MUHAMMAD ZAFRULLAH

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EDUCATION

1974 Ph. D. (Mathematics) University of London (Thesis Advisor: P. M. Cohn)
1969 M. Sc.(Mathematics) University of the Punjab Lahore, Pakistan
1967 B. Sc. (Mathematics and Physics) University of the Punjab, Lahore, Pakistan

PROFESSIONAL EXPERIENCE

Fall 2000-Spring 2004	Visiting Assistant Professor, Idaho State University, Pocatello, ID
1999-Spr 2000	Lecturer, The University of Arkansas, Fayetteville, AR 72701
1998 Fall	Visiting Associate Professor, University of Iowa, Iowa City , IA
1998 Spring	Part-time instructor , Mount Mercy College, Cedar Rapids
1997 Fall	Visiting Associate Professor, The University of Iowa, Iowa City, IA 52242.
1997 Spring	Part-time Instructor, Bowie State University, Bowie, MD 20715.
1996 Fall	Part-time Instructor, Bowie State University, Bowie, MD 20715.
1989-92	Associate Professor, Winthrop University, Rock Hill, SC 29733.
1989 Spring	Visiting Associate Professor, The University of Iowa, Iowa City, IA 52242.
1988 Fall	Visitor, Florida State University, Tallahassee, Florida 32306.
1987-88	Visitor, University of North Carolina at Charlotte, Charlotte, NC 28223..
1985-87	Honorary Research Fellow, University College London, London, UK.
1984 85	Associate Professor, Al- Faateh University, Tripoli, Libya.
1982- 84	Associate Professor, University of Sebha, Sebha, Libya
1977- 82	Assistant Professor, University of Sebha, Sebha, Libya
1975- 77	Demonstrator, UMIST, Manchester, UK.

PROFESSIONAL SERVICES

Reviewer, Mathematical Reviews

Referee for mathematical journals

Outside reviewer of Ph.D. theses

Associate Editor, International Journal of Commutative Ring Theory

ADMINISTRATIVE EXPERIENCE

Chairman of the Department of Mathematics at the University of Sebha, Sebha, Libya from 1978 to 1983.

At Winthrop University I served on the Seminar Committee and the Winthrop-Wylie Mathematics Tournament Committee.

At the University of Arkansas, I was faculty adviser to a student organization called Pakistan Cultural Club.

PUBLIC SERVICE: I have started a web page to serve the following purposes: (a) to draw attention to the ever-increasing number of typographic and technical errors in undergraduate text-books, (b) to serve as a meeting place for Mathematicians working in Commutative Algebra. I have also started a helpdesk for multiplicative ideal theory. The web page has not attracted much attention yet, but I hope that it will flourish when there is a tendency of listening to what is being said regardless of who is saying it. I plan to use my web page to raise my voice for those who do not have a voice.

ABOUT THE USE OF TECHNOLOGY

I am familiar with, and sympathetic with, the use of technology in the classroom. In fact I have taught courses in computer labs, using Maple, Minitab and course/book specific software. My transition from the classical approach to the modern technological approach was not at all easy. I had to do a lot of hard thinking and arguing. Then in the end what converted me was the realization that the content of useful knowledge is increasing at a tremendous rate and to give our students at least a fighting chance of learning useful mathematics we must find some short cuts and use of technology is one of them. On my web page under "**Students**" you can find notes on how to use TI-83 to do Statistics in the notes section of Math 253. These notes include pictures that show what the screen would look like when you press a certain button. Not only my students liked the notes, students from other schools have asked my (totally unnecessary) permission to use the notes.

SELECTED CONFERENCES AND VISITS

Conferences:

1. **Second Piedmont Mathematics Conference**, held at the University of North Carolina at Charlotte. (Duration: 3- 13- 87 to 3- 14- 87.) I gave a talk on the work that later developed into [24]. (A number in brackets such as this refers to the ordinal position of the paper in the list of my publications in My Research..)
2. **841st AMS meeting** at the University of Tennessee at Knoxville, TN. (Duration: 3-24- 88 to 3-27- 88). Evan Houston gave a talk on [21].
3. **861st AMS meeting** held at Denton Texas in November 1990. Presented a paper on t-class groups and Nagata's class group Theorem. The work later appeared as [47].

4. **Colloque International d'Algebre Commutative**, held at the University of Fez Morocco. (Duration: 4- 20- 92 to 4- 24- 92.) Gave a talk on t-invertibility especially highlighting the elements whose presence in an ideal ensures its invertibility (or t-invertibility). This work later appeared as [48].
5. **915th AMS Meeting** held at UT Chattanooga TN, in October 1997. -Gave a talk on unique factorization in non atomic rings
6. **936th AMS Meeting** held at Wake Forest University, Winston-Salem, NC in October, 1998.
7. **962nd AMS Meeting**, New Orleans, Louisiana, January 2001. Gave a talk on LCM-Splitting Sets in Some Ring Extensions, [68]
8. **International Conference on Commutative Ring Theory**, held at the Inha University in Incheon, Korea on May 18-19, 2001. Gave a talk on factorization and splitting sets. The material presented in this talk later developed into [74].
9. **Fourth International Conference, Commutative Ring Theory and Applications,** June 7 - 12 , 2001, held at Fez, Morocco. Gave a plenary talk on Various facets of rings between D[X] and K[X]. Wrote a survey article with the same title. The survey "half appeared" in the conference proceedings, it has appeared in full in Comm. Algebra (see [71]). While in Fez I also served on the jury of Abdeslam Mimouni's thesis. Mimouni is a student of S. Kabbaj, a well-known Moroccan Algebraist.
10. **969th AMS Meeting**, September 21-23, 2001, Columbus, Ohio. I gave a talk on Another look at Nagata Type Theorems. In it I talk on t-LCM Splitting sets and corresponding Nagata type theorems. Most of this material went into [74].
11. **984th AMS Meeting,** March 14-16, 2003, Baton Rouge, Louisiana, gave a talk on A+XB[X] domains and the HFD property. This is joint work with Jim Coykendall and Tiberiu Dumitrescu, the paper is submitted.
12. **994th AMS** meeting, March 12-13, 2004, Tallahassee, Fla., gave a talk on t-splitting sets of ideals and the influence Gilmer and Mott had on this area of research.
13. **Workshop on commutative rings and their modules,** May 30-June 4, 2004, Cortona, Italy, gave a plenary talk on v-coprimality and its applications. The title of the talk was, "What v-coprimality can do for you". I plan to write a survey article on this topic.

Visits:

1. Marco Fontana of Istituto Matematico Universita di Roma invited me, in 1985, to visit for a week. Gave a talk discussed some Mathematics.
2. Alain Bouvier of Universite Claude Bernard, Lyon, France invited me, in 1986, to visit for a week or ten days. Gave several talks, discussed with Bouvier's students their future work.
3. Joe Mott of Florida State University, Tallahassee Florida invited me to visit and give a talk. This visit turned into a tour of several universities including, the University of Iowa, Iowa City, IA, the University of Tennessee at Knoxville, TN and the University of Virginia at Charlottesville, VA. I gave talks at all these places over a period of some twenty days and wrote or planned a number of papers.
4. While in Morocco, in June 2001, I visited Universite Qadi Ayyad, Marrakech, to serve as a member of jury on Said el Baghdadi's thesis. The main topic of the thesis was t-class groups. (El-Baghdadi, also, is a student of S. Kabbaj.) During my

stay there I discussed Mathematics with several people gave my preprints off my laptop and suggested some problems to a number of people.

REFERENCES

Professor Daniel Anderson, Department of Mathematics, The University of Iowa, Iowa City, IA 52242, USA. Phone: 319-335-0773, e-mail: dan-anderson@uiowa.edu

Professor Evan Houston, Department of Mathematics, University of North Carolina at Charlotte, Charlotte, NC 28213, USA. Phone:704-547-2648, e-mail:eghousto@

Professor David Anderson, Department of Mathematics, The University of Tennessee, Knoxville, TN 37996 USA. Phone 865-974-4298, e-mail: anderson@math.utk.edu

MY RESEARCH

I have published a number of papers in Mathematical Journals of repute and I continue to be actively involved in research on (1) ***Commutative Ring Theory***,(2) ***Partially Ordered Groups*** and (3) ***Elementary Number Theory.*** Ring Theory being my main area of interest I briefly describe what kind of work I have been doing in it.

In Ring Theory, I study

1. Integral domains whose non-zero elements have some form of unique factorization
2. Integral domains whose non-zero non-units are expressible as products of irreducible elements to see how far they are from being UFD's (Unique Factorization Domains)
3. Generalizations of UFD's and Krull domains. Of these the most well-known are the weakly Krull and the weakly factorial domains. To see the impact of some of my work in this area you may want to look up, "Ideal Systems, an introduction to Multiplicative Ideal Theory", by Franz Halter-Koch ISBN: 0-8247-0186-0.
4. Sub-rings of polynomial rings over fields (rings of the form A + XB[X] where $A \subseteq B$ are subrings of a field K, X an indeterminate over K) to serve as examples. These pullback constructions became popular after the appearance of [4] [18] and [38] from my list of publications. Today considerable literature exists on these constructions, you may consult papers by Tom Lucas and by Evan Houston and Stefania Gabelli, that appear in the same book that contains my paper [64]. The extent of my involvement in this area can be gauged from [70] after it appears in its entirety.
5. The notion of the divisor class group is restricted to domains that are completely integrally closed and it is mostly used in the context of Krull domains, I suggested

the notion of a class group (called the t-class group or simply the class group) that is defined for any integral domain and that reduces to the divisor class group for Krull domains. This notion is fast becoming popular among multiplicative ideal theorists, (f) study of star operations, the t-operation is one of the star operations that I have studied in detail, my article, "Putting t-invertibility to use" [64] may shed some light on my involvement in this area, the notion of the t-class group mentioned above depends upon the notion of t-invertibility, for a recent survey of the t-class groups and their applications Chapter 2 of "Non Noetherian Commutative Ring Theory, edited by Scott Chapman and Sarah Glaz, Kluwer Academic Publishers, Dordrecht/Boston/London, 2000. This is the same book where [64] appeared and Chapter 2 is written by David Anderson. The notion of t-class group along with the notions of weakly Krull domains has so frequently been in the literature that some authors have started using these notions without any reference to me or to my co-workers.

RECENT AND CURRENT WORK:

An integral domain D is called an h-local domain if every non-zero non-unit of D belongs to at most a finite number of maximal ideals of D and every non-zero prime ideal of D is contained in a unique maximal ideal. Call an ideal A unidirectional, pointing to a maximal ideal M, if M is the only maximal ideal containing A. I observed that D is h-local, if and only if, every proper principal ideal of D is expressible (uniquely) as a product of (mutually comaximal) unidirectional ideals of D. This observation, led to the study, using the star operations, of more general integral domains that have a factorization pattern similar to that of the h-local domains. (The paper based on this work has appeared in Houston J. Math.)

A foreign student, asked me to suggest a problem for his doctoral dissertation. I suggested that he should study integral domains all of whose overrings satisfy the ascending chain condition on principal ideals. He, and another Mathematician at a foreign university, worked on this problem often asking me for guidance and help. It turned out that an integral domain has this property if and only if its integral closure is a Dedekind domain. A joint paper based on this work has appeared in Comm. Algebra.

In my study of a special case of rings of the form $A+XB[X]$ where B is a quotient ring of A, I have recently shown that if A is a Prufer v-multiplication domain $A+XA[1/S][X]$ is a Prufer v-multiplication domain (PVMD) if and only if for every nonzero d in A, the ideal (d, X) is t-invertible. Here, A is a PVMD if every finitely generated nonzero ideal I of A is t-invertible, i.e. there is a finitely generated ideal J such that A: (IJ)=A. The fall out from this study is an interesting set of results. I have written two papers on this with Dan Anderson. The titles of these two papers are: (a) **Splitting multiplicative sets** (This paper has appeared ([63]) in Proc. Amer. Math. Soc. (b) **The ring $R+XR[1/S][X]$ and t-splitting sets.** (This paper has appeared ([66]) in Arabian Journal of Science and

Engineering.) The t-splitting sets and their variations have in fact been quite useful an interested reader may look up [80] and [81].

Let me recall that two elements *x,y* of an integral domain *D* are *v-coprime* (or LCM coprime) if *xDÇyD=xyD.* Recall also that a saturated multiplicative set *S* of an integral domain *D* is a splitting set if every nonzero non-unit *x* of *D* can be written as *x=sd* where *s Î S* and *d* is v-coprime to every element of *S*. Moreover a splitting set is LCM-splitting if in addition for each *s Î* S we have *sDÇxD* is principal for each *x* in *D.* The splitting multiplicative sets have been quite useful in studying the multiplicative properties of integral domains. For instance, in [18] I showed that if *D* is a GCD domain and *S* is a multiplicative set in *D,* then *D+XD[1/S][X]* is a GCD domain if and only if *S* is a splitting multiplicative set of *D.* In [63] some new characterizations were added and in [66] a new notion of splitting sets was introduced.

One of my continuing interests is Nagata type Theorems (If *S* is an LCM splitting set and the ring of fractions *D[1/S]* is a PVMD (GCD domain) then so is *D.*) Recently, in a paper with Tiberiu Dumitrescu, I studied the question of how splitting sets and LCM splitting sets behave in some ring extensions. An interesting consequence of the study was that if *D* is a Noetherian domain and *S* is a multiplicative set of *D* generated by principal primes, then the integral closure of *D* is a UFD if and only if the integral closure of *D[1/S]* is a UFD.(This is a new addition to the list of Nagata type theorems.). This paper ([68]) has electronically appeared in Proc. Amer. Math. Soc. in November 2001.

I have recently started writing a survey of Nagata type Theorems with D.D. Anderson.

My interest in the study of almost GCD domains also continues.(Almost GCD domains are integral domains *D* with the property that for each pair of elements *x,y* in *D* there is a natural number *n(x,y)* such that the intersection of the ideals (x^n) and (y^n) is principal.) Recently I have completed a study of almost GCD domains of finite character in collaboration with T. Dumitrescu, Y. Lequain and J. Mott. The paper ([69]) has appeared in J. Algebra. My interest in almost GCD domains continues and at present I am working with other mathematicians on the condition under which polynomial extensions of almost GCD domains are again almost GCD domains. Also of interest to me is the study of what I like to call almost splitting sets: These are saturated multiplicative sets *S* of a domain *D* such that for each nonzero nonunit *x* of *D* there exists *n=n(x)* such that *x^n* is expressible as a product *x^n=sd* where *s Î S* and *d* is v-coprime to every member of *S.*

Another ambition of mine is to produce Nagata type theorems that do not have anything to do with GCD or pre-Schreier property. I hinted at the possibilities in my talks at Inha University and at the Columbus Ohio meeting. ([74] and a paper under preparation resulted from these talks.)

Some time ago I studied an arithmetical function F, that has a multiplicative companion *f* such that for coprime natural numbers m,n F(mn)=(F(m))^f(n)(F(n))^f(m). I called F a generalized multiplicative function. I am now working on this function to explore its utility. This function being somewhat accessible to undergraduates, I am trying to attract some undergraduates to work on it.

In [69] we floated the idea of an almost lattice ordered group. I am considering plunging into partially ordered groups to get some non-abelian examples of almost lattice ordered groups. Besides I have some unfinished work on factoriality in Riesz groups. (A Riesz group, incidentally, is a directed partially ordered group that satisfies Riesz interpolation property.)

MY GENERAL ATTITUDE TOWARDS RESEARCH

My general attitude towards research is best described by saying that I chase patterns. When I see a good result I want to know what is happening behind the scenes that causes this result and once I find the facts that caused the beautiful result I indicate how else those facts can be used. Most of my papers are good examples of that but my work on Nagata like theorems and on Kaplansky like theorems stands out. Here Nagata like Theorems are statements that generalize Nagata's theorem on UFD's: Let R be an integral domain that satisfies ACC on principal ideals, and let S be a multiplicative set generated by primes of R,. If R_S is a UFD then so is R. Next, the theorem of Kaplansky that I targeted is: An integral domain R is a UFD if and only if, every nonzero prime ideal of R contains a nonzero principal prime. I have singled out these two theorems because I was so impressed by them that I actually went chasing their patterns into partially ordered groups (not necessarily abelian) and came up with some interesting results.

RESEARCH PUBLICATIONS

(I have included the number of citations of some papers. They appear, in bold, after the reference/names of coauthors. These include self-citations but do not include citations in books and proceedings.) (Source: Science citation index.) These numbers are more than a year old now.

[1]. A note on two generated finite groups with two defining relations, Punjab Univ. J. Math. (Lahore) 4(1971), 67-68.

[2]. On the evaluation of a certain arithmetical function, J. Natur. Sci. and Math. 12(1972), 363-365 (with S.M. Kerawala).

[3]. Semirigid GCD-domains, Manuscripta Math. 17(1975), 55-66. **(4)**

[4]. The construction $D + XD_S[X]$, J. Algebra 53(1978), 423-439 (with D.L. Costa and J.L. Mott). **(33)**

[5]. On a result of Gilmer, J. London Math. Soc. 16 (1977), 19-20.

[6]. Rigid elements in GCD domains, J. Natur. Sci. and Math. 17(1977), 7-14. **(6)**

[7]. On unique representation domains, J. Natur. Sci. and Math. 18(1978), 19-29. **(2)**

[8]. On finite conductor domains, Manuscripta Math. 24(1978), 191-204. **(22)**

[9]. On Prüfer v-multiplication domains, Manuscripta Math. 35(1981), 1-26 (with J.L. Mott). **(31)**

[10]. Some polynomial characterizations of Prüfer v-multiplication domains, J. Pure Appl. Algebra 32 (1984), 231-237.**(5)**

[11]. The v-operation and intersections of quotient rings of integral domains, Comm. Algebra 13(1985) 1699-1712. **(6)**

[12]. A general theory of almost factoriality, Manuscripta Math. 51(1985), 29-62. **(11)**

[13]. Overrings and dimensions of general D+ M constructions, J. Natur. Sci. and Math. 26(2) (1986), 7-14 (with D.L. Costa and J.L. Mott).
[14]. The GCD property and irreducible quadratic polynomials, International J. Math. 9(1986), 749-752 (with S.B. Malik and J.L. Mott).
[15]. On generalized Dedekind domains, Mathematika 33(1986), 285-296. **(7)**
[16]. On a property of pre-Schreier domains, Comm. Algebra 15(1987), 1895-1920. **(7)**
[17]. On t-invertibility, Comm. Algebra 16(1988), 149-170 (with S.B. Malik and J.L. Mott).
[18]. The $D + XD_S[X]$ construction from GCD-domains, J. Pure Appl. Algebra 50(1988), 93-107. **(15)**
[19]. Two characterizations of Mori domains, Math. Japonica 33(1988), 645-652.**(5)**
[20]. On generalized multiplicative functions I, J. Natur. Sci. and Math. 28(1988), 257-268.
[21]. Integral domains in which each t-ideal is divisorial, Michigan Math. J. 35(1988), 291-300 (with E. Houston). **(10)**
[22]. Ascending chain conditions and star operations, Comm. Algebra 17(6) (1989), 1523-1533. **(11)**
[23]. Some characterizations of v-domains and related questions, Colloq. Math. Vol. LVIII (1989), 1-9 (with D.D. Anderson, D.F. Anderson, D. Costa, D. Dobbs and J.L. Mott).
[24]. Some quotient based characterizations of domains of multiplicative ideal theory, Bull. Math. Ital. (7) 3-B (1989), 455-467 (with D.D. Anderson and J.L. Mott).
[25]. On t-invertibility II, Comm. Algebra 17(8) (1989), 1955-1969 (with E. Houston).**(21)**
[26]. t-linked overrings and Prüfer v-multiplication domains, Comm. Algebra 17(11)(1989), 2635-2852 (with D. Dobbs, E. Houston and T. Lucas).
[27]. On some class groups of an integral domain, Bull. Soc. Math. Grece. 29(1988), 45-59 (with A. Bouvier). **(14)**
[28]. Unruly Hilbert domains, Canad. Bull. Math. 33(1) (1990), 106-109 (with J.L. Mott). **(4)**
[29]. Well behaved prime t-ideals, J. Pure Appl. Algebra 65(1990), 199-207. **(7)**
[30]. Contents of polynomials and invertibility, Comm. Algebra 18(5) (1990), 1569-1583 (with J.L. Mott and B. Nashier). **(1)**
[31]. Flatness and invertibility of ideals, Comm. Algebra 18(7)(1990), 2151-2158. **(3)**
[32]. t-linked overrings as intersections of localizations, Proc. Amer. Math. Soc. 109(3)(1990), 637-646 (with D. Dobbs, E. Houston and T. Lucas).**(1)**
[33]. Weakly factorial domains and groups of divisibility, Proc. Amer. Math. Soc. 109(4)(1990), 907-913. (with D.D. Anderson). **(13)**
[34]. Factoriality in partially ordered groups, Comm. Algebra 18(5)(1990), 1307-1322. **(1)**
[35]. On almost Bezout domains, J. Algebra 142(1991), 285-309 (with D.D. Anderson). (**4)**
[36]. On pseudo integrality, Canad. Math. Bull. 34(1)(1991), 15-22 (with D.F. Anderson and E. Houston).
[37]. Factorization in integral domains, J. Pure Appl. Algebra 69(1991),1-19 (with D.D. Anderson and D. F. Anderson). **(39)**

[38]. Rings between D[X] and K[X], Houston J. Math. 17(1)(1991), 109-129 (with D.D. Anderson and D.F. Anderson). **(23)**

[39]. On Krull domains, Archiv der Math. 56(1991), 559-568 (with J.L. Mott).**(7)**

[40]. Splitting the t-class group, J. Pure Appl. Algebra 74(1991), 17-37 (with D.D. Anderson and D.F. Anderson). **(13)**

[41]. t-linked overrings of Noetherian weakly factorial domains, Proc. Amer. Math. Soc. 115(3)(1992), 601-604 (with M. Martin).

[42]. Factorization in integral domains II, J. Algebra 152(1992), 78-93 (with D.D. Anderson and D.F. Anderson). **(16)**

[43]. Finite character representations for integral domains, Bull. Math. Ital. (7) 6-B(1992), 613-630 (with D.D. Anderson and J.L. Mott).**(13)**

[44]. On t-linked overrings, Comm. Algebra 20(5)(1992), 1463-1488 (with D. Dobbs, E. Houston, T. Lucas and M. Roitman).

[45]. Atomic domains in which almost all atoms are primes, Comm. Algebra 20(5)(1992), 1447-1462 (with D.D. Anderson and D.F. Anderson). **(11)**

[46]. On t-invertibility III, Comm. Algebra 21(1993), 1189-1201 (with D.D. Anderson). **(5)**

[47]. t-linked extensions, the t-class group and Nagata's Theorem, J. Pure Appl. Algebra 86(1993), 109-124 (with D.D. Anderson and E. Houston). **(8)**

[48]. On t-invertibility and comparability, *Commutative Ring* Theory (eds. P.-J. Cahen, D. Costa, M. Fontana and S.-E. Kabbaj), Marcel Dekker, New York, 1994, 141-150 (with R. Gilmer and J. Mott).

[49]. Some locally trivial star theoretic properties of integral domains, *Commutative Ring* Theory (eds. P.-J. Cahen, D. Costa, M. Fontana and S.-E. Kabbaj), Marcel Dekker, New York, 1994, 87-96 (with D. Dobbs).

[50]. A note on Riesz groups, Manuscripta Math. 80(1993), 225-238. **(2)**

[51]. A note on triangular numbers, Punjab. Univ. J. Math. 26(1993), 75-83 (with H. Lee).

[52]. On a theorem of Kaplansky, Bolletino U.M.I. (7) 8-A (1994), 397-402 (with D.D. Anderson). **(1)**

[53]. P.M. Cohn's completely primal elements, *Zero-Dimensional Commutative Rings* (eds. D.F. Anderson and D. Dobbs) Marcel Dekker, New York, 1995, 115-123 (with D.D. Anderson).

[54]. On generalized unique factorization, Bollettino U. M. I. (7) 9-A (1995), 401-413 (with D.D. Anderson and D.F. Anderson). **(2)**

[55]. On agreeable domains, Comm. Algebra 23 (13) (1995), 4861-4883 (with D.D. Anderson and D. J. Kwak). **(2)**

[56]. Examples in modern algebra with which students can play, Primus 6 No. 4, (1996), 351-354 (with T. Jackson).

[57]. On t-invertibility IV, *Factorization in Integral Domains* (ed. D.D. Anderson) Marcel Dekker, New York, 1997, 221-225 (with D.D. Anderson). **(4)**

[58]. Criteria for unique factorization in integral domains, J. Pure Appl. Algebra, 127(1998), 205-218 (with D.D. Anderson, S. T. Chapman and F.Halter-Koch) **(3)**

[59]. Unique factorization in non-atomic integral domains, Bollettino U. M. I 8(2-B) (1999) 341-352 (with D.D. Anderson and J.L. Mott).

[60]. Star operations and primitive polynomials, Comm. Algebra 27(7)(1999) 3137-3142 (with D.D. Anderson).
[61] Independent locally finite intersections of localizations, Houston J. Math.25(1999) 433-452 (with D. D. Anderson) **(1)**
[62]. Integral domains whose over-rings satisfy ACC on principal ideals, Comm. Algebra 28(9)(2000), 4403-4409. (with T. Dumitrescu and Tariq Shah)
[63]. Splitting multiplicative sets Proc. Amer. Math. Soc. 129(2001) (8), 2209-2217 (with D. D. Anderson).
[64]. Putting t-invertibility to use, *Non-Noetherian commutative ring theory*, 429--457, Math. Appl., 520, *Kluwer Acad. Publ., Dordrecht*, 2000. **(1)**
[65]. Primes that become primal in a pullback, Internat. J. Comm. Ring Theory (to appear) (with T. Dumitrescu and N. Radu).
[66]. The ring D+XD[1/S][X] and t-splitting sets, Commutative algebra. *Arab. J. Sci. Eng. Sect. C Theme Issues* **26** (2001), no. 1, 3--16. (with D. D. Anderson and D.F. Anderson))
[67]. Distinguished domains, Internat. J. Comm. Ring Theory (to appear) (with D.D. Anderson).
[68]. LCM-splitting sets in some ring extensions *Proc. Amer. Math. Soc.* 130 (2002), no. 6, 1639—1644 (with T. Dumitrescu).
[69]. Almost GCD domains of finite t-character, J. Algebra 245(2001) no 1, 161-181 (with T. Dumitrescu, Y. Lequain and J. Mott)
[70]. Various facets of rings between D[X] and K[X], a survey article that has "half appeared" in the proceedings of the 2001 Fez Conference (Lecture notes in Pure and Applied Mathematics Volume 231, pp (Marcel-Dekker 2002), under the nonsensical title, "Facets on rings between D[X] and K[X]". The paper has appeared as indicated below. I am treating it as two papers because apparently Math. Reviews have done that.
[71]. Various facets of rings between D[X] and K[X], Comm. Algebra 31(5) (2003) 2494-2540.
[72].On a property of weakly Krull domains, Proc. Amer. Soc. 131, No.12, 3689-3692 (2003) (with D.D. Anderson).
[73].Almost Splitting Sets and AGCD Domains, Comm. Algebra, 32(1)(2004), 147-158 (with D. D. Anderson and T. Dumitrescu).
[74]. Factorization of certain sets of polynomials in an integral domain, Internat. J. Comm. Ring Theory, 2(2003) (with D.D. Anderson and Pramod K. Sharma)
[75]. *t*-Splitting sets in integral domains, J. Pure Appl. Algebra 187, No.1-3, 71-86 (2004). (with G.W. Chang and T. Dumitrescu).
[76]. AP domains and unique factorization, J. Pure Appl. Algebra 189, No.1-3, 27-35 (2004) (with James Coykendall)
[77]. UMV domains, Proceedings of the Chapel Hill Conference (to appear) (with Evan Houston)
[78]. Weakly Krull inside factorial domains, Proceedings of the Chapel Hill Conference (to appear) (with D.D. Anderson and G.W. Chang)
[79]. A note on almost GCD monoids, Semigroup Forum Volume 69, Number 1(2004), 141-154 (with DD Anderson)
[80] *t*-splitting sets of ideals, (with Gyu Whan Chang and T. Dumitrescu) Journal of Pure and Appl. Algebra, (to appear)

[81] The half factorial property and the domains of the form A+XB[X] (with J. Coykendall and T. Dumitrescu) to appear in Houston J. Math

[82] w-integral closure of integral domains, to appear in J. Algebra (with G. W. Chang)
[83] Schreier Property and Gauss' Lemma (with D.D. Anderson) to appear.

WORK IN PROGRESS.

[1] Nagata Type Theorems a survey (with Dan Anderson) (Dormant)
[2] Generalized multiplicative functions. (Dormant).
[3] Unrestricted UFD's (with J. Coykendall) (in preparation).
[4] Constructing rings without irreducible elements (with Linda Hill and Jim Coykendall) (in preparation).
[5] What v-coprimality can do for you (in preparation)
[6] Quasi Schreier domains II (with Dan Anderson and Tiberiu Dumitrescu) in preparation.