

Shahabaddin Ebrahimi Atani

Professor of Mathematics

Department of Mathematics
Faculty of Science
University of Guilan
P.O. Box 1914
Rasht, Iran

Phone: +98 131 3233509
Fax: +98 131 3233509
ebrahimi@guilan.ac.ir,
ebrahimiatani@gmail.com
<http://staff.guilan.ac.ir/ebrahimi/>

Education

Ph.D. in Mathematics, (December 1996)

University of Manchester, Manchester, U.K.,

Department of Mathematics

Thesis: "On indecomposable pure-injective modules over pullback rings"

M.Sc. in Mathematics, (September 1977)

Teacher Training University, Tehran, Iran

Institute of Mathematics

B.Sc. in Mathematics, (September 1975)

University of Tabriz, Tabriz, Iran.

Department of Mathematics

Research Interests

1. Module theory
2. Modules over pullback rings and Pure-injective modules
3. Zero-divisor graphs
4. semiring theory
5. cryptography.

Advisory for Post Graduate Programs

Current Ph.d students

1. R. Ebrahimi Atani (jointly with Dr. S. Mirzakuchaki, in Iran University of Science and Technology)
2. F. Farzalipour
3. F. Esmaeili Khalil Saraei

Graduated students (Ph.D Thesis)

1. A. Yousefian Darani, "Primal and weakly primal submodules and related results", February 2008, University of Guilan.

Graduated students (M.Sc. Thesis)

1. A. Metani, “**Modules over pullback ring and subdirect sums**”, 1998, University of Guilan.
2. B. Amam verdi, “**Indecomposable pure-injective modules over commutative valuation rings**”, 1999, University of Guilan.
3. F. Hamzhepour, “**Indecomposable injective modules over pullback rings**”, 1999, University of Guilan.
4. A. Najafizadeh, “**Sigma-injective moduls over left duo and left distributive rings**”, 2000, IUniversity of Guilan.
5. D. Sazabadiha, “**Chain conditions on direct summand and pure submodules**”, 2000, University of Guilan.
6. M. H. Nasr asfhani, “**On rings whose artinian modules are noetherian**”, 2001, University of Guilan.
7. A. Khaki, “**Unique subdirect sums of prime rings**”, 2001, University of Guilan.
8. S. Sajed, “**Von neumann regular rings**”, 2001, University of Guilan.
9. Y. A. aspily, “**On generalized GCD rings**”, 2002, University of Guilan.
10. A. Y. Darani, “**On multiplication modules**”, 2002, University of Guilan.
11. D. Abbas Karami, “**Attached prime ideals over non-commutative rings**”, 2003, University of Guilan.
12. S. Khojasteh, “**On locally pure-injective modules**”, 2003, University of Guilan.
13. F. Farzalipour, “**Prime and radical submodules of modules over commutative rings**”, 2004, University of Guilan.
14. P. S. Ghyasvand, “**Application of semirings and semigroups in cryptography**”, 2004, University of Guilan.
15. A. Golami, “**On weakly prime ideals**”, 2005, University of Guilan.
16. T. Roshani, “**Multiplication modules over non-commutative rings**”, 2005, University of Guilan.
17. F. Esmaeili, “**On prime submodules**”, 2006, University of Guilan.
18. S. Azimi, “**Pure submodules of multiplication modules**”, 2006, University of Guilan.
19. M. Shajari, “**Zero-divisor graphs for direct product of commutative rings**”, 2007, University of guilan.
20. Y. Hassani, “**Ideal theory in commutative semirings**”, 2007, University of Guilan.
21. Z. Ebrahimi Sarvandi, “**Zero-divisor graphs of idealizations**”, 2007, University Payame Noor (Kerman).
22. N. Nemati Mirmahaleh, “**Constraction and count of Boolean function of an odd variables with maximum algebraic immunity**”, 2008, University of Guilan
23. A. Ramzanpoor Mardakhe, “**Algebraic Immunity Hierachy of Boolean functions**”, 2008, University of Guilan.

Publication

Journal papers

1. (with R. Ebrahimi Atani), “**Comultiplication modules over a pullback of Dedekind domains**”, Czechoslovak Mathematical Journal, to appear (2009).
2. (with F. Farzalipour), “**Weak multiplication modules over a pullback of Dedekind domains**”, Colloquium Mathematicum, 114 (2009), 99-112.
3. (with A. Y. Darani), “**Primal submodules of multiplication modules**”, Tamkang Journal of Mathematics, to appear (2009).
4. “**An ideal-based zero-divisor graph of a commutative semiring**”, Glasnik Matematički, to appear (2009).
5. (With R. Ebrahimi Atani), “**A Note On Uniformly Primary Submodules**”, Navi Sad Journal of Mathematics. To appear (2009).
6. (with A. Y. Darani), “**Zero-divisor graphs with respect to primal and weakly primal ideals**”, Journal of the Korean Math. Soc., to appear.
7. (with F. Farzalipour), “**Zero-divisor graphs of idealizations with respect to modules**”, Chiang Mai J. Sci., 36 (1) (2009), 1-4.
8. (with A. Y. Darani), “**Weakly primal submodules**”, Tamkang Journal of Mathematics, to appear (2009).
9. “**Indecomposable weak multiplication modules over Dedekind domains**”, Demonstratio Mathematica, VLI 41(1) (2008), 33-43.
10. “**On primal and weakly primal ideals over commutative semirings**”, Glasnik Matematički, 43(63) (2008), 13-23
11. (with A. Y. Darani) “**Some remarks on the primal submodules**”, Sarajevo Journal of Mathematics, 4(17), (2008), 181-190.
12. (with R. Ebrahimi Atani), “**Secondary representation of semimodules over a commutative semiring**”, Quasigroups and related systems, 16 (2008), 133-140.
13. “**The zero-divisor graph with respect to ideals of a commutative semirings**”, Glasnik Matematički, 43 (63) (2008), 309-320
14. (with R. Ebrahimi Atani) “**Ideal theory in commutative semirings**”, Buletinul ASM, Number 2(57), 2008, ISSN 1024-7696, Pages 14-23.
15. (with R. Ebrahimi Atani and S. Mirzakuchaki) “**Public key cryptography using semigroup actions and semirings**”, Journal of Discrete Mathematical Sciences and cryptography, 11(4) (2008). 437-445.
16. (with R. Ebrahimi atani, Willi Meier and S. Mirzakuchaki), “**Design and Implementation of DPA Resistive Grain-128 Stream cipher Based on SABL Logic**”, International Journal of Computers, Communications and Control, Suppl. issue., Vol III (2008), pp. 293-298.
17. (with A. Y. Darani) “**Notes on the primal submodules**”, Chiamgmai J. of Science, 35(3) (2008), 399-410.
18. (with R. Ebrahimi atani, S. Mirzakuchaki, and Willi Meier), “**On DPA-Resistive Implementation of FSR-based Stream Ciphers using SABL Logic Styles**”, International Journal of Computers, Communications and Control, Vol III (2008), Number 4, pp. 324-335.
19. (with M. Shajari) “**The diameter of a zero-divisor graph for a finite direct product of commutative rings**”, Sarajevo Journal of Mathematics, 3(16) (2007), 149-156.
20. (with F. Farzalipour) “**On graded secondary modules**”, Turkish J. of Math., 31 (2007), 371-378.

21. (wit F. Esmaeli) **“On MacCasland submodules”**, Int. Math. Forum, 2(46) (2007), 2255-2260.
22. (with Unsal Tiker) **“On the graded primary avoidance theorem”**, Chiang Mai J., Sci., 34(2) (2007), 161-164.
23. **“The ideal theory in quotients of commutative semirings”**, Glasnik Matematicki. 42 (2007), 301-308.
24. **“k-weakly primary ideals over semirings”**, Sarajevo Journal of Mathematics, 3(15) (2007), 9-13.
25. (with F. Esmaeli) **“Modules which satisfy the radical formula”**, Int. J. Contemp. Math. Sci., 2(2007), 13-18.
26. (with F. Farzalipour) **“On weakly prime submodules”**, Tamkang Journal of Mathematics, 38 (2007), 247-252.
27. (with A. Y. Darani) **“On weakly primal ideals (I)”**, Demonstratio Mathematica, (1) (2007), 23-32.
28. (with F. Callialp and U. Tekir) **“A short note on the primary submodules of multiplication modules”**, International Journal of Algebra, 1(8) (2007), 381-384.
29. (with R. Ebrahimi Atani and S. Mirzakuchaki), **“Public key cryptography based on semi-module over quotient semirings”**, Inter, Math. Forum, 2(52) (2007), 2561-2570.
30. (with Z. Ebrahimi Sarvandi), **“Zero-divisor graph of idealizations with respect to prime modules”**, Int. J. Contemp. Math. Sci., 26(2007), 1279-1283.
31. (with Unsal Tiker) **“On the primary avoidance theorem for modules over commutative rings”**, Int. J. of pure and appli. Math., 31(2) (2006), 203-207.
32. (with A. Y. Darani) **“On quasi-primary submodules”**, Chiang Mai Journal of Scinence, 33(3) (2006), 249-254
33. (with F. Farzalipour) **“Notes on the grded prime submodules”**, Intr. Math. Forum, 38 (2006), 1871-1880.
34. (with A. Y. Darani) **“On primal ideals over semi-groups”**, Quasigroups and related systems, to appear (2006)
35. **“On graded weakly prime ideals”**, Turkish J. of Math, 30(2006), 351-358.
36. (with Sang Cheol Lee) **“Multiplication modules over pullback rings (I)”**, Honam Math. J., 28(1) (2006), 69-81.
37. (with S. Khojasteh) **“On multiplication modules”**, Int. Math. Forum, no. 24(2006), 1175-1180.
38. **“On graded prime submodules”**, Chiang Mai Journal of Scinence, 33(1) (2006), 3-7.
39. **“On graded weakly prime submodules”**, Int. Math. Forum, no. 2(2006), 61-66.
40. **“On graded weakly primary ideals”**, Quasigroups and related systems, 13(2005), 185-191.
41. (with F. Farzalipour) **“On weakly primary ideals”**, Georgian Mathematical Journal , 12 (2005). 423-429.
42. **“Submodules of multiplication modules”**, Taiwanese Journal of Mathematics, 9(3) (2005), 358-369.
43. **“Strongly irreducible submodules”**, Bulletin of the Korean Mathematical Society, 42(1) (2005), 121 - 131.
44. (with F. Farzalipour) **“On prime and primary submodules”**, Chiang Mai Journal of Scinence, 32(1) (2005), 5 - 9.
45. **“The product of multiplication submodules”**, Honam Math. Journal, 27-1 (2005), 1-8
46. **“On representable modules”**, Chiang Mai Journal of Scinence, 32(2) (2005), 93-96.

47. “**On prime modules over pullback rings**”, Czechoslovak Mathematical Journal, 54(3) (2004), 781-789.
48. “**Multiplication modules and related modules**”, Archivum Mathematicum, 4 (2004) 407- 414.
49. “**On non-separated coprimary modules**”, FJMS, 9(2) (2003), 197-202.
50. “**Pure sub-module and attached primes**”, Int. Math. Journal, 4(1) (2003), 53 - 56.
51. “**Multiplication modules over pullback rings**”, Int. Math. Journal, 3(10) (2003), 1029 - 1032.
52. “**On modules and idealization**”, Int. Math. Journal, 3(7) (2003), 705 - 709.
53. “**On secondary modules over pullback rings**”, Comm. in Algebra, 30(6) (2002), 2675-2685.
54. “**Some remarks on coprimary modules**”, FJMS, 7(3) (2002), 301-309.
55. “**Submodules of secondary modules**”, Int. J. of Math. and Mathematical Sciences, 31(6) (2002), 321-327.
56. “**On indecomposable separated secondary modules over ZG** ”, Southeast Asian Bulletin of Mathematics, 25(2) (2001), 383-388.
57. “**On secondary modules over dedekind domains**”, Southeast Asian Bulletin of Mathematics, 25(1) (2001), 1-6.
58. “**On pure-injective modules over pullback rings**”, Comm. in Algebra, 28(9) (2000), 4037-4069.
59. “**I-torsion-free modules over pullback rings**”, Honam Math. Journal, 22 (2000), 1-7.
60. “**Modules over associated graded rings**”, Honam Math. Journal, 21 (1999), 13-18.

Conference Papers

1. Reza Ebrahimi Atani, Mehdi Baboli, Sattar Mirzakuchaki, Shahabaddin Ebrahimi Atani, and Babak Zamanlooy, “**Design and Implementation of a 118 MHz 2D DCT Processor**”, To appear in the proceeding of the IEEE International Symposium on Industrial Electronics ISIE'08, 30 June-2 July, 2008, Cambridge, UK.
2. Reza Ebrahimi Atani, Willi Meier, Sattar Mirzakuchaki, Shahabaddin Ebrahimi Atani, “**Design and Implementation of DPA Resistive Grain-128 Stream Cipher Based on SABL Logic**”, in the proceeding of the 2nd IEEE International Conference on Computers, Communications & Control - ICCCC'08, 15-17 May, 2008, Flix Spa, Romania.
3. Reza Ebrahimi Atani, Sattar Mirzakuchaki, Shahabaddin Ebrahimi Atani, “**Design and Implementation of an Image CoProcessor**”, Image and Signal Processing - 3rd International Conference, ICISP 2008, Cherbourg-Octeville, France, July 1-3, 2008, LNCS 5099 Springer 2008, pp. 498-507.
4. Reza Ebrahimi Atani, Sattar Mirzakuchaki, Shahabaddin Ebrahimi Atani, Willi Meier, “**Design and Simulation of a DPA Resistive Circuit for Trivium Stream Cipher Based on SABL Logic Styles**”, To appear in the proceeding of the 15th IEEE International Conference on Mixed Design of Integrated Circuits and Systems, MIXDES'08, Poznan, 19-21 June 2008, p.p. 203 – 208.
5. Reza Ebrahimi Atani, Sattar Mirzakuchaki, Shahabaddin Ebrahimi Atani, “**Design and simulation of A DPA Resistive Circuit for Trivium Stream Cipher Based on WDDL logic Styles**”, To appear in the proceeding of the Third INTERNATIONAL CONFERENCE ON MODELING, SIMULATION AND APPLIED OPTIMIZATION ,ICMSAO'09, Jan. 20-22 2009 , Sharjah, U.A.I..

6. Reza Ebrahimi Atani, Sattar Mirzakuchaki, Shahabaddin Ebrahimi Atani, “**Design and Simulation of a DPA Resistive Circuit for Trivium Stream Cipher Based on SABL Logic Styles**”, To appear in the proceeding of the Third INTERNATIONAL CONFERENCE ON MODELING, SIMULATION AND APPLIED OPTIMIZATION ,ICMSAO'09, Jan. 20-22 2009 , Sharjah, U.A.I..

Work in Progress

1. Attached prime submodules of modules
2. Some remarks on the Ideal-based Zero-divisor graphs.
3. On generalized distinguished prime submodules.
4. Subsemimodules of semimodules.
5. Weak Comultiplication Modules Over a Pullback of Dedekind Domains
6. On weakly multiplication modules over pullback rings.

Technical Reports

1. Reza Ebrahimi Atani, Shahabaddin Ebrahimi Atani, Sattar Mirzakuchaki “**A Novel Public Key Crypto System Based on Semi-modules over Quotient Semi-rings**”, eprint Archive, 2007/391