

# Curriculum Vitae

**Gregory L. McColm**

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**Department of Mathematics & Statistics**

**University of South Florida**

**4202 E. Fowler Ave., PHY114**

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**13 February 2022**

## **Position**

**Associate Professor of Mathematics, USF-Tampa**

## **Education**

**University of California at Los Angeles**

**Ph.D. awarded in Fall, 1986**

**M.A. awarded in Spring, 1982**

**Field: Mathematical Logic**

**Specialty: Abstract Recursion and Descriptive Complexity**

**Dissertation Advisor: Yiannis N. Moschovakis**

**Dissertation: *On the complexity of the theory of the natural numbers***

**Oberlin College**

**B.A. awarded in Spring, 1980**

**Major: Mathematics**

## **Fields**

**Mathematical Logic & Theoretical Computer Science:**

**Finite Model Theory**

**Computational and Descriptive Complexity Theory**

**Combinatorics:**

**Combinatorial (& Logical) Game Theory**

**Finite and Infinite Ramsey Theory and Extremal Graph Theory**

**Random Graph Theory, and Probabilistic Methods and Random Processes**

**Geometry:**

**Polyhedral / Combinatorial Geometry, Tilings, Tessellations and Theoretical Crystallography**

**Crystallography**

**Computational Geometry and Computer Implementations**

**Mathematics Education and Mathematical Philosophy**

## Annotations

Knowledge of the computer languages C, ForTran, LisP, Maple, Pascal and Python and of the markup language HTML

### Occupations

#### USF-Tampa

Associate Professor of Mathematics, Acad. Yrs. 1992-

Assistant Professor of Mathematics, Acad. Yrs. 1986-1992

### Activities

Member, American Chemical Society

Member, American Association of University Professors

Member, American Mathematical Society

Member, Association for Computing Machines

Associate Member, International Union of Crystallography

Member, Mathematical Association of America

Member, Society for Industrial and Applied Mathematics

### Courses taught

- *Undergraduate* Basic Statistics, Calculus I, Calculus II, Calculus III, College Algebra, College Trigonometry, Elementary Calculus II, Engineering Calculus I, Engineering Calculus III, Finite Mathematics, Precalculus Trigonometry.
- *Graduate* Bridge to Abstract Mathematics, Differential Equations, Discrete Mathematics, Early History of Mathematics, Elementary Abstract Algebra I, Elementary Abstract Algebra II, Elementary Number Theory, Introduction to Probability, Modern Geometry, Problem Solving using Pascal or C, Set Theory, Symbolic Computations in Mathematics, and Vector Calculus.
- *Guest* Advanced Linear Algebra, Combinatorics I, LISP: programming with Algebraic Applications, Mathematical Logic and Foundations I, Mathematical Logic and Foundations II, Probability Theory I, Probability Theory II, Theory of Computing, and special topics courses on set theoretic forcing, computational complexity, and geometry, and Teaching College Mathematics, and independent study in category theory, mathematical crystallography, and mathematical logic.

### Publications, a Journal Submissions

• *Journal of Mathematical Analysis and Applications*  
J Math Anal Appl (1989), 1324-1345.

• *Annals of Applied Logic*  
Ann Appl Logic (1990), 103-134.

• *Annals of Applied Logic*  
Ann Appl Logic (1990), 129-151.

• *Journal of Combinatorial Theory*  
J Comb Theory A (1991), 68-75.

• *Electronic Research Notices in Discrete Mathematics*  
Electr Res J For a Logic (1992), 273-290.

- not open for pro* (with W. E. Clark & W. R. Stark)  
*J. Linguistics* (1992), 67-71.
- Zentralblatt für Allgemeine Sprachwissenschaft* (1992), 293-298.
- D. Linguistics* (with E. Grädel)  
*Inquiry* (1995), 129-135.
- J. Linguistics* (1995), 392-414.
- D. Linguistics* (1996), 111-134.
- Inquiry* (1995), 201-220.
- H. Linguistics* (with E. Grädel)  
*Ann. N.Y. Acad. Sci.* (1996), 169-199.
- Am. Linguistics* (with W. E. Clark & B. Shekhtman)  
*Lang. & Cogn. Sci.* (1998), 297-310.
- Appl. Linguistics* (1998), 511-519.
- First Language* (1999), 239-266.
- D. Linguistics* (2002), 331-347.
- Introduction to Linguistics*  
*Journal of Linguistics* (2003), 203-226.
- An. Institutul de Lingvistică și Literatură* (2003), 84-100.
- D. Linguistics* (2004), 147-170.
- Journal of Linguistics* (2004), 61-110.
- Computational Linguistics* (2004), 373-387.
- (with K.-D. Hou)*  
*Journal of Linguistics* (2008), 123-137.
- Computational Linguistics* (with N. Jonoska)  
*Journal of Linguistics* (2009), 332-346.
- Journal of Linguistics* (with Ana Staninska and Natasha Jonoska)



Epistemological Foundations of Artificial Grammar Learning  
(with N. Jonoska & A. Staninska; S. Staninska presenting)

International Conference on Distributed Artificial Intelligence  
London, Canada; May, 2005

A Cognitive Psychology of Artificial Grammar Learning  
International Psychology Conference

or s t (2007; winner, Tampa Writer's Alliance 2006 Writing Contest: 3rd place for fiction), 81 - 84.

turn o r  
pp r r A L t rary a a n (Feb., 2007), 18 - 19.

I pon n o Co or  
pp r r A L t rary a a n (Nov./Dec., 2007), 9.

Florida a par bun (June 5, 2011), Views & News p. 1.

Ar o n n t, o t on

Florida a par bun (Oct. 22, 2011), Metro p. 15.

Art n n t, o t on

Florida a par bun (Jan. 9, 2012), Metro p. 9.

o p or o n

Florida a par bun (Feb. 25, 2012), Views p. 1.

Fo u on n n qu ot r

Florida o s (My Turn, Mar. 20, 2012), <http://floridavoices.com/myturn/focus->

865th Meeting of the AMS  
Tampa, FL; March, 1991.

Grant Borrer on Computation  
16th MAA Florida Suncoast Meeting  
St. Petersburg, FL; December, 1991.

Combinatorics  
23rd Southeastern International Conference on Combinatorics, Graph Theory,  
Computing  
Boca Raton, FL; February, 1992.

Algorithms on Non-point  
872nd Meeting of the AMS  
Tuscaloosa, AL; March, 1992.

Database Query  
NSF-INRIA Workshop on Databases and Finite Model Theory  
San Diego, CA; June, 1992.

Algorithmic Combinatorics, Structures  
Dagstuhl-Seminar 9323 on Semantics of Programming Languages and Algebra  
Dagstuhl, Germany; June, 1993.

Algorithms  
18th MAA Florida Suncoast Meeting  
Venice, FL; December, 1993.

Combinatorics  
19th MAA Florida Suncoast Meeting  
St. Petersburg, FL; December, 1994

Random Functions  
26th Southeastern International Conference on Combinatorics, Graph Theory,  
Computing  
Boca Raton, FL; March, 1995.

Algorithmic Random Structures and Algorithms (RANDOM'95)







*B r e Bu n Cr*

**32nd Annual Meeting of the Suncoast Region of the Florida Section of the Mathematics Association of America**

**St. Petersburg, FL, December 2007**

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**Pi Mu Epsilon Induction Banquet**

**Jacksonville, FL, April 2008**

*r o n A op G*

**Thirty-Ninth Southeastern International Conference on Combinatorics, Graph The-**

Polk State College, Lakeland, Florida, April 2012

*Art Controversy*  
37th Annual Meeting of the Suncoast Region of the Florida Section of the Mathematics Association of America  
State College of Florida, Bradenton, Florida, December 2012.

*Geometry*  
Special Session on Geometry, 38th Annual Meeting of the Suncoast Region of the Florida Section of the Mathematics Association of America  
Hillsborough Community College - SouthShore Campus, Ruskin, Florida, December 2013.

*Plenary Session*  
Plenary Session, 38th Annual Meeting of the Suncoast Region of the Florida Section of the Mathematics Association of America  
Hillsborough Community College - SouthShore Campus, Ruskin, Florida, December 2013.

*Discrete Geometry in Crystallography*  
Special Session on Discrete Geometry in Crystallography, 1,098th Meeting of the American Mathematical Society  
University of Maryland - Baltimore County, Baltimore, Maryland, March 2014.

*International Union of Crystallography*  
23rd Congress and General Assembly of the International Union of Crystallography  
Montreal, Canada, August 2014.

*39th Annual Meeting of the Suncoast Region of the Florida Section of the Mathematics Association of America*  
39th Annual Meeting of the Suncoast Region of the Florida Section of the Mathematics Association of America  
University of South Florida - Sarasota / Manatee, Sarasota, Florida, December 2014.

*Joint Annual Meeting of the Mathematical Association of America (Florida Section) and the Florida Two-Year College Mathematical Association*  
Joint Annual Meeting of the Mathematical Association of America (Florida Section) and the Florida Two-Year College Mathematical Association  
Eckerd College, St. Petersburg, Florida, January 2015

*Henry C Hartje, Jr. Lecture*  
Henry C Hartje, Jr. Lecture  
Florida Southern College, Lakeland, Florida, April 2015.

*40th Annual Meeting of the Suncoast Region of the Florida Section of the Mathematics Association of America*  
40th Annual Meeting of the Suncoast Region of the Florida Section of the Mathematics Association of America  
Florida Polytechnic University, Florida, December 2015.

*Artifical Intelligence*  
Joint Annual Meeting of the Mathematical Association of America (Florida Section) and the Florida Two-Year College Mathematical Association  
Etif Symmec-



*Starry, Starry Numbers: An Introduction to the History of Mathematics and Cosmology*, by Emily Rolfe Grosholz

pub. Springer, 2016

AA - v. ws (2017), <https://www.maa.org/press/maa-reviews/starry-reckoning-reference-and-analysis-in-mathematics-and-cosmology>

*Internet. Google. Internet. History. Document*

Department Graduate Program Director  
1993-95

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Do to , tu nt

- Ana Staninska, jointly directed with Natasha Jonoska, 2007

A or t or, A o

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- Deborah Nelson, 2000

B n ot

- Joy D'Andrea, 2011

Fun n r on t Co p o o

- Lindsay Fields, 2018

D op n o to r t r n o Co pu B or n In  
t CD

- Daviel Leyva, 2019

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**Minisymposium on Crystal Design using Discrete Structures in Geometry  
Philadelphia, PA; May, 2010**

**Special session co-organizer**

**1079th Meeting of the American Mathematical Society  
Special Session on Modeling Crystalline and Quasi-Crystalline Materials  
Tampa, FL; March, 2012**

**Minisymposium co-organizer**

**SIAM Mathematical Aspects of Materials Science Meeting  
Minisymposia on Mathematical Crystallography I, II, and III  
Philadelphia, PA; May, 2013**

**Special Issue Co-Editor**

**Acta Crystallographica A  
Virtual Issue on Mathematical Crystallography  
Articles in Volume 70, Numbers 2, 3, 4**

**Minisymposium co-organizer**

**SIAM Mathematical Aspects of Materials Science Meeting  
Minisymposia on Mathematical Crystallography I, II, III, and IV  
Philadelphia, PA; May, 2016**

**Special session co-organizer**

**1152nd Meeting of the American Mathematical Society  
Special Session on Crystalline and Highly Symmetric Structures  
Gainesville, FL; November, 2019**

**University of South Florida; service through the years:**

- Regular Committ28784]J T[M]-0.367(28784]J T[M]-0.367()-0.765802(t)--0.765802(t(t)5(i)-07c26



## Various textbook committees

### Academic Community; service through the years:

- Administrator, International Union of Crystallography weblog *Crystalline* at <http://blogs.iucr.net/crystalmath/>, 2012 - present
- Consultant, International Union of Crystallography Commission on Crystallographic Education, 2013 - 2014
- Member, International Union of Crystallography Commission on Crystallographic Education, 2014 - present

### United faculty of Florida; service through the years:

- Member, FEA Delegate Assembly
- Member, UFF Senate
- Secretary, UFF/USF Chapter
- Publicity Chair, UFF/USF Chapter  
(Editor, *Notation*, *News* and the *FFB* *A* *F*)