VITA FOR MICHAEL FILASETA

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Education:

Ph.D. University of Illinois at Champaign-Urbana (1984)
B.A. University of Arizona (1980)

Professional Experience:

Full Professor, University of South Carolina (1995-present)
Associate Professor, University of South Carolina (1989-1995)
Assistant Professor, University of South Carolina (1984-1989)
Teaching and Research Assistant, University of Illinois (1980-83)

Grants:

Duration	Agency	Type	Title
2004-2007	NSA	PI	*Fac lac plyns & Galois grps of Laguerre plyns* (with Douglas Meade)
2002-2006	NSF	PI	*On the factorization of lacunary polynomials* (with Douglas Meade)
2000-2003	NSF	Co-PI	*SCREMS Proposal*
1998-2000	NSA	PI	*Problems on the irreducibility of polynomials*
1997-1999	NSA	PI	*Finite differences & irreduc. techniques in Analytic Number Theory*
1994-1997	NSF	PI	*Finite diff. techniques & irreducibility thms in Analytic Num. Theory*
1994-1996	NSF	Co-PI	*Computational equip. for Algebra, Combin., and Number Theory*
1992-1994	NSA	PI	*Problems related to finite differences, fract. parts, and irreducibility*
1989-1991	NSF	PI	*Gaps between k-free numbers, finite differences, & exponential sums*

Other Awards:

Mortar Board Excellence in Teaching Award, 1994
The Distinguished Award of the Hardy-Ramanujan Society (with Ognian Trifonov), 1991
USC Research and Productive Scholarship Grant (Univ. of S. Carolina, 1985-1986)
University Fellowship (University of Illinois, 1980-1982)

Memberships:

American Mathematical Society (AMS)
Mathematical Association of America (MAA)

Refereed for the Following:

Acta Arithmetica
Advances in Applied Mathematics
Annales des Sciences Mathematiques du Quebec
Bulletin of the Malaysian Mathematical Society
Central European Journal of Mathematics
Discrete Mathematics
l'Enseignement Mathematique
Fibonacci Quarterly
Illinois Journal of Mathematics
Integers: Electronic Journal of Combinatorial Number Theory
International Journal of Mathematics and Mathematical Sciences
International Journal of Number Theory
Journal fur die reine und angewandte Mathematik (Crelle's Journal)
Journal of Combinatorial Theory, Series A
Journal of Graph Theory
Journal of Inequalities in Pure and Applied Mathematics
Journal of Integer Sequences
Journal of Number Theory
Journal of Systems and Software
Journal of Theoretical Biology
Mathematical Monthly
Mathematical Reports for the Canadian Academy of Sciences
Monatshefte für Mathematik
Pacific Journal of Mathematics
Proceedings of the American Mathematical Society
Proceedings of the London Mathematical Society
Ramanujan Journal
Rocky Mountain Journal of Mathematics
SIAM Journal on Discrete Mathematics
Topology and Its Applications
Transactions of the American Mathematical Society
Mathematical Reviews
Springer-Verlag (CMS book series)
SPECTRUM Series of Books for the MAA
Proceedings of Conferences (from Canada, Cardiff, Illinois, & Poland)

Conference Organization:

Illinois Number Theory Fest, UIUC, 2007 (with Berndt, Daimond & Ford)
PAlmetto Number Theory Seminars, USC, 2006 (with Boston & Boylan)
South East Regional Meeting On Numbers, USC, 2005 (with Murhpy, Trifonov & Yu)
Session of AMS Sectional Meeting in Columbia, SC, 2001 (with Trifonov)
South East Regional Meeting On Numbers, USC, 1999 (with Trifonov, Ford & Hudson)
Session of AMS Sectional Meeting in DeKalb, Illinois, 1993 (with Pomerance)
South East Regional Meeting On Numbers, USC, 1993

Former Doctoral Students:

Year	Name	Dissertation Title
2006	Carrie Finch	*Topics from the irred. of polyns. and coverings of the integers*
2004	Travis Kidd	*On the irreducibility of the Laguerre polynomials* $L_m^{(m)}(x)$
2001	Martha Allen	*Generalizations of the irreducibility theorems of I. Schur*
2001	Angel Kumchev	*Diophantine problems involving prime numbers*
2000	Richard L. Williams	*The irreducibility of a certain class of Laguerre polynomials*
1996	Ikhalfani Solan	*Norms of factors of polynomials, an extension of a theorem of Ljunggren, and the distribution of k-free numbers*
1995	Brian D. Beasley	*The distribution of powerfree values of irred. polynomials*

Former Masters Students:

Year	Name	Thesis Title
2007	J Russell Leidy	*Galois groups of Laguerre polynomials*
2004	Manton Matthews	*On the factorization of* $f(x)x^n + g(x)$
2003	Robert Murhpy	*Factorization of polynomials with small Euclidean norm*
2001	Michael Williams	*Eisenstein's criterion applied to mth order Bernoulli polynomials of degree m*
1999	Martha Allen	*The irreducibility theorems of I. Schur*
1998	James Blair	*Determining the irreducibility of polynomials through the use of Newton polygons*
1997	Brian Hipp	*A variation on a theorem of Ljunggren*
1996	Gerald Baygents	*Reducibility criterion in polyns. with non-negative coefficients*
1995	Patrick Harley	*On a generalization of an irreducibility theorem of I. Schur*
1995	Shannon Smith	*An algorithm of Lenstra, Lenstra, and Lovasz*
1989	Roger Rosenthal	*Dirichlet's theorem for polynomials*
1989	Grace De Ramos	*Elementary approaches to a gap problem involving k-free numbers*
1989	Jacklyn Pitts	*On an irreducibility theorem of I. Schur*
1989	Angela Andrews	*On the density of irreducible polynomials with coefficients 0 and 1*
1988	Melonie Rodgers	*Problems and results on irreducible polynomials*
1987	Janis Alexander	*Irred. criteria for polynomials with non-negative coefficients*

Current Students:

Dan Baczkowski (Ph.D.), Mark Kozek (Ph.D.), Banerjee Pradipto (Ph.D.)

Teaching: I have enjoyed teaching over 25 different courses at the University of South Carolina, most on several occasions. At the lower level, I have taught Discrete Mathematics for Computer Science, Business Calculus, our 3 semester Calculus sequence, as well as a course for Elementary Education. Upper level undergraduate courses I have taught include Geometry (Euclidean and non-Euclidean), Algebraic Coding Theory, The Theory of Equations, Probability, Linear Algebra, Complex Variables, Real Analysis I & II, Discrete Mathematics, and Number Theory. At the graduate level, I have taught a variety of courses in Number Theory including Elementary, Analytic I & II, Algebraic, Transcendental and Computational. In addition, I have taught a full year sequence at the graduate level on The Theory of Irreducible Polynomials.

Miscellaneous Other Activities:

MSRI Summer Graduate Program (jointly with P. Borwein in 06/02)
Spectrum Editorial Board for the MAA (2001-present)
Collaborating Editor for the Problem Section of the Mathematical Monthly (1991-1997)
Grader for the William Lowell Putnam Competition (1996, 1997, 1999, 2002)
Member of the All-State High School Mathematics Selection Committee (1990-2005)

PUBLICATIONS

[1] Michael Bennett, Michael Filaseta and Ognian Trifonov, *On the factorization of consecutive integers*, submitted.

[2] Michael Bennett, Michael Filaseta and Ognian Trifonov, *Yet another generalization of the Ramanujan-Nagell equation*, submitted.

[3] Michael Filaseta, Andrew Granville and Andrzej Schinzel, *Irreducibility and greatest common divisor algorithms for sparse polynomials*, submitted.

[4] Michael Filaseta, Carrie Finch and Mark Kozek, *On powers associated with Sierpinski numbers, Riesel numbers and Polignac's conjecture*, submitted.

[5] Michael Filaseta, Carrie Finch and J Russell Leidy, *T. N. Shorey's influence in the theory of irreducible polynomials*, Proceedings of the Diophantine Conference in Honor of T. N. Shorey, to appear.

[6] Michael Filaseta, Florian Luca, Pantelimon Stănică, and Robert Underwood, *Galois groups of polynomials arising from circulant matrices*, Journal of Number Theory, to appear.

[7] Michael Filaseta, Florian Luca, Pantelimon Stănică, and Robert Underwood, *Two Diophantine approaches to the irreducibility of certain trinomials*, Acta Arithmetica, to appear.

[8] Michael Filaseta, Angel Kumchev, and Dima Pasechnik, *On the irreducibility of a truncated binomial expansion*, Rocky Mountain Journal of Mathematics, to appear.

[9] Michael Filaseta, Kevin Ford, Sergei Konyagin, Carl Pomerance, and Gang Yu, *Sieving by large integers and covering systems of congruences*, Journal of the AMS, 20 (2007), 495–517.

[10] Michael Filaseta, Carrie Finch, and Charles Nicol, *On three questions concerning* $0, 1$*-polynomials*, Journal de Théorie des Nombres de Bordeaux, 18 (2006), 357–370 .

[11] Michael Filaseta and Douglas B. Meade, *Irreducibility testing of lacunary* $0, 1$*-polynomials*, J. Algorithms, 55(1):21–28, 2005.

[12] Michael Filaseta and Manton Matthews, Jr., *On the irreducibility of* $0, 1$*-polynomials of the form* $f(x)x^n + g(x)$, Colloq. Math., 99(1):1–5, 2004.

[13] Martha Allen and Michael Filaseta, *A generalization of a third irreducibility theorem of I. Schur*, Acta Arith., 114(2):183–197, 2004.

[14] Michael Filaseta and Andrzej Schinzel, *On testing the divisibility of lacunary polynomials by cyclotomic polynomials*, Math. Comp., 73(246):957–965 (electronic), 2004.

[15] Martha Allen and Michael Filaseta, *A generalization of a second irreducibility theorem of I. Schur*, Acta Arith., 109(1):65–79, 2003.

[16] Michael Filaseta and Richard L. Williams, Jr., *On the irreducibility of a certain class of Laguerre polynomials*, J. Number Theory, 100(2):229–250, 2003.

[17] Michael Filaseta, *Coverings of the integers associated with an irreducibility theorem of A. Schinzel*, In Number theory for the millennium, II (Urbana, IL, 2000), pages 1–24, A K Peters, Natick, MA, 2002.

[18] M. Filaseta and T.-Y. Lam, *On the irreducibility of the generalized Laguerre polynomials*, Acta Arith., 105(2):177–182, 2002.

[19] Arnold Adelberg and Michael Filaseta, *On mth order Bernoulli polynomials of degree m that are Eisenstein*, Colloq. Math., 93(1):21–26, 2002.

[20] Michael Filaseta and Ognian Trifonov, *The irreducibility of the Bessel polynomials*, J. Reine Angew. Math., 550:125–140, 2002.

[21] Brian Beasley and Michael Filaseta, *A distribution problem for powerfree values of irreducible polynomials*, Period. Math. Hungar., 42(1-2):123–144, 2001.

[22] M. Filaseta, K. Ford, and S. Konyagin, *On an irreducibility theorem of A. Schinzel associated with coverings of the integers*, Illinois J. Math., 44(3):633–643, 2000.

[23] A. Borisov, M. Filaseta, T. Y. Lam, and O. Trifonov, *Classes of polynomials having only one non-cyclotomic irreducible factor*, Acta Arith., 90(2):121–153, 1999.

[24] Michael Filaseta, *On the factorization of polynomials with small Euclidean norm*, In Number theory in progress, Vol. 1 (Zakopane-Kościelisko, 1997), pages 143–163, de Gruyter, Berlin, 1999.

[25] Michael Filaseta and Ikhalfani Solan, *An extension of a theorem of Ljunggren*, Math. Scand., 84(1):5–10, 1999.

[26] Michael Filaseta and Sergeĭ Konyagin, *On a limit point associated with the abc-conjecture*, Colloq. Math., 76(2):265–268, 1998.

[27] J. Browkin, M. Filaseta, G. Greaves, and A. Schinzel, *Squarefree values of polynomials and the abc-conjecture*, In Sieve methods, exponential sums, and their applications in number theory (Cardiff, 1995), volume 237 of *London Math. Soc. Lecture Note Ser.*, pages 65–85, Cambridge Univ. Press, Cambridge, 1997.

[28] Michael Filaseta and Ikhalfani Solan, *Norms of factors of polynomials*, Acta Arith., 82(3):243–255, 1997.

[29] Michael Filaseta, *The smallest maximal set of pairwise disjoint partitions*, In Number theory (New York, 1991–1995), pages 103–113, Springer, New York, 1996.

[30] Michael Filaseta, *A generalization of an irreducibility theorem of I. Schur*, In Analytic number theory, Vol. 1 (Allerton Park, IL, 1995), volume 138 of *Progr. Math.*, pages 371–396, Birkhäuser Boston, Boston, MA, 1996.

[31] Michael Filaseta and Ognian Trifonov, *The distribution of fractional parts with applications to gap results in number theory*, Proc. London Math. Soc. (3), 73(2):241–278, 1996.

[32] Michael Filaseta and Sergei Konyagin, *Squarefree values of polynomials all of whose coefficients are 0 and 1*, Acta Arith., 74(3):191–205, 1996.

[33] Michael Filaseta, *The irreducibility of all but finitely many Bessel polynomials,* Acta Math., 174(2):383–397, 1995.

[34] Michael Filaseta, *Powerfree values of binary forms,* J. Number Theory, 49(2):250–268, 1994.

[35] Michael Filaseta and Ognian Trifonov, *The distribution of squarefull numbers in short intervals,* Acta Arith., 67(4):323–333, 1994.

[36] Michael Filaseta, M. L. Robinson, and Ferrell S. Wheeler, *The minimal Euclidean norm of an algebraic number is effectively computable,* J. Algorithms, 16(2):309–333, 1994.

[37] Michael Filaseta, *On the distribution of gaps between squarefree numbers,* Mathematika, 40(1):88–101, 1993.

[38] R. Blecksmith, M. Filaseta, and C. Nicol, *A result on the digits of a^n,* Acta Arith., 64(4):331–339, 1993.

[39] Michael Filaseta, *Short interval results for k-free values of irreducible polynomials,* Acta Arith., 64(3):249–270, 1993.

[40] M. Filaseta and S. W. Graham, *An estimate for the number of reducible Bessel polynomials of bounded degree,* Colloq. Math., 65(1):65–68, 1993.

[41] Michael Filaseta and Ognian Trifonov, *On gaps between squarefree numbers, II,* J. London Math. Soc. (2), 45(2):215–221, 1992.

[42] Michael Filaseta, *Squarefree values of polynomials,* Acta Arith., 60(3):213–231, 1992.

[43] Michael Filaseta, *On an irreducibility theorem of I. Schur,* Acta Arith., 58(3):251–272, 1991.

[44] Michael Filaseta and Ognian Trifonov, *On gaps between squarefree numbers,* In Analytic number theory (Allerton Park, IL, 1989), volume 85 of *Progr. Math.*, pages 235–253, Birkhäuser Boston, Boston, MA, 1990.

[45] Michael Filaseta, *Rouché's theorem for polynomials,* Amer. Math. Monthly, 97(9):834–835, 1990.

[46] Michael Filaseta, *Short interval results for squarefree numbers,* J. Number Theory, 35(2):128–149, 1990.

[47] Michael A. Filaseta and David R. Richman, *Sets which contain a quadratic residue modulo p for almost all p,* Math. J. Okayama Univ., 31:1–8, 1989.

[48] Michael Filaseta, *An elementary approach to short interval results for k-free numbers,* J. Number Theory, 30(2):208–225, 1988.

[49] Michael Filaseta, *Prime values of irreducible polynomials,* Acta Arith., 50(2):133–145, 1988.

[50] Michael Filaseta, *Irreducibility criteria for polynomials with nonnegative coefficients,* Canad. J. Math., 40(2):339–351, 1988.

[51] Michael Filaseta, *Sets with elements summing to squarefree numbers,* C. R. Math. Rep. Acad. Sci. Canada, 9(5):243–246, 1987.

[52] Michael Filaseta, *The irreducibility of almost all Bessel polynomials,* J. Number Theory, 27(1):22–32, 1987.

[53] Michael Filaseta, *Newton's method and simple continued fractions,* Fibonacci Quart., 24(1):41–46, 1986.

[54] Michael Filaseta, *A new method for solving a class of ballot problems,* J. Combin. Theory Ser. A, 39(1):102–111, 1985.

[55] Michael Filaseta, *An application of Faltings' results to Fermat's last theorem,* C. R. Math. Rep. Acad. Sci. Canada, 6(1):31–33, 1984.

[56] Michael Filaseta, *A further generalization of an irreducibility theorem of A. Cohn,* Canad. J. Math., 34(6):1390–1395, 1982.

[57] John Brillhart, Michael Filaseta, and Andrew Odlyzko, *On an irreducibility theorem of A. Cohn,* Canad. J. Math., 33(5):1055–1059, 1981.

[58] Michael Filaseta, *On evaluating the Legendre symbol,* Pi Mu Epsilon Journal, 7:165–168, 1980.

MISCELLANEOUS: COMMENTARY, LETTER, PROBLEMS AND SOLUTIONS

[59] Michael Filaseta, *Commentary on Schinzel's polynomial results in one variable*, in Andrzej Schinzel's Selecta, Vol. 1, European Math. Soc., 2007, 283–294.

[60] Michael A. Filaseta, *Problem: 10640,* Amer. Math. Monthly, 105(1):69, 1998.

[61] M. Filaseta and C. Nicol, *Problem: 10423,* Amer. Math. Monthly, 101(10):1014, 1994.

[62] Michael Filaseta, *Solution of Advanced Problem: 6540,* Amer. Math. Monthly, 96(2):165–166, 1989.

[63] Michael Filaseta, *Problem: 244,* The Two-Year College Math. J., 14(2):173, 1983.

[64] Michael Filaseta, *Letter: War without end*, Math. Mag., 51:256, 1978.

[65] Michael Filaseta, *Solution of Problem: 60,* The Two-Year College Math. J., 9(5):299, 1978.

[66] Michael Filaseta, *Solution of Problem: 88,* The Two-Year College Math. J., 9(4):239, 1978.