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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
- Fluent in English, Romanian; Proficient in French

2. Professional experience

- *Tenured Professor & Associate Chair for Research* (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
- *Professor Assistant*, 1992-1993, Bucharest University, Romania

3. Books, Editing and Chapters in Books

1. T.W. Cusick, P. Stanica, *Cryptographic Boolean Functions and Applications*, Edition 2, Academic Press - Elsevier, 2017.
2. T.W. Cusick, P. Stanica, *Cryptographic Boolean Functions and Applications*, Edition 1, Academic Press - Elsevier, March 2009.

3. *Proc. Of International Conference on Fibonacci Numbers* (F. Luca, P. Stanica, eds.), Utilitas Mathematica, *Congressus Numerantium* Vol. 201, January 2010.
4. *Proc. Of International Conference on Fibonacci Numbers* (F. Luca, P. Stanica, eds.), *Aportaciones Matematicas*, Investigacion 20, Soc. Matematica Mexicana, 2011.
5. M. E. McCay, J. T. Butler, and P. Stanica, **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 journals

110. P. Stanica, T. Sasao, J.T. Butler, **Distance duality on some classes of Boolean functions**, accepted *J. Combin. Math. and Combin. Computing*.
109. F. Luca, P. Stanica, **Perfect squares as concatenation of consecutive integers**, accepted in *American Math. Monthly*.
108. 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*, 2018.
107. B. Mandal, P. Stanica, S. Gangopadhyay, **New classes of p -ary bent functions**, *Cryptography and Communications*, 2018, 1-16.
106. 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.
105. S. Gangopadhyay, B. Mandal, P. Stanica, **Gowers U_3 norm of Maiorana-McFarland bent Boolean functions**, *Designs, Codes & Cryptography* 86:5 (2018), 1131-1148.
103. S. Gangopadhyay, G. Paul, A.K. Saini, N. Sinha, P. Stanica, **Generalized nonlinearity of S -boxes**, *Advances on Mathematics of Communications* 12:1 (2018), 115-122.
102. T. Martinsen, W. Meidl, S. Mesnager, P. Stanica, **Decomposing generalized bent and hyperbent functions**, *IEEE Trans. Information Theory* 63:12 (2017), 7804-7812.
101. T. Martinsen, W. Meidl, P. Stanica, **Partial spread and vectorial generalized bent functions**, *Designs, Codes & Cryptography* 85:1 (2017), 1-13.
100. E.J. Ionascu, T. Martinsen, P. Stanica, **Bisecting binomial coefficients**, *Discrete Applied Math* 227 (2017), 70-83.
99. G.N. Stanica, P. Stanica, **Recurrences for entries of powers of matrices**, *Fibonacci Quarterly* 55:5 (2017) (*Proc. Intern. Conf. Fib. Numbers and Applications 2016*), 166-173.
98. T. Martinsen, W. Meidl, P. Stanica, **Generalized bent functions and their Gray images**, *Proc. of WAIFI 2016: Arithmetic of Finite Fields*, LNCS 10064 (2017), 160-173.
97. S. Gangopadhyay, S. Maitra, N. Sinha, P. Stanica, **Quantum Algorithms related to HN-Transforms of Boolean Functions**, *Proc. C2SI-Carlet 2017: Codes, Cryptology and Information Security*, LNCS 10194, 2017, pp. 314-327.
96. F. Luca, P. Stanica, **Monotonic phinomial coefficients**, *Bulletin Australian Math Soc.* 95 (2017), 365-372.
95. B. Mandal, S. Gangopadhyay, P. Stanica, **Cubic Maiorana-McFarland bent functions with no affine derivatives**, *International J. Computer Mathematics* 2:1 (2017), 1-14.
94. S. Gangopadhyay, A. Gangopadhyay, S. Pollatos, P. Stanica, **Biased cryptographic Boolean functions**, *Cryptography and Communications (Discrete Structures, Boolean Functions and Sequences)* 9:2 (2017), 301-314.
93. S. Gangopadhyay, E. Pasalic, P. Stanica, S. Datta, **A note on non-splitting Z -functions**, *Information Processing Letters* 121 (2017), 1-5.

92. F. Luca, P. Stanica, *Counting permutation equivalent degree six binary polynomials invariant under the cyclic group*, *Applicable Algebra in Engineering, Communic. & Computing* 28 (2017), 1-10.
91. P. Stanica, *Weak and strong 2^k -bent functions*, *IEEE Trans. Information Theory* 62:5 (2016), 2827-2835.
90. C. Etherington, M. Anderson, E. Bach, J. Butler, P. Stanica, *A parallel approach in computing correlation immunity in six variables*, *International Journal of Foundations of Computer Science* 27:4 (2016), 511-528.
89. F. Luca, P. Stanica, *On Fibonacci numbers which are elliptic Carmichael*, *Periodica Mathematica Hungarica* 72:2 (2016), 171-179
88. P. Stanica, S. Gangopadhyay, E. Pasalic, B. Mandal, *An analysis of the C class of bent functions*, *Fundamenta Informaticae* 146 (2016), 1-22.
87. S. Gangopadhyay, P. Stanica, *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.
86. Yu. Bilu, T. Komatsu, F. Luca, A. Pizarro-Madariaga, P. Stanica, *On a divisibility relation for Lucas sequences*, *J. Number Theory* 163 (2016), 1-18.
85. C. Carlet, D. Joyner, P. Stanica, D. Tang, *Cryptographic properties of monotone Boolean functions*, *Journal of Mathematical Cryptology* (2016).
84. F. Zhang, S. Xia, P. Stanica, Y. Zhou, *Further results on constructions of generalized bent Boolean functions*, *Inform. Sciences - China*. 59 (2016), 1-3.
83. T.W. Cusick, P. Stanica, *Counting equivalence classes for monomial rotation symmetric Boolean functions with prime dimension*, *Cryptography and Communications (Discrete Structures, Boolean Functions and Sequences)*, 2016, 1-15.
82. D. Canright, J.H. Chung, P. Stanica, *Circulant matrices and affine equivalence of monomial rotation symmetric functions*, *Discrete Math.* 338:12 (2015), 2197-2211.
81. P. Stanica, *Affine equivalence of quartic monomial rotation symmetric Boolean functions in prime power dimension*, *Information Sciences* 314 (2015), 212-224.
80. C. Martinsen, P. Stanica, *Asymptotic behavior of gaps between roots of weighted 80. factorials*, *Fibonacci Quarterly* 53:3 (2015), 213-218.
79. J.H. Chung, P. Stanica, C.H. Tan, Q. Wang, *A construction of Boolean functions with good cryptographic properties*, *International J. Computer Mathematics* (2015), 700-711.
78. W. Banks, C. Finch, F. Luca, C. Pomerance, P. Stanica, *Sierpinski and Carmichael Numbers*, *Transactions of AMS* 367 (2015), 355-376.
77. F. Luca, P. Stanica, *On numbers of the form $p+2^{n-n}$* , *J. Combinatorics and Number Theory* 6:3 (2015), 157-162.
76. Q. Wang, C. Carlet, P. Stanica, C.-H. Tang, *Cryptographic Properties of the Hidden Weighted Bit Function*, *Discrete Applied Mathematics* 174 (2014), 1-10.
75. Q. Wang, C.-H. Tan, P. Stanica, *Concatenations of the hidden weighted bit function and their cryptographic properties*, *Advances in Mathematics of Communications* 8:2 (2014), 153-165.
74. J.H. Chung, P. Stanica, C.H. Tan, Q. Wang, *A construction of Boolean functions with good cryptographic properties*, *International J. Computer Mathematics* (2014), 1-12.
73. F. Luca, P. Stanica, *Equations with arithmetic functions of Pell numbers*, *Bull. Math. Soc. Sci. Math. Roumanie. Tome* 57(105), No. 4 (2014), 409-413.
72. P. Pace, P. Stanica, B. Luke, T. Tedesso, *Extended Closed-form Expressions for the Robust Symmetrical Number System Dynamic Range and An Efficient Algorithm for its Computation*, *IEEE Transactions on Information Theory* 60:3 (2014), 1-11.
71. F. Luca, P. Stanica, *On the first digits of the Fibonacci numbers and their Euler function*, *Uniform Distribution Theory Journal* 9:1 (2014), 21-25.

70. F. Luca, P. Stanica, *The Euler function of Fibonacci and Lucas numbers and factorials*, *Annales Univ. Sci. Budapest., Sect. Comp.* **41** (2013), 119-124.
69. F. Luca, P. Stanica, A. Yalciner, *When do Fibonacci invertible classes modulo M form a subgroup?*, *Annales Mathematicae et Informaticae* **41** (2013), 254-270 (*Proc. 15th International Conference on Fibonacci Numbers and Their Applications*).
68. F. Luca, P. Stanica, *On some conjectures on the monotonicity of some arithmetical sequences*, *J. Combinatorics and Number Theory* **4:2** (2013), 39-47.
67. S. Gangopadhyay, E. Pasalic, P. Stanica, *A note on generalized bent criteria for Boolean functions*, *IEEE Trans. Information Theory* **59:5** (2013), 3233-3236.
66. P. Stanica, T. Martinsen, S. Gangopadhyay, B. Kumar Singh, *On Generalized Bent Functions*, *Designs Codes, Cryptography* **69:1** (2013), 77-94.
65. E. Kilic, P. Stanica, *General Approach in Computing Sums of Products of Binary Sequences*, *Hacettepe J. Math.* **42:1** (2013), 1-7.
64. P. Stanica, S. Sarkar, S.G. Gupta, S. Maitra, N. Kar, *Counting Heron triangles with constraints*, *Integers* **13** (2013), #A3.
63. E. Kilic, P. Stanica, *The inverse of banded matrices*, *Journal of Computational and Applied Mathematics* **237** (2013), 126-135.
62. P. Stanica, S. Gangopadhyay, A. Chaturvedi, A.K. Gangopadhyay, S. Maitra, *Investigations on Nega-Hadamard transform, bent and negabent functions*, *IEEE Trans. Inf. Theory* **58:6** (2012), 4064-4072.
61. F. Luca, P. Stanica, *On the Euler function of the Catalan numbers*, *Journal of Number Theory* **132** (2012), 1404-1424.
60. J. Fox, R. Gera, P. Stanica, *The Independence Number for the Generalized Petersen Graphs*, *Ars Combinatoria* **103** (2012), 439-451.
59. D. Canright, S. Gangopadhyay, S. Maitra, P. Stanica, *Laced Boolean functions and subset sums in finite fields*, *Discrete Applied Mathematics* **159** (2011), 1059-1069.
58. E. Kilic, P. Stanica, *Factorizations and representations of binary polynomial recurrences by matrix methods*, *Rocky Mountain Journal of Mathematics* **41:4** (2011), 1247-1264.
57. C. Chun, P. Stanica, B. Neta, *Recurrence relations for a third-order family of methods in Banach spaces*, *Computers and Mathematics with Applications* **61** (2011), 1665-1675.
56. T.W. Cusick, Y. Li, P. Stanica, *On a Combinatorial Conjecture*, *Integers* **11** (2011), 185-203; also in *J. Combinatorial Number Theory* **11** (2011), Art. #17 (17pp).
55. R. Gera, P. Stanica, *The Spectrum of the Generalized Petersen Graphs*, *Australasian Journal of Combinatorics* **49** (2011), 39-45.
54. E. Kilic, P. Stanica, *A matrix approach for general higher order linear recurrences*, *Bulletin of the Malaysian Mathematical Sciences Society* **34** (1) (2011), 51-67.
53. E. Kilic, P. Stanica, *The Lehmer matrix and its recursive analogue*, *J. of Combinat. Math. and Combinat. Computing* **74** (2010), 193-205.
52. F. Luca, P. Stanica, A. Togbe, *On a Diophantine equation of Stroeker*, *Bulletin Belgian Math Soc.* **17** (2010), 1-8.
51. F. Luca, D. Marques, P. Stanica, *On the spacings of C -nomial coefficients*, in *J. Number Theory* **130:1** (2010), 82-100.
50. T.W. Cusick, Yuan Li, P. Stanica, *On a conjecture of balanced symmetric Boolean functions*, *J. Math Cryptology* **3:4** (2009), 273-290.
49. E. Kilic, P. Stanica, *Factorizations and representations of second order linear recurrences with indices in arithmetic progressions*, *Bulletin Mex. Math. Soc.* **15** (2009), 1-8.
48. F. Luca, P. Stanica, *On Machin's formula with powers of the golden section*, *International J. Number Theory* vol.5:6 (2009), pp. 973-979.
47. T.W. Cusick, P. Stanica, *Sums of the Thue-Morse sequence over arithmetic progressions*, *Advances and Applications in Discrete Mathematics* **4:2** (2009), 127-135.

46. C. Dartyge, F. Luca, P. Stanica, *On digit sums of multiples of an integer*, *J. Number Theory* 129:11 (2009), 2820-2830.
45. N. Petrakos, G. Dinolt, B. Michael, P. Stanica, *Cube-Type Algebraic Attacks on Wireless Encryption Protocols*, *IEEE Computer* 42:10 (2009), 106-108.
44. S. Konyagin, F. Luca, P. Stanica, *Sum of Divisors of Fibonacci numbers*, *Uniform Distribution Theory* Vol. 4 (2009), No. 1, 1-8.
43. S. Maitra, Y. V. Subba Rao, P. Stanica, S. Gangopadhyay, *Nontrivial solutions to the cubic sieve congruence problem $x^3=y^2 z \pmod{p}$* , Special Issue on *Applied Cryptography & Data Security* in *Journal of "Computacion y Sistemas"* Vol.12, No.3 (2009) (eds. F. Rodriguez-Henriquez, D. Chakraborty), 253-266.
42. E. Kilic, P. Stanica, *Generating matrices for weighted sums of a second order linear recurrence*, *Journal of Integer Sequences*, Vol. 12 (2009), Article 09.2.7.
41. H. Fredricksen, E.J. Ionascu, F. Luca, P. Stanica, *Minimal Niven Numbers*, *Acta Arithmetica* 132.2 (2008), 135-159.
40. P. Stanica, S. Maitra, *Rotation-Symmetric Functions – Count and Cryptographic Properties*, *Discrete Applied Mathematics* 156.10 (2008), 1567-1580.
39. T.W. Cusick, Yuan Li, P. Stanica, *Balanced Symmetric Functions over $GF(p)$* , *IEEE Transactions on Inform. Theory* 54:3 (2008), 1304-1307.
38. M. Filaseta, F. Luca, P. Stanica, R. Underwood, *Galois Groups of Polynomials Arising from Circulant Matrices*, *J. Number Theory* 128:1 (2008), 59-70.
37. P. Stanica, *Graph eigenvalues and Walsh spectrum of Boolean functions*, *Integers-Journal of Combinatorial Number Theory* 7(2), Art. 32, 2007.
36. T.W. Cusick, H. Fredricksen, P. Stanica, *On the delta sequence of the Thue-Morse sequence*, *Australasian Journal of Combinatorics* 39 (2007), 293-300.
35. *Resolution of some conjectures related to Erdos-Debrunner inequality* (C. Frenzen, E. Ionascu, P. Stanica), *J. Ineq. Pure Appl. Math.* 8 (2007), Issue 3, 13pp.
34. M. Filaseta, F. Luca, P. Stanica, R. Underwood, *Two Diophantine Approaches to the Irreducibility of Certain Trinomials*, *Acta Arithmetica* 128 (2007), 149-156.
33. E. Ionascu, F. Luca, P. Stanica, *Heron triangles with two fixed sides*, *J. Number Theory* 126 (2007), 52-67.
32. F. Luca, P. Stanica, *Linear Equations with Euler Totient Function*, *Acta Arithmetica* 128 (2007), 135-147.
31. E. Ionascu, P. Stanica, *Extreme values for the area of rectangles with vertices on concentric circles*, *Elemente der Mathematik* 62:1 (2007), 30-39.
30. R. Gera, S. Horton, C. Rasmussen, P. Stanica, *Results on the min-sum vertex cover problem*, *Congr. Numer.* 178 (2006), 161-172.
29. F. Luca, P. Stanica, $F_1 F_2 F_3 F_4 F_5 F_6 F_8 F_{10} F_{12} = 11!$, *Portugaliae Mathematica*, Vol. 63, Fasc. 1 (2006), 251-260.
28. P. Stanica, T. Foguel, *Almost Hamiltonian Groups*, *Resultate der Mathematik* 48 (2005), no. 1-2, 44-49.
27. F. Luca, P. Stanica, *On a conjecture of Ma*, *Resultate der Mathematik (Results in Mathematics)* 48 (2005), no. 1-2, 109-123.
26. F. Luca, P. Stanica, *Prime Divisors of Lucas Sequences and a Conjecture of Skalba*, *International Journal of Number Theory*, Vol. 1, No. 4 (2005) 583-591.
25. W. Banks, F. Luca, F. Saidak, P. Stanica, *Composition with the Euler and the Carmichael function*, *Abhandlungen aus dem Math. Seminar der Universität Hamburg* 75 (2005), 215–243.
24. P. Stanica, *Cholesky factorizations of matrices associated with r-order recurrent sequences*, *Integers-Electronic Journal of Combinatorial Number Theory*, Vol. 5(2)

- (2005), #A16. (Also published in Proceedings of a Conf. in Honor of Tom Brown: Topics in Combinatorial Number Theory, published by DIMATIA, Vol. 261, ITI Series.)
23. N.B. Limaye, D.G. Sarvate, P. Stanica, P. Young, **Regular and Strongly Regular Planar Graphs**, *Journal of Combinatorial Math. and Combinatorial Computing* **54**, 111-127 (2005).
 22. F. Luca, P. Stanica, **Fibonacci numbers that are not sum of two primes powers**, *Proceedings of American Mathematical Soc.* **133** (2005), 1887-1890.
 21. C. Georgescu, C. Joita, W. Nowell, P. Stanica, **Chaotic Dynamics of Some Rational Maps**, *Discrete and Continuous Dynamical Systems –Ser. A* **12: 2** (2005), 363-375.
 20. P. Stanica, J.A. Clark, J.L. Jacob, S. Maitra, **Almost Boolean Functions: the Design of Boolean Functions by Spectral Inversion**, *Computational Intelligence* **20: 3** (2004), 450-462.
 19. E. Ionascu, P. Stanica, **Asymptotic expansions for some nonlinear recurrences and almost doubly-exponential sequences**, *Acta Math. Universitatis Comenianae* LXXIII 1 (2004), 1–13.
 18. P. Stanica, S.-H. Sung, **Boolean Functions with Five Controllable Cryptographic Properties**, *Designs, Codes and Cryptography* **31** (2004), 147-157.
 1. P. Stanica, **Generating Functions, Weighted and Non-Weighted Sums for Powers of Second-Order Recurrence Sequence**, *Fibonacci Quarterly* **41** (2003), 321-333.
 16. P. Stanica, p^q - **Catalan Numbers and Squarefree Binomial Coefficients**, *J. Number Theory* **100/2** (2003), 203 - 216.
 15. C. Joita, P. Stanica, **Inequalities related to rearrangements of powers and symmetric polynomials**, *J. of Inequalities in Pure and Applied Math.*, **4:2** (2003), art. 37.
 14. P. Stanica, **Netted Matrices**, *Intern. J. of Math. & Math Sciences* **2003:39** (2003), 2507-2518.
 13. F. Luca, P. Stanica, **Products of Factorials Modulo p** , *Colloquium Mathematicum* **96** (2003), 191-205.
 12. F. Luca, P. Stanica, **On the prime power factorization of $n!$** , *J. Number Theory* **102/2** (2003), 298-305.
 11. P. Stanica, S. Maitra, **A Constructive Count of Rotation Symmetric Functions**, *Information Processing Letters* **88/6** (2003), 299-304.
 10. P. Stanica, **Nonlinearity, Local and Global Avalanche Characteristics of Balanced Boolean Functions**, *Discrete Mathematics* **248:1-3** (2002), 181-193.
 9. R. Peele, P. Stanica, **Powers of Pascal's like triangles and Fibonacci sequences**, *Fibonacci Quarterly* **40** (2002), 146-152.
 8. P. Stanica, **Inequalities on Linear Functions and Circular Powers**, *J. Inequalities in ure and Applied Mathematics*, **4:3** (2002), Art. 30.
 7. G.N. Stanica, P. Stanica, **There are Infinitely Many Smarandache Derivations, Integrations and Lucky Numbers**, *Smar. Notions Journal* **13** (2002), 48-52 (recreational mathematics).
 6. T.W. Cusick, P. Stanica, **Fast Evaluation, Weights and Nonlinearity of Rotation-Symmetric Functions**, *Discrete Mathematics* **258:1-3** (2002), 289-301.
 5. F. Smith, P. Stanica, **Muller-Twist or Comply-Constrain Games**, *Integers-Electronic Journal of Combinatorial Number Theory*, vol. 3 (2002), art. G3.
 4. 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.
 3. P. Stanica, **Good Lower and Upper Bounds on Binomial Coefficients**, *Journal of Inequalities in Pure and Applied Mathematics* **2:3** (2001), Art. 30.

2. T.W. Cusick, P. Stanica, *Counting the n -chromos of I.J. Schoenberg*, *Journal of Combinatorial Theory*, Series A **79** (1997), 298-314.
1. T.W. Cusick, P. Stanica, *Bounds on the number of functions satisfying the strict avalanche criteria*, *Inform. Proc. Letters* **60** (1996), 514-519.

5. Publications in refereed conference proceedings

1. T. Martinsen, W. Meidl, A. Pott, P. Stanica, *On symmetry and differential properties of generalized Boolean functions*, Proc. WAIFI: Arithmetic of Finite Fields, 2018.
2. C. Riera, P. Sole, P. Stanica, *A complete characterization of plateaued Boolean functions in terms of their Cayley graphs*, Proc. Africacrypt (Marrakesh-Morroco), LNCS, Springer-Verlag, 2018.
3. F. Luca, P. Stanica, *On Fibonacci numbers which are elliptic Korselt numbers*, *Proc. International Conf. Fibonacci Numbers and Application*, Fib. Quart. Vol. 52:5 (2014), 164-167.
4. P. Stanica, *Normic continued fractions in totally and tamely ramified extensions of local fields*, *Proc. International Conf. Fibonacci Numbers and Application* Fib. Quart. Vol. 52:5 (2014), 193-200.
5. E.M. McCay, J.T. Butler, P. Stanica, *Computing Algebraic Immunity by Reconfigurable Computer*, Proceedings of the 10th International Workshop on Boolean Problems, Freiberg, Germany, Sept. 2012.
6. E. Kilic, P. Stanica, *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.
7. T.W. Cusick, P. Stanica, *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.
8. P. Stanica, 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.
9. J.L. Shafer, S.W. Schneider, J.T. Butler, P. Stanica, *Enumeration of Bent Boolean Functions by Reconfigurable Computer*, The 18th Annual International IEEE Symposium on Field-Programmable Custom Computing Machines (FCCM-2010), 265-272.
10. E. Kilic, G.N. Stanica, P. Stanica, *Spectral Properties of Some Combinatorial Matrices*, *Congressus Numerantium*, Proceedings of International Conference on Fibonacci Numbers, (F. Luca, P. Stanica, eds.), Vol. 201, pp. 223-236, 2010.
11. F. Luca, P. Stanica, *Aliquots sums of Fibonacci numbers*, *Congressus Numerantium, Proceedings of International Conference on Fibonacci Numbers*, (William Webb, ed.), Vol. 200, pp. 153-160, 2010.
12. F. Luca, P. Stanica, *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.
13. P. Stanica, *On the nonexistence of bent rotation symmetric Boolean functions of degree greater than two* (P. Stanica), *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.
14. 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.

15. 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.
16. 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.
17. F. Luca, P. Stanica, **Cullen Numbers in Second Order Recurrent Sequences**, *Proceedings of the International Conference on Fibonacci Numbers* (2004), Kluwer, 167-175.
18. 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.
19. 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.
20. 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.

6. Presentations at Conferences – National and International

1. ***A quick walk through cryptography (To encrypt or not to encrypt, that is the question)***, Western Norway University of Applied Sciences, April 2018.
2. ***Perfect squares as concatenation of consecutive integers***, West Coast Number Theory Conference, December 2017.
3. ***(Generalized) Boolean functions: invariance under some groups of transformations and differential properties, invited talk***, Boolean Functions and Applications, Norway, July 2017.
4. ***Bisecting binomial coefficients (keeping things fair in a sequence)***, West Coast Number Theory Conference December 2016.
5. ***Counting affine equivalence classes of MRS in prime (power) dimension***, International Conf. Fibonacci Numbers, June 2016.
6. ***On a divisibility relation for Lucas sequences***, West Coast Number Theory Conference, December, 2015.
7. ***Cyclotomic Cosets and Affine Equivalences in Prime Dimensions***, RICAM - Johann Radon Institute for Computational and Applied Mathematics "Osterreichische Akademie der Wissenschaften", May 2015.
8. ***Invited minicourse on "Cryptographic Boolean Functions"***, ISI-Delhi, March 2015.
9. ***Cyclotomic Cosets and an Affine Equivalences Count in Prime Dimensions***, Univ. Witwatersrand, South Africa, October 2014.
10. ***Counting Affine Equivalence Classes of MRS in Prime (Power) Dimension***, International Conf. on Fibonacci Numbers and Applications, Univ. Rochester, July 2014.
11. ***Lectures on Cryptographic Boolean Functions***, National Workshop on Cryptology, Delhi, India, October 2013.
12. ***Attacks on RSA and its variations***, Morelia Number Theory Day, August 2013.
13. ***Thirty years of attacks on RSA***, 1st Congress of the Americas, Guanajuato, August 2013.

14. *Graph Theory Tools on Cryptographic Boolean Functions*, USNA, August 2012.
15. *Algebraic and Cube Attacks on Stream/Block Ciphers*, USNA, August 2012.
16. *When do the Fibonacci invertible classes modulo M form a subgroup?*, International Conf. Fibonacci Numbers and Applications, Eger-Hungary, June 2012.
17. *Algebraic and the cube attacks on Stream/Block Ciphers*, Naval Postgraduate School, May 2012.
18. *Algebraic and the cube attacks on E0 Bluetooth protocol*, DSO-Singapore, March 2012.
19. *Generalized Boolean Functions*, TL@NUS - Singapore, February 2012.
20. *Cryptographic Boolean Functions*, DSO-Singapore, February 2012.
21. *Various Problems on Sums of Digits*, ISI-Delhi, January 2012.
22. *Some Problems on the Hamming Weight and Sums of Digits*, ISI-Kolkata, January 2012.
23. *Generalized bent functions and Walsh-Hadamard transform*, Integers, U. West Georgia, October 2011.
24. *Nega-Hadamard transform, bent and negabent functions*, SETA 2010, Paris, France, September 2010.
25. *A quick walk through cryptography*, Romanian Diaspora Conference, IMAR (Institute of Mathematics of Romanian Academy), Bucharest, Romania, September 2010.
26. *Nonoverlap property of the Thue—Morse sequence*, International Conference on Fibonacci Numbers and Applications, July 2010, Mexico.
27. *Generating matrices of C -nomial coefficients and their spectra*, International Conference on Fibonacci Numbers and Applications, July 2010, Mexico.
28. *Cryptographic Attacks and Countermeasures -- A Mathematical View* (with D. Canright), 1st NPS Cyber Summit, October 2009.
29. *Independence Number and Spectra of Generalized Petersen Graphs*, to *Integers Conference*-Univ. West Georgia, October 2009.
30. *To Encrypt or not to encrypt*, Columbus State University-Georgia, October 2009.
31. *A quick walk through cryptography*, invited colloquium at Auburn University Montgomery, October 2009.
32. *A Combinatorial Conjecture*, West Coast Number Theory Conference, Asilomar Conf. Center, December 2009.
33. *To encrypt or not to encrypt, that is the question*, Invited talk, California State University-Monterey Bay, April 2009.
34. *Toeplitz and other combinatorial matrices*, Midwest Conference on Combinatorics, Cryptography and Computing, UNLV, October 2008.
35. *Counting Balanced Polynomials over Finite Fields*, UNAM-Mexico, September 2008.
36. *Spectral Properties of Some Combinatorial Matrices*, 13th International Conference on Fibonacci Numbers, Patras, Greece, July 2008.

37. *Combinatorial and Number Theoretical Considerations on Sums of Digits and Hamming Weights*, Universidad Autonoma de Madrid, Spain, March 2008.
38. *Sums of the Thue-Morse sequences over arithmetic progressions*, West Coast Number Theory Conf., December 2007, Asilomar, CA.
39. *Nagy graphs and homogeneous bent Boolean functions*, Integers conference, West Georgia, 2007.
40. *Remarks on homogeneous bent Boolean functions*, Advanced Study Institute, Moscow, September 2007.
41. *Counting balanced polynomials over finite fields* (invited talk), AMS Sectional Meeting, Hoboken N.J., April 2007.
42. *Aliquot Sums of Fibonacci Numbers*, 12th International Conference on Fibonacci Numbers, San Francisco, CA, July 2006.

43. ***Avalanche Features and Walsh Spectrum of Boolean Cayley Graph***, *INTEGERS 2005 Conference in honor of R. Graham*, Univ. of West Georgia, October 2005.
44. ***Prime Divisors in Lucas Sequences*** at *Southeast Regional Meeting on Numbers* at Univ. of South Carolina, Columbia, SC, April 2005.
45. ***Group theory based public-key cryptography***, *Zassenhaus Group Theory conference*, Auburn University Montgomery, March 2005.
46. ***Counting Rotation Symmetric Functions***, *West Coast Number Theory Conf.*, Univ. of Nevada – Las Vegas, Dec. 2004.
47. ***Fibonacci Numbers of the form $p^a \pm p^b$*** , *11th International Conference on Fibonacci Numbers* (Braunschweig, Germany), July 2004.

48. ***To encrypt or not to encrypt, that is the question*** (invited lecture), *IMATE-UNAM*, June 2004.
49. ***Cubic Sieve Congruence Problem and Discrete Logs***, *West Coast Number Theory Conference*, Asilomar-CA, December 2003.
50. ***Graph Eigenvalues and Walsh Spectrum of Boolean Functions***, *Midwest Conference on Combinatorics, Cryptography and Computing*, U. of Nevada-Las Vegas, November 2003.
51. ***Cholesky factorizations of matrices associated to r-order recurrent sequences***, *INTEGERS 2003 Conference in honor of T. Brown*, Univ. of West Georgia, October-November 2003.
52. ***Exponents in the Factorization of $n!$*** , *Southeast Regional Meeting on Numbers*, Univ. of North Carolina, March 2003.
53. ***Circulant Matrices, Trinomials and Diophantine Equations***, *West Coast Number Theory Conference*, San Francisco – CA, December 2002.
54. ***Cullen Numbers in Binary Sequences***, *International Conference on Fibonacci Numbers*, Arizona, June 2002.
55. ***Squarefree Catalan Numbers and Residues of Products of Factorials in \mathbb{Z}_p*** - *Notions in Number Theory* (Invited Colloquium Talk), University of South Alabama, Mobile, March 25, 2002.
56. ***If Everything Else Fails, Generalize!***, Invited Talk at Mathematics Circle at USA, Mobile, March 25, 2002.
57. ***Netted Matrices and Fibonacci Sequences***, *West Coast Number Theory Conference*, Asilomar, December 2001.
58. ***Trade-off in the Design of Boolean Functions***, *15th Midwest Conference on Combinatorics, Cryptography and Comput.*, U. of Nevada-Las Vegas, October 2001.
59. ***Bounds on Binomial Coefficients with Indices Having a Common Factor***, *Southeast Regional Meeting on Numbers* (SERMON), Furman University, SC, March 2001.
60. ***Catalan Numbers and Squarefree Binomial Coefficients*** (Special Session), Joint AMS-MAA, January 2001, New Orleans.
61. ***Chromos and Covering Residues Classes*** (Special Session), *Southeast Regional Meeting of AMS*, U. of Alabama-Birmingham, November 2000.
62. ***Atlas of Boolean Functions with Good Cryptographic Properties***, *Midwest Combinatorics, Cryptography and Computing Conference*, Wichita State University, October 2000.
63. ***Congruences Modulo s of s -Catalan Numbers***, *Southeast Regional Meeting on Numbers* (SERMON 2000), April 2000, Blacksburg, VA, USA.
64. ***Powers of a Certain Matrix and Fibonacci Sequences*** (with Rhodes Peele), presented by R. Peele at Sermon 2000, Blacksburg, VA.
65. ***Mathematics and Cryptography: Beware of the ATM***, MAMS, November 1999 (invited by R. Underwood), Montgomery, AL, USA.

66. ***G-nonlinearity and bent functions***, *Fourth International Conference on Finite Fields and Applications*, Waterloo, Ontario, Canada, August 12-15, 1997.
67. ***Quadratic functions in Galois fields of characteristic 2***, *International Conference on Combinatorics, Information Theory and Statistics*, Maine, Portland, July 1997 (invited by H.F. (Skip) Mattson, Jr.).
68. ***Bent functions and a new definition of nonlinearity***, *MGO Conference*, Syracuse University, New York, April 1997.
69. ***Distribution of prime numbers-density results***, Institute of Mathematics of Romanian Academy, Bucharest, Romania, summer 1996.
70. ***New bounds on the number of functions satisfying the strict avalanche criterion***, A. M. Youssef, T. W. Cusick, P. Stanica, and S. E. Tavares, *Advances in Crypto '96 Rump Session Presentations on Boolean Functions*, August 1996.
71. ***Cohomology of finite groups***, Institute of Mathematics of Romanian Academy, Bucharest, Romania, summer 1996.
72. ***Cryptosystems and attacks on them***, State University of New York at Buffalo, 1996.
73. ***Infinite Galois Theory***, Institute of Mathematics of Romanian Academy, Bucharest, Romania, summer 1996.
74. *I presided a session on Calculus at the Mathematical Association of America meeting held at Huntingdon College, Montgomery - AL, March 2001.*
75. *I participated at The International Conference on Number Theory in honor of Heini Halberstam at University of Illinois, Urbana-Champaign, 1995.*

7. Journal Referee Services

I have reviewed papers as a referee for numerous journals and conference proceedings: *Finite Fields and Applications*, *Discrete Mathematics J.*, *J. Number Theory*, *Ars Combinatoria*, *Applied Mathematics Letters*, *Computational Applied Math. J.*, *Information Sciences*, *Information Processing Letters*, *Electronic Letters*, *Integers-Combinatorial Number Theory J.*, *Journal of Zhejiang University SCIENCE (JZUS)*, *Journal of Indian Statistical Association*, *Revista Colombiana de Matematicas*, *Indocrypt: International Conference on Cryptography 2003, 2005* (Program Committee), *Proceedings of a Conference in Honor of Prof. J. Seberry (2004)*, *International Conference on Computers and Communications*, Romania, 2004, 2005, 2006, *ICALP 2005 (Spain)*, etc.

8. Grants, Honors and Awards, Memberships

- **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 to spend time to do research at various institutions in US, Mexico, India, South Africa, Austria, France, Germany, Norway, Romania, 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*, travel, equipment & labor for 4 quarters (1 quart.-yrs. 1 & 3, and 2 quarts. in yr. 2)
- **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)

9. Graduate Students

- Thor Martinsen, Applied Math Ph.D., 2014-
- Spyros Pollatos, Applied Math Ph.D., 2013-
- Jong Chung, Applied Math Ph.D., 2010-2014
- Oliver DiNallo (Master's, MA), 2017
- Nicholas, J. Sharpe (Master's, MA), 2016
- Thomas Kuhn, (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.

10. University/School/Department Service

- NPS Research Board Committee, 2009-present.
- MSCE Update Committee, 2008-2009.
- Program manager for *Mathematics for Secure Communication* certificate at NPS.
- Applied Math *Chair Search Committee* member, 2007.
- 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 Search Committee*, 2003-2004 and 2004-2005.
- Served on the *Head of Math Department Search Committee*.
- *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

11. Courses Taught (ug=undergraduate, g=graduate)

- *Cryptographic Boolean Functions* (g)
- *Cryptography* (g)
- *Coding Theory* (g)
- *Advanced Combinatorics* (g)
- *Discrete Mathematics* (g, ug)
- *Abstract Algebra* (g,ug)
- *Number Theory* (g, ug)
- *Linear Algebra* (g, ug)
- *Bridge to Advanced Mathematics* (g)
- *Finite Mathematics for Operations Research* (g)
- *Finite Mathematics* (ug)
- *Precalculus Algebra and Trigonometry* (ug)
- *Business Calculus* (ug)

- *Single Variable Calculus I* (ug)
- *Single Variable Calculus II* (ug)
- *Multivariable Calculus III* (ug)
- *Ordinary Differential Equations* (ug)

12. Citizenship: U.S.A., Romania

13. Clearance: *Secret*