DR. AYMAN BADAWI COMPLETE CV

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(3) Fax: 971-6-2950
(4) Birth date: 2/14/1963
(5) Status: Married To Rawya Abuhijleh and I have two children (Nadeem (9 year old) and Raneem (3 year old))

1. Research Interest

(ALGEBRA) Commutative Ring Theory : Multiplicative Ideal Theory. My most work is devoted to ϕ-Commutative Rings: a class of commutative rings that I defined and it contains the class of integral domains. My work focuses on : phi-Valuation domains (phi-Chained rings), phi-Pseudo-Valuation rings, phi-Integral Closure of rings, phi-Noetherian rings, phi-Prufer rings, phi-Dedekind rings, and phi-Krul rings. Other interests include : n-Absorbing Ideals (a concept that I defined and it is a generalization of the concept of prime ideals), Finite Fields, Zero-Divisor Graphs, Total Graphs, and π-Regular rings.

2. Education

1) Dept. of Mathematics, Univ. of North Texas, Denton, TX 76203, U. S. A. (PH.D, confirmed, 1993)

2) Dept. of Mathematics, Tenn. Tech. Univ., Cookeville, TN 35805, U. S. A. (M. S. in Mathematics 1988).

3) Dept. of Mathematics and Computer Science, Tenn. Tech. Univ., Cookeville, TN 35805, U. S. A. (B. S. in Mathematics and B. S. Computer Science 1986) .

3. Experience

1) (2003-currently) Dept. of Mathematics, American Univ. of Sharjah, P.O. Box 26666, Sharjah, United Arab Emirates.

Responsibilities at the American Univ. of Sharjah: Taught Differential equations, Business Math , Calculus for business, Calculus I, Linear Algebra, Discrete Math., Modern Abstract Algebra with Application, and College Algebra. **Also, I supervised an undergraduate math research project titled " distribution of prime numbers," and it was received a university recognition.**

2) (1996-2002) Dept. of Mathematics, Birzeit University, Box 14, Birzeit, West Bank

Responsibilities at Birzeit Univ. : Taught Calculus I, II, and III, Basic Statistics, Calculus for business students, Abstract Algebra (Group Theory and Ring Theory), Linear Algebra, Advanced Linear Algebra, Number Theory, Advanced Topic in finite fields and their application, Coding Theory, Modern Geometries.

3) (1998-1999), Visiting Assistant Professor (titled visiting scholar), Dept. of Mathematics, Univ. of Tennessee, Knoxville, TN 37996, U. S. A.

Responsibilities at the Univ. of Tennessee: I conducted research activities with professors David F. Anderson and David E. Dobbs, also I taught Calculus III for engineering, Pre-Calculus, Logic and Foundation of Mathematics.

4) (1993-1995), Visiting Assistant Professor of Mathematics, Dept. of Mathematics, Emory & Henry College, Emory, VA 24327, U. S. A.

Responsibilities at Emory & Henry College: Taught Calculus I, II, III, Pre-Calculus, Linear Algebra, Statistics, and Modern Geometries

5) (86-93), I worked as a Teaching Assistant, a Teaching Associate, and a Teaching Fellow at all the universities I attended.

4. Honors and Grants

1) I served on the University Faculty Research Grant (UFRG) for three consecutive years (2003-2006).

2) Pew Fellowship at the Univ. of Kentucky, Lexington, KY, U. S. A., in the summer of 94 where I visited Professor Paul Eakin.

3) Ashrawi Scholarship at Vrije University, Amsterdam, Holland in October of 97.

4) Visiting Scholar (98-99) at the Univ. of Tennessee, Knoxville, U. S. A.

5) I am a reviewer for the American Math. Reviews.

6) A research visitor at the Univ. of Roma I, in November of 2002.

7) A research visitor at the Univ. of Tennessee, Knoxville, U. S. A., from Feb., 17, 003 till March, 17, 003.

5. Professional Activities & Committees

-0.5) I served on the FPC (Faculty Personal Committee) for the CAS (College of Art and Science), 2007-2008.

-0.2) I served on the University Committee for Faculty Rolling and Promotions, 2007-2008.

-0.11) I worked as the seminar coordinator for the Math. Dept, 2004-now.

-0.10) The IT (Web-Designer) for the Math. Dept., 2006-NOW.

-0.05) The IT (WebPage) for the INTERNATIONAL CONFERENCE ON MODELING, SIMULATION AND APPLIED OPTIMIZATION.

-0.01) Reviewer for The American Math. Reviews.

0)I supervised an undergraduate math research project titled " distribution of prime numbers," and it was received a university recognition.

1) I served on the University Faculty-Research-Grant Committee (FRGC) for three consecutive years (2003-2006)

2) I wrote a book titled **Abstract Algebra Manual: Problems and Solutions**, published by Nova Science, 2nd Edition (New York)(2004), ISBN 1-59033-924-X.

3) A .Badawi (editor), **Trends in Commutative Rings Research**, Nova Science, New York, U. S. A., (2004), (English), ISBN 1-59033-926-6.

4) A. Badawi (editor), **Mathematics Research at the leading edge**, Nova Science, New York, U. S. A., (2005), THIS IS THE PROCEEDINGS of the UAE-MATH-DAY which was held on April 1, 2004.

6) I refereed articles for Journal of Pure an Applied Algebra, Communications in Algebra, Houston Journal of Mathematics, International Journal of Mathematics and Mathematic Sciences (IJMMS), ACHARYA NAGARJUNA INTERNATIONAL JOURNAL OF MATHEMATICS & INFORMATION TECH- NOLOGY, Arabian Journal for Science and Engineering, International Electric Journal of Algebra, INDIAN JOURNAL OF MATHEMATICS (IJM)/ BULLETIN OF THE ALLAHABAD MATHEMATICAL SOCIETY(BAMS), and Marcel-Dekker (now Francis and Taylor) Conferences-Proceedings

6) I supervised and directed the following undergraduate research projects at Birzeit University:

(1) Perfect Polynomials over Z_P.
(2) Partition Z_n into disjoint multiplicative groups.
(3) Embedding an integer m as the identity of a multiplicative group module n.
(4) Von-Neumann Regular Rings.
(5) Some basic properties of Z_n.
(6) On radical ideals of a commutative ring.

(7) On Primary ideals.
(8) Fundamental Theorem on finite abelian group.
(9) Vector Spaces over Z and over R/M.
(10) Sylow's Theorems with Applications.
(11) On the Characteristic and minimal polynomials of Matrices.
(12) Using nullity to check the solution for a Matrix.
(13) On Quotient Rings.
(14) Perfect Polynomials over finite fields.
(15) Non-Euclidian Geometries: Hyperbolic Geometries.

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6. Publications

(1) A. Badawi and A. Jaballah, " Some finiteness conditions on the set of overrings of a ϕ-ring," Houston J. Math. 34(2) (2008), 397-407.
(2) A. Badawi and D.F. Anderson, "On the zero-divisor graph of a ring," ACCEPTED, to appear in Comm. Algebra.
(3) A. Badawi, " On 2-absorbing ideals of commutative rings," Bull. Austral. Math. Soc. 75(2007), 417-429.
(4) A. Badawi, " On Pseudo-almost valuation domains," Comm. Algebra 35(2007), 1167-1181.
(5) A. Badawi and Thomas Lucas, "on ϕ-Mori rings," Houston J. Math.32(2006), 1-31.
(6) A. Badawi and D. E. Dobbs, " Strong ring extensions and ϕ-pseudo-valuation rings," Houston J. Math.32(2006), 379-398.
(7) A. Badawi, "Factoring nonnil ideals as a product of prime and invertible ideals," Bulletin of the London Math. Society 37(2005), 665-672.
(8) A. Badawi and D. F. Anderson, " on ϕ-Dedekind rings and ϕ-Krull rings," Houston J. Math.31(2005), 1007-1022.
(9) A. Badawi and D. F. Anderson,"On ϕ-Prufer rings and ϕ-Bezout rings," Houston J. Math. 30(2004), 331-343.
(10) A. Badawi, "A Characterization of valuation domains via m-canonical ideals," Comm. Algebra 32(2004), 4363-4374.
(11) A. Badawi, " On nonnil-Noetherian rings," Comm. Algebra 31(2003), 1669-1677.
(12) A. Badawi and D. F. Anderson, " Divisibility conditions in commutative rings with zero-divisors," Comm. Algebra 38(2002), 4031-4047.
(13) A. Badawi and E. Houston," Powerful ideals, strongly primary ideals, almost pseudo-valuation domains, and conducive domains," Comm. Algebra 30(2002), 1591-1606.
(14) A. Badawi, A. Y. M. Chin, and H. V. Chen, " On rings with near idempotent elements," International J. of Pure and Applied Mathematics, 1(2002), 255-261
(15) A. Badawi, "On Divided rings and ϕ-pseudo-valuation rings," International J. Comm. Rings (IJCR), Vol. 1(2002), 51-60.
(16) A. Badawi and D. F. Anderson," On root closure in commutative rings," Arabian J. of Science and Engineering (Arabian J. Sci. Engrg), Vol. 26, 1C(2001), 17-30.
(17) A. Badawi and DavidE. Dobbs, " On Locally divided rings and going down rings," Comm. Algebra. 29(2001), 2805-2825.
(18) A. Badawi, " On ϕ-chained rings and ϕ-pseudo-valuation rings," Houston J. Math 27(2001), 725-736.
(19) A. Badawi, "On ϕ-pseudo-valuation rings, II," Houston J. Math. 26(2000), 473-480.
(20) A. Badawi," Remarks on pseudo-valuation rings", Comm. Algebra 28(2000), 2343-2358.
(21) A. Badawi, "On Chained overrings of pseudo-valuation rings," Comm. Algebra 28(2000), 2359-2366.
(22) A. Badawi and D. F. Anderson and D. E. Dobbs "Pseudo-valuation rings II," Boll. Un. Mat. Ital. B(8)3(2000), 535-545.
(23) A. Badawi," On divided commutative rings," Comm. Algebra 27(1999), 1465-1474.

(24) A. Badawi," On comparability of ideals of commutative rings," Comm. Algebra 26(1998), 793-802.
(25) A. Badawi, " On Abelian π-regular rings," Comm. Algebra 25(1997), 1009-1021.
(26) A. Badawi," On domains which have prime ideals that are linearly ordered," Comm. Algebra 23(1995), 4365-4373.
(27) A. Badawi, " On semicommutative π-regular rings," Comm. Algebra 22(1994), 151-157.
(28) A. Badawi, " R_n contains a division ring iff R does," Amer. Math. Monthly, 100(1994),679-680.
(29) A. Badawi, " A Counter example for a question on pseudo-valuation rings," Abelian Groups, Rings, Modules, and Homological Algebra, Chapman & Hall/CRC, Vol. 249 (2006), 23-27.
(30) A. Badawi and Thomas Lucas, "Rings with prime nilradical," Arithmetical Properties of Commutative Rings and Monoids, Chapman & Hall/CRC, Vol. 241(2005), 198–212.
(31) A. Badawi, " On the complete integral closure of rings that admit a ϕ-strongly prime ideal," Lecture Notes Pure Appl. Math. Vol. 231(2002), 15-22. Marcel Dekker, New York/Basel.
(32) A. Badawi, "Pseudo-valuation domains: A Survey," Proceedings of the Third Palestinian International Conference on Mathematics, 38-59(2002), Word Scientific Publishing Co., New York/London.
(33) A. Badawi, " On ϕ-pseudo-valuation rings," Advances in commutative ring theory, Lecture Notes Pure Appl. Math. Vol.205(1999), 101-110, Marcel Dekker, New York/Basel.
(34) A. Badawi, " A visit to valuation and pseudo-valuation domains," Lecture Notes Pure Appl. Math. Vol. 185(1995), 57-69, Marcel Dekker, New York/Basel.
(35) A. Badawi and D. E. Dobbs, " Some examples of locally divided rings," Lecture Notes Pure Appl. Math., Vol. 220(2001), 73-83. Marcel Dekker, New York/Basel.
(36) A. Badawi and D. F. Anderson, " Conditions equivalent to seminormality in certain classes of commutative rings," Lecture Notes Pure Appl. Math., Vol. 220(2001), 49-59, Marcel Dekker, New York/Basel.
(37) A. Badawi and D. F. Anderson and D. E. Dobbs, " Pseudo-valuation rings," Lecture Notes Pure Appl. Math. Vol. 185(1997), 57-67, Marcel Dekker, New York/Basel.

c. Conferences and research papers presented

(1) A 30-minutes invited speaker at the Algebra Conference, Fes-2008, Ifran, Morroco.
(2) A 15-minutes speaker at the UAE-Math-Day, April 2007, "On the total graph of a commutative ring."
(3) A 40-minutes invited Speaker at the Math Conference in Bangkok, Thailand , March 2008, "On the total graph of a commutative ring."
(4) A 40-minutes invited speaker at the MATH Conference in Cairo November 2007, "Psudo-almost valuation domains."
(5) A 50-minutes invited speaker at the IPM (Institute for theoretical studies in Mathematics and Physics), Iran (November 2007), "On the total graph and zero-graph of Commutative Rings."
(6) A 20-minutes invited speaker for the Algebra Conference at the Univ. of Connecticut, USA(June, 2007), " The total graph of commutative rings."
(7) A 15 minute speaker for the UAE-Math day, Eitisalat College, " Zero-divisor graphs(Recent results)," 2007.
(8) A 15 minute speaker in a Math conference in Malaysia, " Girth and Parameter of zero-divisor graph," March, 2007
(9) A Plenary speaker(50 minutes) at Qaboos Univ. (oman), " Zero-divisor graph of a commutative ring," Algebra workshop, Dec. 2006
(10) A 20-minute invited speaker at Algebra Workshop in Cortona, Italy, June 2006, "A General Theory for Prufer Domains."
(11) A plenary speaker (50 minutes) in Algebra Workshop in March of 2006 at KFUPM (Saudi Arabai), " On phi-commutative rings."

(12) A 20-minute speaker in the Algebra Session at the UAE-MATH-DAY (Univ. of Sharjah), "Commutative rings with finitely many non-nilpotent atom", 2006.
(13) A 20-minute invited speaker at Algebra Conference in Cairo (Egypt), March, 2006, " Anderson-Mott Commutative rings."
(14) Invited Speaker for the American Math. Society Special Session on Commutative Rings, In OCTOBER 2005, "Some finiteness conditions on the set of overring of phi-rings."
(15) Invited Speaker for the American Math. Society Special Session on Commutative Rings, In Jan., 2006, " Anderson-Mott Commutative Rings." 3.
(16) A plenary speaker (50 minutes) in Algebra Workshop in November of 2005 at Qaboos Univ. (Oman) , "On nonnil rings."
(17) Invited Speaker, "On 2-absorbing ideals of commutative rings," Cortona, Italy (June, 2004).
(18) A characterization of valuation domains via m-canonical ideals," presented in the AMS-Special Session on Commutative Rings in Baton Rouge, Louisiana, U. S. A., March 14 till March 17.
(19) " On Nonnil Noetherian Rings," presented at the commutative ring conference in Venice, Italy, during the month of June, 2002.
(20) "On the complete integral closure of ϕ-pseudo-valuation rings," at Fez, Morocco, the fourth international conference on commutative rings.
(21) "ϕ-chained rings and ϕ-pseudo-valuation rings," at Colloque, Deuxieme recontre internationale sur les polynomes a valeurs, au CIRM, Luminy, France), from May, 29, 2000 till June ,3, 2000.
(22) Root closure in rings," Special session on Commutative Rings, AMS-Meeting, Charlotte, North Carolina, U. S. A., Abstract of the American Math. Society, Vol. 20(1999), P. 23.
(23) "Powerful ideals in integral domains," Special session on Commutative Rings, AMS-Meeting, Winston-Salem, North Carolina, U. S. A., Abstract of the American Math. Society, Vol. 19(1998), P. 447.
(24) "On Pseudo-valuation rings," Abstract of the American Math. Society, Vol. 18(1997), P. 43. 10)"On Abelian pi-regular rings," Abstract of the American Math. Society, Vol. 15 (1995), P. 63. 11)"On semicommutative rings," Abstract of the American Math. Society, Vol. 15 (1993), P. 59.
(25) "More on the perfection of polynomials over GF(q)," Abstract of the American Math. Society, Vol. 19 (1988), P. 173.

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7. Books

(1) A. Badawi, "Focus on Commutative Rings Research," Nova Science, NewYork, U. S. A. (2006), ISBN 1-60021-065-1.
(2) A. Badawi, Mahmoud Anabtawi, David F. Anderson, and Saber Elaydi,"Mathematics Research at the Leading Edge," Nova Science, New York, U. S. A., (2005). THIS IS THE PROCEEDINGS OF THE UAE-MATH DAY WHICH WAS HELD in APRIL, 2003 at the AUS.
(3) A. Badawi , " Abstract Algebra Manual: Problems and Solutions," published by Nova Science, 2nd Edition (New York)(2004), ISBN 1-59033-924-X.
(4) A. Badawi (editor), Trends in Commutative Rings Research, Nova Science, New York, U. S. A., (2004), (English), ISBN 1-59033-926-6.