* 1996, 1998-1999, State University of New York at Buffalo
- *Teaching Assistant,* 1993-1996, State University of New York at Buffalo
- *Assistant Professor,* 1992-1993, Bucharest University, Romania

3. Books, Editing and Chapters in Books

1. <u>P. Stanica</u>, S. Mesnager, S. K. Debnath (eds.), ***Proc. 1st International Conference on Security & Privacy*** (ICSP'21), 2022, Springer-CCF.
2. <u>P. Stanica</u>, S. Gangopadhyay, S. K. Debnath (eds.), ***Proc. 1st International Conference on Security & Privacy*** (ICSP'20), 2021, Springer -LNEE 744: https://www.springer.com/gp/book/9789813367807
3. T.W. Cusick, <u>P. Stanica</u>, ***Cryptographic Boolean Functions and Applications***, Edition 2, Academic Press - Elsevier, 2017.
4. T.W. Cusick, <u>P. Stanica</u>, ***Cryptographic Boolean Functions and Applications***, Edition 1, Academic Press - Elsevier, March 2009.
5. ***Proc. Of International Conference on Fibonacci Numbers*** (F. Luca, P. Stanica, eds.), Utilitas Mathematica, *Congressus Numerantium* Vol. 201, January 2010.
6. ***Proc. Of International Conference on Fibonacci Numbers*** (F. Luca, P. Stanica, eds.), *Aportaciones Matematicas*, Investigacion 20, Soc. Matematica Mexicana, 2011.
7. M. E. McCay, J. T. Butler, and <u>P. Stanica</u>, ***Using a reconfigurable computer to compute algebraic immunity***, in B. Steinbach (Editor): *Recent Progress in the Boolean Domain*, *Cambridge Scholars Publishing*, Newcastle upon Tyne, UK, 2014, *Section 3.3,* pp. 170-185.

4. Publications in refereed conference proceedings

1. P. Stanica, ***C-differential uniformity for functions constructed via the Maiorana-McFarland bent function***, Workshop on Coding & Cryptography, WCC 2022, Paper #37.
2. S. Maitra, C.S. Mukherjee, P. Stanica, D. Tang, ***On Boolean Functions with Low Polynomial Degree and Higher Order Sensitivity***, Workshop on Coding & Cryptography, WCC 2022, Paper #3.
3. A. Geary, M. Calderini, C. Riera, <u>P. Stanica</u>, ***Higher Order c-Differentials***, *In: Proc. International Conf. on Security and Privacy*, Springer (ICSP 2021) (eds. P. Stanica, S. Mesnager, S.K. Debnath), Communications and Information Science 1497, Springer-Cham.
4. S. Ul Hasan, M. Pal, <u>P. Stanica</u>, ***The (generalized) boomerang uniformity of some classes of functions over finite fields***, Boolean Functions & Applic. (BFA), Norway, 2021, Paper #3.
5. J. C. Arunagiri, V. S. Poonia, <u>P. Stanica</u>, S. Gangopadhyay, ***A quantum algorithm to verify the Strict Avalanche criterion in Boolean functions***, Boolean Functions & Applic. (BFA), Norway, 2021, Paper #17.
6. D. Bartoli, M. Calderini, C. Riera, <u>P. Stanica</u>, ***Low c-differential uniformity for functions modified on subfields***, Boolean Functions & Applic. (BFA), Norway, 2021, Paper #23.
7. P. Ellingsen, C. Riera, P. Stanica, A. Tkachenko, ***An extension of the avalanche criterion in the context of c-differentials***, *The 18th International Conference on Security and Cryptography* (*SECRYPT* 2021).
8. <u>P. Stanica</u>, ***On the c-differential uniformity of the Gold function modified on a subfield***, *roc. International Conf. on Security and Privacy*, Springer (ICSP 2020), LNEE 744, Springer 2021, pp. 131-137.
9. N. Kundu, Kunal Dey, <u>P. Stanica</u>, S. K. Debnath, S. Pal, ***Post-Quantum Secure Identity Based Encryption from Multivariate Public Key Cryptography***, *Proc. International Conf. on Security and Privacy*, Springer (ICSP 2020), LNEE 744, Springer 2021, pp. 139-149.
10. A. Salagean, <u>P. Stanica</u>, ***Estimating the nonlinearity of Boolean functions using probabilistic linearity tests***, *Sequences and Their Applications – SETA 2020*.

11. L. Budaghyan, N. Kalyeski, C. Riera, <u>P. Stanica</u>, ***On the sensitivity of some permutation APN functions to swapping point***s, *Sequences and Their Applications – SETA 2020.*

12. A.N. Siddhanti, S. Bodapati, A. Chattopadhyay, S. Maitra, D. Roy, <u>P. Stanica</u>, ***Analysis of the Strict Avalanche Criterion in variants of Arbiter-based Physically Unclonable Functions,*** INDOCRYPT 2019, Springer-Verlag LNCS 11898, pp. 1-22, 2019.

13. D. Bera, S. Maitra, D. Roy, <u>P. Stanica</u>, ***Limitations of the BLR testing in estimating nonlinearity,*** *Workshop on Cryptography & Coding, Rennes*, France 2019.

14. S. Gangopadhyay, C. Riera, <u>P. Stanica</u>, ***Gowers U2 norm of Boolean functions and their generalizations***, *Workshop on Cryptography & Coding*, Rennes, France 2019.

15. L. Budaghyan, N.S. Kaleyski, S. Kwon, C. Riera, <u>P. Stanica</u>, ***Partially APN Boolean functions***, *Proc. of Sequences and Their Applications (SETA 2018), Hong Kong,* 2018.

16. S. Maitra, B. Mandal, T. Martinsen, D. Roy, <u>P. Stanica</u>, ***Tools in analyzing linear approximations of Boolean functions related to FLIP***, *Proc. Indocrypt* 2018, Springer-Verlag, LNCS 11356, 283-303.

17. T. Martinsen, W. Meidl, A. Pott, <u>P. Stanica</u>, ***On symmetry and differential properties of generalized Boolean functions***, Proc. WAIFI: Arithmetic of Finite Fields, 2018, pp. 207-223. (**best paper award**)

18. C. Riera, P. Sole, <u>P. Stanica</u>, ***A complete characterization of plateaued Boolean functions in terms of their Cayley graphs***, Proc. Africacrypt (Marrakesh-Morocco), LNCS, Springer-Verlag, 2018.

19. F. Luca, <u>P. Stanica</u>, ***On Fibonacci numbers which are elliptic Korselt numbers,*** *Proc. International Conf. Fibonacci Numbers and Application*, Fibo. Quart. Vol. 52:5 (2014), 164-167.

20. <u>P. Stanica</u>, ***Normic continued fractions in totally and tamely ramified extensions of local fields***, *Proc. International Conf. Fibonacci Numbers and Application* Fibo. Quart. Vol. 52:5 (2014), 193-200.

21. E.M. McCay, J.T. Butler, <u>P. Stanica</u>, ***Computing Algebraic Immunity by Reconfigurable Computer***, Proceedings of the 10th International Workshop on Boolean Problems, Freiberg, Germany, Sept. 2012.

22. E. Kilic, <u>P. Stanica</u>, ***Generating matrices of C-nomial coefficients and their spectra***, *Proc. International Conf. Fibonacci Numbers & Applic.* (F. Luca, P. Stanica, Eds.)*,* Aportaciones Matematicas, Sociedad Matematica Mexicana, 2011, 91-96.

23. T.W. Cusick*,* <u>P. Stanica</u>, ***Nonoverlap property of the Thue-Morse sequence***, *Proc. International Conf. Fibonacci Numbers & Applic.* (F. Luca, P. Stanica, Eds.)*,* Aportaciones Matematicas, Sociedad Matematica Mexicana, 2011, 139-154.

24. <u>P. Stanica</u>, A. Chaturvedi, A. Gangopadhyay, S. Gangopadhyay, S. Maitra, ***Nega-Hadamard transform, bent and negabent functions***, SETA 2010 (C. Carlet and A. Pott, Eds.) , LNCS 6338, pp. 359–372, 2010.

25. J.L. Shafer, S.W. Schneider, J.T. Butler, <u>P. Stanica</u>, ***Enumeration of Bent Boolean Functions by Reconfigurable Computer***, The 18*th Annual International IEEE Symposium on Field-Programmable Custom Computing Machines* (FCCM-2010), 265-272.

26. E. Kilic, G.N. Stanica, <u>P. Stanica</u>, ***Spectral Properties of Some Combinatorial Matrices***, *Congressus Numerantiu*m, Proceedings of International Conference on Fibonacci Numbers, (F. Luca, P. Stanica, eds.), Vol. 201, pp. 223-236, 2010.

27. F. Luca, <u>P. Stanica</u>, ***Aliquots sums of Fibonacci numbers***, *Congressus Numerantium, Proceedings of International Conference on Fibonacci Numbers*, (William Webb, ed.), Vol. 200, pp. 153-160, 2010.

28. F. Luca, <u>P. Stanica</u>, ***Fibonacci numbers of the form $p^a \pm p^b$***, *Congressus Numerantium, Proceedings of the Eleventh International Conference on Fibonacci Numbers and their Applications*, (William Webb, ed.), Vol 194, pp. 177-183, 2009.

29. P. Stanica, ***On the nonexistence of bent rotation symmetric Boolean functions of degree greater than two***, *Proceedings of NATO Advanced Studies Institute* (Boolean Functions in Cryptology and Information Security - NATO Science for Peace and Security), Ed. O.A. Logachev (2008), 214-218.

30. H. Fredricksen, E.J. Ionascu, F. Luca, P. Stanica, ***Remarks on a sequence of minimal Niven numbers,*** SEQUENCES 2007 (S.W. Golomb et al., eds.), Springer-Verlag LNCS 4893, 162–168, 2007.

31. P. Stanica, ***Graph eigenvalues and Walsh spectrum of Boolean functions***, Proceedings of the 'Integers Conference 2005' in Celebration of the 70th Birthday of Ronald Graham, (Carrollton, Georgia), Walter de Gruyter, 431-442, 2007.

32. P. Stanica, J. Clark, S. Maitra, ***Results on Rotation-Symmetric Bent & Correlation-Immune Boolean Functions***, Lecture Notes in Computer Science, *Proceedings of FSE* 2004, Delhi, India; LNCS 3017 (R. Bimal, W. Meier, eds.) 2004, XI, 485.

33. F. Luca, P. Stanica, ***Cullen Numbers in Second Order Recurrent Sequences***, *Proceedings of the International Conference on Fibonacci Numbers* (2004), Kluwer, 167-175.

34. P. Stanica, S. Maitra, ***Rotation Symmetric Functions - Count and Cryptographic Properties***, In *Proc. R. C. Bose Centenary Symp. on Discrete Math. And Applications*, *Electronic Notes in Discrete Mathematics* **15** (2003), 141-147.

35. J.A. Clark, J.L. Jacob, S. Maitra, P. Stanica, ***Almost Boolean Functions: the Design of Boolean Functions by Spectral Inversion***, *Proceedings of* IEEE Conference on Evolutionary Computation 2003. Special Session on Evolutionary Computation and Computer Security. *Congress of Evolutionary Computation,* Canberra, Australia, December 2003.

36. A.M. Youssef, T.W. Cusick, P. Stanica, S.E. Tavares, ***New bounds on the number of functions satisfying the strict avalanche criteria***, *Selected Areas of Cryptology*, Queen's University, Kingston, Canada, pp. 49-56, 1996.

5. Publications in refereed journals

1. S. Ul Hasan, M. Pal, P. Stanica, ***C-differential uniformity and boomerang connectivity table of two classes of permutation polynomials***, *IEEE Transactions on Information Theory*. 68:1 (2022), 679-691

2. V. Srivastava, S. K. Debnath, P. Stanica, S. Pal, ***A Multivariate Identity-Based Broadcast Encryption with Applications to the Internet of Things***, *Advances in Math Communication*, 2022.

3. A. O. Gomez-Flores, L. A. Medina, P. Stanica, ***P-recursivity of some families of Boolean polynomials under biased Walsh transforms***, *Rocky Mountain Journal of Mathematics*.

4. A. Salagean, P. Stanica, ***Improving bounds on probabilistic affine tests to estimate the nonlinearity of Boolean functions***, *Cryptography & Communication – CCDS* 14 *(*2022), 459-481.

5. P. Stanica, A. Geary, C. Riera, A. Tkachenko, ***C-differential bent functions and perfect nonlinearity***, *Discrete Applied Mathematics* 307 (2022), 160-171.

6. S. K. Debnath, T. Choudhury, P. Stanica, K. Dey, N. Kundu**,*Delegating Signing Rights in a Multivariate Proxy Signature Scheme***, *Advances in Math Communication*, 2022.

7. L. Budaghyan, N. Kaleyski, C. Riera, P. Stanica, ***On the behavior of some APN permutations under swapping points***, *Cryptography & Communication – CCDS* 14 *(*2022), 319-345

8. D. Bartoli, M. Calderini, C. Riera, <u>P. Stanica</u>, ***Low c-differential uniformity for functions modified on subfields***, *Cryptography & Communication – CCDS*, 2022.

9. <u>P. Stanica</u>, ***Low c-differential and c-boomerang uniformity of the swapped inverse function***, Discrete Mathematics 344:10 (2021), 112543.

10. <u>P. Stanica</u>, ***Investigations on c-Boomerang Uniformity and Perfect Nonlinearity***, *Discrete Applied Mathematics* 304 (2021), 297-314.

11. <u>P. Stanica</u>, ***Using double Weil sums in finding the c-Boomerang Connectivity Table for monomial functions on finite fields***, Applicable Algebra in Engineering, Communication and Computing, 2021.

12. S. Mesnager, C. Riera, <u>P. Stanica</u>, H. Yan, Z. Zhou, ***Investigation on c-(almost) perfect nonlinear functions***, *IEEE Transactions on Information Theory*, 2021. 67:10 (2021), 6916-6925.

13. S. Ul Hasan, M. Pal, <u>P. Stanica</u>, Boomerang uniformity of a class of power maps, *Designs, Codes and Cryptography* 89 (2021), 2627-2636.

14. <u>P. Stanica</u>, C. Riera, A. Tkachenko, ***Characters, Weil sums and c-differential uniformity with an application to the perturbed Gold function***, *Cryptography & Communication – CCDS*, 2021 13 (2021), 891-907.

15. C. Riera, M. Parker, <u>P. Stanica</u>, ***Quantum states associated to mixed graphs and their algebraic characterization***, *Advances in Math Communication*, 2021.

16. <u>P. Stanica</u>, *A **Boolean functions view on the Golay-Rudin-Shapiro sequence**, Journal of Combinatorics and Number Theory* 11:3 (2021).

17. S.K. Debnath, <u>P. Stanica</u>, N. Kundu, R. Dutta, ***Secure and efficient multiparty private set intersection cardinality***, *Advances in Math Communication* 15:2 (2021), 365-386.

18. S. Gangopadhyay, C. Riera, <u>P. Stanica</u>, ***Gowers U2 norm as a measure of nonlinearity for Boolean functions and their generalizations***, *Advances in Math. Communication* 15:2 (2021), 241-256.

19. B. Mandal, S. Maitra, <u>P. Stanica</u>, ***On the existence and non-existence of some classes of bent-negabent functions***, *Applicable Algebra in Engineering, Communication and Computing*, 2021.

20. <u>P. Stanica</u>, A. Geary, ***The c-differential behavior of the inverse function under EA-equivalence***, *Cryptography and Communications* 13 (2021), 295-306.

21. S.U. Hasan, M. Pal, C. Riera, <u>P. Stanica</u>, ***On the c-differential uniformity of certain maps over finite fields***, *Designs, Codes and Cryptography* 89 (2021), 221-239.

22. C. Riera, T. Roy, S. Sarkar, <u>P. Stanica</u>, ***A hybrid inversive congruential pseudorandom number generator with high period***, *European Journal of Pure and Applied Mathematics* 14:1 (2021), 1-18.

23. <u>P. Stanica</u>, ***A Boolean functions' view on the Golay-Rudin-Shapiro sequence***, *Journal of Combinatorics and Number Theory*, 2021.

24. F. Luca, S. Mabaso, <u>P. Stanica</u>, ***On the prime factors of the iterates of the Ramanujan tau-function***, *Proc. Edinburgh Math. Soc.* 63(4) (2020), 1031-1047.

25. M. Hopp, P. Ellingsen, C. Riera, <u>P. Stanica</u>, ***Thickness distribution of Boolean functions** in **4 and 5 variables and a comparison with other cryptographic properties***, *Annales Mathematicae et Informaticae* 52 (2020), 117-135.

26. C.A. Jothishwaran, S. Gangopadhyay, C. Riera, <u>P. Stanica</u>, ***A quantum algorithm, for the estimation of the Gowers U2 norm and linearity tests of Boolean functions***, *Quantum Information Processing* 19:311, 2020.

27. S. Li, W. Meidl, A. Polujan, A. Pott, C. Riera, <u>P. Stanica</u>, ***Vanishing Flats: A Combinatorial Viewpoint on the Planarity of Functions and Their Applications***, *IEEE Transactions on Information* Theory 66:11 (2020), 7101-7112.

28. B. Mandal, S. Maitra, P. Stanica, ***Further results on non-existence of bent-negabent functions***, *Applicable Algebra in Engineering, Communication and Computing*, 2020.

29. L.A Medina, M.G. Parker, C. Riera, P. Stanica, ***Root-Hadamard transforms and complementary sequences***, C*ryptography & Communication – CCDS* 12 (2020), 1035-1049.

30. S.K. Debnath, P. Stanica, N. Kundu, A.K. Debnath, ***Post quantum protocol for computing set intersection cardinality with linear complexity***, *IET – Information Security* 14:6 (2020), 661-669.

31. S.K. Debnath, P. Stanica, N. Kundu, R. Dutta, ***Towards the multiparty set intersection cardinality with linear complexity***, *Advances in Math Communication*, 2020.

32. L. Budaghyan, N.S. Kaleyski, C. Riera, P. Stanica, ***Partially APN functions with APN-like polynomial representations***, *Designs, Codes and Cryptography* 88 (2020), 1159-1177.

33. P. Ellingsen, P. Felke, C. Riera, P. Stanica, A. Tkachenko, ***C-differentials, multiplicative uniformity, and (almost) perfect c-nonlinearity***, *IEEE Trans. Inf. Theory*, 66:9 (2020), 5781-5789.

34. C. Riera, P. Stanica, S. Gangopadhyay, ***Generalized bent Boolean functions and strongly regular graphs***, *Discrete Applied Mathematics* 283 *(*2020), 367-374.

35. S. Gangopadhyay, C. Riera, P. Stanica, ***Gowers U2 norm as a measure of nonlinearity for Boolean functions and their generalizations***, *Adv. Math. Communication*, 2020.

36. S. Maitra, B. Mandal, T. Martinsen, D. Roy, P. Stanica, ***Analysis on Boolean function in a restricted (biased) domain***, *IEEE Trans. Inf. Theory* 66:2 (2020), 1219-1231.

37. S. Mesnager, C. Riera, P. Stanica, ***Multiple characters transforms and generalized Boolean functions***, *Cryptography & Communication – CCDS* 11:6 (2019), 1247-1260.

38. L. Budaghyan, N.S. Kaleyski, S. Kwon, C. Riera, P. Stanica, ***Partially APN Boolean functions and classes of functions that are not APN infinitely often***, *Cryptography & Communication - CCDS* 12 (2020), 527-545.

39. P. Stanica, B. Mandal, S. Maitra, ***The connection between quadratic bent-negabent functions and the Kerdock code***, *Applicable Algebra in Engineering, Communication and Computing* 30:5 (2019), 387-401.

40. C. Riera, P. Stanica**, *Landscape Boolean functions***, *Advances in Math Communication* 13:4 (2019), 613-627.

41. Q. Wang, P. Stanica, ***Transparency order for Boolean functions: analysis and construction***, *Designs, Codes & Crypt.* 87:9 (2019), 2043-2059.

42. F. Luca, P. Stanica, ***Perfect squares as concatenation of consecutive integers***, *American Math. Monthly* 126:8 (2019), 728-734.

43. Q. Wang, P. Stanica, ***A trigonometric sum sharp estimate and new bounds on the nonlinearity of some cryptographic Boolean functions***, *Designs Codes & Crypt.* 87:8 (2019), 1749-1763.

44. L. Budaghyan, P. Stanica**, *What is... a cryptographic Boolean function*?** (invited paper), *Notices of American Math. Society* 66:1 (2019), 60-63.

45. Q. Wang, P. Stanica, ***A new upper bound for the covering radius of the second order Reed-Muller code of length 128***, *Cryptography and Communications* 11 (2019) 269-277.

46. B. Mandal, P. Stanica, *S. Gangopadhyay, **New classes of p-ary bent functions**, Cryptography and Communications*, 2018, 1-16.

47. P. Stanica, T. Sasao, J.T. Butler, ***Distance duality on some classes of Boolean functions***, *J. Combin. Math. and Combin. Computing* 107 (2018), 181-198.

48. F.N. Castro, L.A. Medina, P. Stanica, ***Generalized Walsh transforms of symmetric and rotation symmetric Boolean functions are linear recurrent***, *Applicable Algebra in Engineering, Communication and Computing* 2018, 1-21.

49. S. Gangopadhyay, B. Mandal, P. Stanica, ***Gowers U3 norm of Maiorana-McFarland bent Boolean functions***, *Designs, Codes & Cryptography* 86:5 (2018), 1131-1148.

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53. E.J. Ionascu, T. Martinsen, <u>P. Stanica</u>, ***Bisecting binomial coefficients***, *Discrete Applied Math* 227 (2017), 70-83.

54. G.N. Stanica, <u>P. Stanica</u>, ***Recurrences for entries of powers of matrices***, *Fibonacci Quarterly* 55:5 (2017) *(Proc. Intern. Conf. Fib. Numbers and Applications 2016),* 166-173.

55. T. Martinsen, W. Meidl, <u>P. Stanica</u>, ***Generalized bent functions and their Gray images***, Proc. of WAIFI 2016: Arithmetic of Finite Fields, LNCS 10064 (2017), 160-173.

56. S. Gangopadhyay, S. Maitra, N. Sinha, <u>P. Stanica</u>, ***Quantum Algorithms related to HN-Transforms of Boolean Functions***, Proc. *C2SI-Carlet 2017: Codes, Cryptology and Information Security*, LNCS 10194, 2017, pp. 314-327.

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59. S. Gangopadhyay, A. Gangopadhyay, S. Pollatos, <u>P. Stanica</u>, ***Biased cryptographic Boolean functions***, *Cryptography and Communications* (*Discrete Structures, Boolean Functions and Sequences*) 9:2 (2017), 301-314.

60. S. Gangopadhyay, E. Pasalic, <u>P. Stanica</u>, S. Datta, ***A note on non-splitting Z-functions***, *Information Processing Letters* 121 (2017), 1-5.

61. F. Luca, <u>P. Stanica</u>, ***Counting permutation equivalent degree six binary polynomials invariant under the cyclic group***, *Applicable Algebra in Engineering, Communic. & Computing* 28 (2017), 1-10.

62. <u>P. Stanica</u>, ***Weak and strong 2^k-bent functions***, *IEEE Trans. Information Theory* 62:5 (2016), 2827-2835.

63. C. Etherington, M. Anderson, E. Bach, J. Butler, <u>P. Stanica</u>, ***A parallel approach in computing correlation immunity in six variables***, *International Journal of Foundations of Computer Science* 27:4 (2016), 511-528.

64. F. Luca, <u>P. Stanica</u>, ***On Fibonacci numbers which are elliptic Carmichael***, *Periodica Mathematica Hungarica* 72:2 (2016), 171-179

65. <u>P. Stanica</u>, S. Gangopadhyay, E. Pasalic, B. Mandal, ***An analysis of the C class of bent functions***, *Fundamenta Informaticae* 146 (2016), 1-22.

66. S. Gangopadhyay, <u>P. Stanica</u>, ***Fourier Entropy-Influence Conjecture for Cryptographic Boolean Functions***, Special issue on "*Advances in Cryptology and Information Security*" in *Transactions on Advanced Research*, Vol. 12:2, (2016), 8-14.

67. Yu. Bilu, T. Komatsu, F. Luca, A. Pizarro-Madariaga, <u>P. Stanica</u>, ***On a divisibility relation for Lucas sequences***, *J. Number Theory* 163 (2016), 1-18.

68. C. Carlet, D. Joyner, P. Stanica, D. Tang, ***Cryptographic properties of monotone Boolean functions***, *Journal of Mathematical Cryptology* 10:1 (2016), 1-14.

69. F. Zhang, S. Xia, <u>P. Stanica</u>, Y. Zhou, ***Further results on constructions of generalized bent Boolean functions***, *Inform. Sciences - China*. 59 (2016), 1-3.

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71. D. Canright, J.H. Chung, <u>P. Stanica</u>, ***Circulant matrices and affine equivalence of monomial rotation symmetric functions***, *Discrete Math.* 338:12 (2015), 2197-2211.

72. <u>P. Stanica</u>, ***Affine equivalence of quartic monomial rotation symmetric Boolean functions in prime power dimension***, *Information Sciences* 314 (2015), 212-224.

73. C. Martinsen, <u>P. Stanica</u>, ***Asymptotic behavior of gaps between roots of weighted 80. factorials***, *Fibonacci Quarterly* 53:3 (2015), 213-218.

74. J.H. Chung, <u>P. Stanica</u>, C.H. Tan, Q. Wang, ***A construction of Boolean functions with good cryptographic properties***, *International J. Computer Mathematics* (2015), 700-711.

75. W. Banks, C. Finch, F. Luca, C. Pomerance, <u>P. Stanica</u>, ***Sierpinski and Carmichael Numbers***, *Transactions of AMS* **367** (2015), 355-376.

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139.	P. Stanica, ***Netted Matrices***, *Intern. J. of Math. & Math Sciences* **2003:39** (2003), 2507-2518.

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142.	P. Stanica, S. Maitra, ***A Constructive Count of Rotation Symmetric Functions***, *Information Processing Letters* **88/6** (2003), 299-304.

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144.	R. Peele, P. Stanica, ***Powers of Pascal's like triangles and Fibonacci sequences***, *Fibonacci Quarterly* **40** (2002), 146-152.

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147.	T.W. Cusick, P. Stanica, ***Fast Evaluation, Weights and Nonlinearity of Rotation-Symmetric Functions***, *Discrete Mathematics* **258**:**1-3** (2002), 289-301.

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149.	P. Stanica, Soo Hak Sung, ***Improving the Nonlinearity of Some Balanced Boolean Functions with Good Local and Global Avalanche Characteristics***, *Inform. Proc. Letters* **79** (2001), 167-172.

150.	P. Stanica, ***Good Lower and Upper Bounds on Binomial Coefficients***, *Journal of Inequalities in Pure and Applied Mathematics* **2:3** (2001), Art. 30.

151.	T.W. Cusick, P. Stanica, ***Counting the n-chromos of I.J. Schoenberg***, *Journal of Combinatorial Theory*, Series A **79** (1997), 298-314.

152.	T.W. Cusick, P. Stanica, ***Bounds on the number of functions satisfying the strict avalanche criteria***, *Inform. Proc. Letters* **60** (1996), 514-519.

6. Grants, Honors and Awards, Memberships

- **The George Boole international prize, 2021.**
- **Fellow of the Institute of Mathematics and Applications, UK**
- **Applied Mathematics Research Award** for 2012.
- **ONR Visiting Scientist Program Grant**, 2009, 2012, 2013, 2014.
- **GSEAS Entrepreneurship Award**, 2011.
- **GSEAS Faculty Research Award**, 2010.
- **CED3 Grant,** 2009.

- **AFOSR-QDR Grant,** 2008.
- **Many invitations for research visits at various institutions in US, Mexico, India, South Africa, Austria, France, Germany, Norway, Romania, Singapore, South Korea, etc.**
- **NATO Award:** all expenses to attend and give an invited talk ``Counting balanced Boolean functions of bounded degree'' at the NATO Advanced Study Institute ``Boolean Functions in Cryptology and Information Security'' held at Zvenigorod - Moscow, September 8-18, 2007.
- **Invited** to spend the summer of 2008 in the Mathematics Department of TOBB University of Economics and Technology, Turkey.
- **Research Initiation Program grant** NPS (2006-2008); Project: *Cryptographic Boolean Functions*
- **Distinguished Research Professor** at AUM (2004-2007)
- *Editorial Board Member* for *Discrete Applied Mathematics***,** since 2014
- *Associate Editor* and **Number Theory Editor** - *European J. Pure and Applied Mathematics,2008-present*
- **Associate Editor** of the *Australian J. Mathematical Analysis and Applications* (2003-2006)
- AUM **Chancellor's grant** (2005)
- AUM **Research Grant-in-Aid**; Project: *Cryptographic Functions Satisfying Important Design Criteria: Local and Global Avalanche Characteristics, Nonlinearity*, received 2000.
- **Full Scholarship** during graduate studies, 1993-1998.
- Earned a full five-year **undergrad. scholarship** from the Univ. Bucharest (1986-1992).
- Awarded an additional **research grant** from the Romanian Ministry of Education during undergraduate studies (1990-1992).
- **Member of the Scientific Committee** of *International Conference on Computers and Communications,* Baile Felix – Oradea, Romania, May 27-29, 2004
- **Program Committee**, International Conference on Cryptography - Indocrypt 2003, India
- **Research Award**, School of Sciences - Auburn Univ. Montgomery, 2002-2003.
- **Dean's Award***,* School of Sciences - Auburn Univ. Montgomery, 2002-2003.
- **Junior Faculty Award**, School of Sciences - Auburn Univ. Montgomery, 2001-2002.
- Elected as **AFTICA (Associate Fellow)** in the Institute of Combinatorics and Its Applications - Canada, 2001
- Member of *Research Group on Inequalities and their Applications*, Victoria University – Australia, *American Mathematical Society* (since 1993), *Romanian Association of Mathematicians* (since 1992), *Mathematical Association of America* (since 1999), *Fibonacci Association* (since 2001), *Mensa International* (since 1990), *Phi Kappa Phi* (since 2001), Cited in *Who's Who in Combinatorics*, 2000, *Who's Who in Mathematical Sciences* (1997, 2010), *Who's Who Among Students in American Univ. and Colleges* (Fall 1996)

7. Graduate Students

- Aaron Geary, Applied Math Ph.D., 2019-2022
- Thor Martinsen, Applied Math Ph.D., 2014-2017
- Jong Chung, Applied Math Ph.D., 2010-2014
- Devon Zilmer (Master's, MA), 2021
- Michael Troncoso (Master's, MA & CS), 2020
- Zachary Klein (Master's, MA), 2020
- Matthew Dods (Master's, MA), 2020
- Andrew Cammack (Master's, MA), 2020
- David Justamante (Master's, MA & CS), 2017

- Oliver DiNallo (Master's, MA), 2017
- Nicholas, J. Sharpe (Master's, MA), 2016
- Thomas Knuth, (Master's MA), 2016
- Bijesh Shrestha (Master's, MA), 2016
- Bing Yong Lim (Master's MA), 2015
- Matt Fukuzawa (Master's, MA), 2014
- Ola Larsson (Master's, MA), 2013
- Eric McCay (Master's, MA & ECE), 2012
- Chris Johnson (Master's, ECE), 2010
- Timothy O'Doud (Master's, ECE), 2010
- Carole Etherington (Master's, ECE), 2010
- Aaron Geary (Master's, MA & IT), 2009.
- Nikolaos Petrakos (Master's, CS & MA), 2009.
- Stuart W. Schneider (Master's, ECE), 2009.
- Neil Schafer (Master's, ECE), 2009.
- Jennifer Fischer (Master's, ECE), 2009
- Alexopoulos Argyrios (Master's, MA & ECE), 2009.
- Carlos Fernandez (Master's, MA), 2008.
- Spyros Pollatos (Master's, MA & OR), 2008.

8. University/School/Department Service

- Program manager for *Mathematics for Secure Communication* certificate at NPS.
- NPS Research Board Committee, 2009-2019.
- MSCE Update Committee, 2008-2009.
- Managing (with R. Gera, C. Rasmussen) Finite Mathematics for Operations Research (1025), Bridge to Advanced Mathematics (2025) and Discrete Mathematics (3025) courses.
- Designed a graduate course on *Combinatorial and Cryptographic Properties of Boolean Functions* (Fall 2007)
- *PhD Committee* member (since 2006), Applied Mathematics, NPS.
- Served on *Math Department Faculty and Head Search Committees,* 2003-2004 and 2004-2005, 2007.
- *Faculty advisor* for the AUM Math Club, 2003-present.
- Member of *AUM Grievance Committee*, 2003-present.
- Chair of the *Tenure and Promotion Committee* for a faculty member, 2003.
- Serve on AUM's *Information Technology Assessment Committee,* 2002-present.
- Serve on *Mathematics Program Assessment, Freshman Mathematics Program Assessment,* and *Communications Committee.*
- *Co-Director for the Sciences Computer Center*, 2001-2003.
- Served on the *Computer Overview Committee* formed by the Dean of the School of Sciences, winter 2000 - spring 2001

9. Citizenship: U.S.A.