

DR. AYMAN BADAWI COMPLETE PUBLICATIONS LIST

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- (4) Birth date: 2/14/1963
- (5) Status: Married To Rawya Abuhijleh and I have two children (Nadeem (11 year old) and Raneem (5 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 : ϕ -Valuation domains (ϕ -Chained rings), ϕ -Pseudo-Valuation rings, ϕ -Integral Closure of rings, ϕ -Noetherian rings, ϕ -Prufer rings, ϕ -Dedekind rings, and ϕ -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. PUBLICATIONS

- (1) A. Badawi, "On rings with divided nil ideal", Chapter in the book : Commutative Algebra And Its Applications, 21-40(2009), Walter De Gruyter, Germany, ISBN 978-3-11-020746-0
- (2) A. Badawi, D. F. Anderson, D. E. Dobbs and J. Shapiro, "Divisibility properties in ultra-powers of commutative ring", Chapter in the book : Commutative Algebra And Its Applications, 9-19(2009), Walter De Gruyter, Germany, ISBN 978-3-11-020746-0
- (3) A. Badawi and D.F. Anderson, " The total graph of a commutative ring," J. Algebra 320 (2008), 2706-2719.
- (4) 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.
- (5) A. Badawi and D.F. Anderson, "On the zero-divisor graph of a ring," Comm. Algebra 36(2008), 3073-3092.
- (6) A. Badawi, " On 2-absorbing ideals of commutative rings," Bull. Austral. Math. Soc. 75(2007), 417-429.
- (7) A. Badawi, " On Pseudo-almost valuation domains," Comm. Algebra 35(2007), 1167-1181.
- (8) A. Badawi and Thomas Lucas, "on ϕ -Mori rings," Houston J. Math.32(2006), 1-31.

- (9) A. Badawi and D. E. Dobbs, "Strong ring extensions and ϕ -pseudo-valuation rings," *Houston J. Math.* 32(2006), 379-398.
- (10) A. Badawi, "Factoring nonnil ideals as a product of prime and invertible ideals," *Bulletin of the London Math. Society* 37(2005), 665-672.
- (11) A. Badawi and D. F. Anderson, "on ϕ -Dedekind rings and ϕ -Krull rings," *Houston J. Math.* 31(2005), 1007-1022.
- (12) A. Badawi and D. F. Anderson, "On ϕ -Prufer rings and ϕ -Bezout rings," *Houston J. Math.* 30(2004), 331-343.
- (13) A. Badawi, "A Characterization of valuation domains via m-canonical ideals," *Comm. Algebra* 32(2004), 4363-4374.
- (14) A. Badawi, "On nonnil-Noetherian rings," *Comm. Algebra* 31(2003), 1669-1677.
- (15) A. Badawi and D. F. Anderson, "Divisibility conditions in commutative rings with zerodivisors," *Comm. Algebra* 38(2002), 4031-4047.
- (16) A. Badawi and E. Houston, "Powerful ideals, strongly primary ideals, almost pseudo-valuation domains, and conducive domains," *Comm. Algebra* 30(2002), 1591-1606.
- (17) 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.
- (18) A. Badawi, "On Divided rings and ϕ -pseudo-valuation rings," *International J. Comm. Rings (IJCR)*, Vol. 1(2002), 51-60.
- (19) 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.
- (20) A. Badawi and David E. Dobbs, "On Locally divided rings and going down rings," *Comm. Algebra*. 29(2001), 2805-2825.
- (21) A. Badawi, "On ϕ -chained rings and ϕ -pseudo-valuation rings," *Houston J. Math* 27(2001), 725-736.
- (22) A. Badawi, "On ϕ -pseudo-valuation rings, II," *Houston J. Math.* 26(2000), 473-480.
- (23) A. Badawi, "Remarks on pseudo-valuation rings", *Comm. Algebra* 28(2000), 2343-2358.
- (24) A. Badawi, "On Chained overrings of pseudo-valuation rings," *Comm. Algebra* 28(2000), 2359-2366.
- (25) A. Badawi and D. F. Anderson and D. E. Dobbs "Pseudo-valuation rings II," *Boll. Un. Mat. Ital. B*(8)3(2000), 535-545.
- (26) A. Badawi, "On divided commutative rings," *Comm. Algebra* 27(1999), 1465-1474.
- (27) A. Badawi, "On comparability of ideals of commutative rings," *Comm. Algebra* 26(1998), 793-802.
- (28) A. Badawi, "On Abelian π -regular rings," *Comm. Algebra* 25(1997), 1009-1021.
- (29) A. Badawi, "On domains which have prime ideals that are linearly ordered," *Comm. Algebra* 23(1995), 4365-4373.
- (30) A. Badawi, "On semicommutative π -regular rings," *Comm. Algebra* 22(1994), 151-157.

- (31) A. Badawi, " R_n contains a division ring iff R does," Amer. Math. Monthly, 100(1994), 679-680.
- (32) 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.
- (33) A. Badawi and Thomas Lucas, "Rings with prime nilradical," Arithmetical Properties of Commutative Rings and Monoids, Chapman & Hall/CRC, Vol. 241(2005), 198-212.
- (34) 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.
- (35) 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.
- (36) 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.
- (37) 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.
- (38) 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.
- (39) 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.
- (40) 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) Invited 20 minutes speaker, AMS-Special Session on Commutative Rings, University of Iowa, USA, March 18-March 20, 2011.
- (2) Invited 30 minutes speaker, ICMS 2010, Bolu, Turkey, Nov 23-Nov 27, 2010 .
- (3) Invited 30 minutes speaker, Third International Conference on Integer Valued Polynomials and Unsolved Problems in Commutative Algebra," Marseille, France, Nov 28-Dec 3, 2010 .
- (4) Twenty-minutes speaker for the Algebra Conference (ICA 2010) which dedicated for the 70th Birthday of Prof. Shum Kar-Ping at The Faculty of Mathematics and Natural Sciences Gadjah Mada University, Yogyakarta, Indonesia 7-10 October 2010.
- (5) Twenty-minutes speaker for the Math&Physics Conference, Nablus, West Bank, Palestine, Najah Univ August 2-August 4, 2010
- (6) Twenty-minutes speaker for the Algebra Conference Brasilia (Brazil) July 25-July30, 2010
- (7) Invited Speaker for the Commutative Algebra Conference Rome (Italy) May 19-May21, 2010

- (8) Twenty-minutes speaker for the Math Conference Kuala Lumpur, Malaysia, October 2009
- (9) Invited speaker (40 minutes) For the Commutative Algebra Conference, June 15-June 21, 2009. In Honour of 60th birthday of David F. Anderson, Gyeongsangju, South Korea
- (10) Invited speaker 20 minutes, Special Session on Commutative Algebra, AMS-Annual meeting, Washington DC, Jan4-Jan 8, 2009.
- (11) Invited speaker and organizer of the special session on Commutative Algebra, Univ. of Delhi, India, Dec 18-Dec 20, 2008.
- (12) Invited speaker 30 minutes, Algebra Workshop, Sultan Qaboos University, Muscat, Oman Dec 14 2008.
- (13) A 30-minutes invited speaker at the Algebra Conference, Fes-2008, Ifran, Morocco.
- (14) A 15-minutes speaker at the UAE-Math-Day, April 2007, "On the total graph of a commutative ring."
- (15) A 40-minutes invited Speaker at the Math Conference in Bangkok, Thailand, March 2008, "On the total graph of a commutative ring."
- (16) A 40-minutes invited speaker at the MATH Conference in Cairo November 2007, "Pseudo-almost valuation domains."
- (17) 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."
- (18) A 20-minutes invited speaker for the Algebra Conference at the Univ. of Connecticut, USA(June, 2007), " The total graph of commutative rings."
- (19) A 15 minute speaker for the UAE-Math day, Eitissalat College, " Zero-divisor graphs(Recent results)," 2007.
- (20) A 15 minute speaker in a Math conference in Malaysia, " Girth and Parameter of zero-divisor graph," March, 2007
- (21) A Plenary speaker(50 minutes) at Qaboos Univ. (oman), " Zero-divisor graph of a commutative ring," Algebra workshop, Dec. 2006
- (22) A 20-minute invited speaker at Algebra Workshop in Cortona, Italy, June 2006, "A General Theory for Prufer Domains."
- (23) A plenary speaker (50 minutes) in Algebra Workshop in March of 2006 at KFUPM (Saudi Arabia), " On phi-commutative rings."
- (24) A 20-minute speaker in the Algebra Session at the UAE-MATH-DAY (Univ. of Sharjah), "Commutative rings with finitely many non-nilpotent atoms", 2006.
- (25) A 20-minute invited speaker at Algebra Conference in Cairo (Egypt), March, 2006, " Anderson-Mott Commutative rings."
- (26) Invited Speaker for the American Math. Society Special Session on Commutative Rings, In OCTOBER 2005, "Some finiteness conditions on the set of overrings of phi-rings."
- (27) Invited Speaker for the American Math. Society Special Session on Commutative Rings, In Jan., 2006, " Anderson-Mott Commutative Rings." 3.
- (28) A plenary speaker (50 minutes) in Algebra Workshop in November of 2005 at Qaboos Univ. (Oman) , "On nonnil rings."
- (29) Invited Speaker, "On 2-absorbing ideals of commutative rings," Cortona, Italy (June, 2004).

- (30) 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.
- (31) " On Nonnil Noetherian Rings," presented at the commutative ring conference in Venice, Italy, during the month of June, 2002.
- (32) "On the complete integral closure of ϕ -pseudo-valuation rings," at Fez, Morocco, the fourth international conference on commutative rings.
- (33) " 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.
- (34) 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.
- (35) "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.
- (36) "On Pseudo-valuation rings," Abstract of the American Math. Society, Vol. 18(1997), P. 43.
- (37) "On Abelian pi-regular rings," Abstract of the American Math. Society, Vol. 15 (1995), P. 63.
- (38) "On semicommutative rings," Abstract of the American Math. Society, Vol. 15 (1993), P. 59.
- (39) "More on the perfection of polynomials over $GF(q)$," Abstract of the American Math. Society, Vol. 19 (1988), P. 173.

3. BOOKS

- (1) A. Badawi , " Abstract Algebra Manual: Problems and Solutions," published by Nova Science, 2nd Edition (New York)(2004), ISBN 1-59033-924-X.
- (2) A. Badawi, "Focus on Commutative Rings Research," Nova Science, NewYork, U. S. A. (2006), ISBN 1-60021-065-1.