

Julian A.D. Allagan | Curriculum Vitae

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Education

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|--|--------------------------------|
| Auburn University <i>Ph.D., Mathematics</i> | Auburn, AL 2007-2009 |
| Auburn University <i>M.S., Applied Mathematics</i> | Auburn, AL 2005-2007 |
| Troy University <i>B.S., Mathematics (Summa Cum Laude)</i> | Troy, AL 2001-2004 |

Professional Appointments

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| Elizabeth City State University <i>Associate Professor, Department of Math. and Computer Science</i> <i>Full time Graduate Faculty</i> | Elizabeth City, NC 2017-Present 2018-Present |
| State Farm Insurance <i>Data Analyst</i> | Athens-Atlanta, GA Jan 2017-July 2017 |
| University of North Georgia <i>Associate Professor, Department of Mathematics</i> | Oconee, GA 2014-2016 |
| University of North Georgia <i>Assistant Professor, Department of Mathematics</i> | Oconee, GA 2009-2014 |
| Auburn University <i>Graduate Teaching Assistant, Department of Mathematics</i> | Auburn, AL 2005-2009 |

Teaching & Mentoring

All of the following courses had full instructor responsibilities.

Elizabeth City State University.

- + Junior Seminar (Topics from Foundations of Mathematics, Linear Algebra, Calculus I, II, III)
- + Discrete Mathematics (for CS and Math Majors)
- + College Geometry
- + Calculus II
- + Calculus I
- + College Algebra

Auburn University and University of North Georgia.

- + Calculus I, II, III
- + Business Calculus I, II
- + Mathematics for Elementary Teachers
- + Elementary Statistics

- + Linear Algebra
- + Pre-Calculus (w/ trigonometry)
- + Quantitative Skills and Reasoning
- + College Algebra

Mentoring Activities.

Undergraduate Research Project

A Regression Analysis of Hospital Stays

Spring 2018

Developed and supervised an undergraduate research experience culminating in students oral and poster presentations at a research week program at ECSU. The (4) students learned R-programing along with building multiple multivariable linear regression models on a nosocomial infection control data to determine the effect of several variables on the length of stay of patients in 113 hospitals in the US.

Miscellaneous.

Service

Institutional Service at Elizabeth City State University.

- + Undergraduate Mathematics Curriculum Committee member *2017–present*
- + Peer Evaluation Committee member *2017–present*
- + Student Recruitment/Retention/Marketing Committee member *2017–present*
- + State Mathematics Contest Committee member *2017–present*
- + Social Activity Committee member *2017–present*
- + Research and External Funding Relations Committee *2017–present*
- + Search committee for Math Instructor *Spring 2018*
- + Master Advisor *2017–present*
- + Building (Lane Hall) Manager *2018–present*
- + Math club (PiByte) co-advisor *2018–present*
- + Course coordinator
 - College Algebra *2017–2018*

Institutional Service at other Institutions (University of North Georgia).

- Presidential Innovation Grant Award Evaluation Committee (2013, 2014)
- Math Search Committee (2012, 2013, 2016 (Chair))
- Quality Enhancement Program (subcommittee)—for college teachers certifications (2011-2012)
- Math Curriculum Committee (2009-2016)
- Problem writing committee for Regional Math Tournaments (2010, 2011, 2012, 2014)
- Team Sponsor for a Regional Math Tournament (2010-2013)
- STEM Peer Review Committee (2010, 2012)
- Math Club co-Advisor

Service to the Profession.

Referee & Reviewer

Journals include:

2010-present

- JOURNAL OF GRAPH THEORY (Elsevier)
- IJMMS (International Journal of Mathematics and Mathematical Sciences)
- JACODESMATH (Journal of Algebra Combinatorics Discrete Structures and Applications)
- DISCRETE MATHEMATICS (Elsevier)
- TAG (Theory and Applications of Graphs)
- EJGTA (Electronic Journal of Graph Theory and Applications)
- ZBMATH (Zentralblatt MATH)
- MATHEMATICAL REVIEWS (American Mathematical Society)

Others

- External Reviewer for tenure and promotion in the University System of South Carolina (2015)
- Reviewer of several *Teacher's quality Grant* Proposals (Fall 2013)
- Editor/Corrector of "College Algebra," 6th ed. for Stewart/Redlin/Watson (in 2011)
- Reviewer of "For All Practical Purposes," 6th edition, COMAP, for Freeman (in 2004)

Service to the Community.

Miscellaneous.

State Regional Mathematics Contest Level II

March 2018

Responsible for submitting 30 questions with keys, grading and presenting some awards and trophies

Research

Publication in refereed Journal Articles.

17-Allagan, J. A., Mphako-Banda, E., *Electronic Journal of Graph Theory and Applications* 6 (1) (2018), 113–122

16-Allagan, J. A., Bobga, B., *Choice number of multi-bridge graphs*, *Computer Science Journal of Moldova*, vol.25, 3(75), 2017

15-Allagan, J. A., Serkan C., *Bell numbers of complete multipartite graphs*, *Computer Science Journal of Moldova*, vol.24, 2(71), 2016

14-Allagan, J. A., Voloshin, V., *Coloring k -trees with forbidden monochrome or rainbow triangles*, *Australasian Journal of Combinatorics* 65(2) (2016), 137-151

13-Allagan, J. A., Bobga, B., Johnson, P., *On the choosability of some graphs*, *Congressus Numerantium*, 225 (2015), 95-100

12-Allagan, J. A., Mphako-Banda, E., *Tutte Polynomials of Some Multigraphs*, *Quaestiones Mathematicae* (2015) 1-16

11-Allagan, J. A., Johnson, P., *Estimates of the Choice Numbers and the Ohba numbers of some complete multipartite graphs*, *Ars Combinatoria* vol CXIX (2015) pp 167-176

10-Allagan, J. A., Slutzky, D., *Chromatic Polynomials of Mixed Hypercycles*, *Discussiones Mathematicae Graph Theory* 34(3) (2014), 547–558

9-Allagan, J. A., Slutzky, D., Chromatic Polynomials of Mixed Hypergraphs, Australasian Journal of Combinatorics 58(1) (2014), 197-213

8-Allagan, J. A., Chromatic Polynomials of Some (m,l)- Hyperwheels, Computer Science Journal of Moldova vol.22, no.1(64) (2014)

7-Allagan, J. A., Chromatic Polynomials of Some Sunflower Mixed Hypergraphs, Contributions to Discrete mathematics Vol 9(2) (2014), 35-44

6-Allagan, J. A., Tutte Polynomials of multi-bridge graphs, Computer Science Journal of Moldova, vol.21, no.2(62), (2013)

5-Allagan, J. A., Hendon, M., Johnson, P., Slutzky, D., On the Existence of S-graphs: Symmetric and Diametrical Bipartite Graphs, Journal of Combinatorial Mathematics and Combinatorial Computing vol.83 (2012)

4-Allagan, J. A., Hall numbers of some complete k-partite graphs, Utilitas Mathematica vol.89 (2012), 257-267

3-Allagan, J.A., Johnson, P., The Choice Number of $K(4, 2, \dots, 2)$ – A Dispute Resolved, Congressus Numerantium, 191 (2008), pp 65–70

2-Allagan, J.A., The chromatic polynomials of some linear uniform hypergraphs, Congressus Numerantium, vol. CLXXXVII (2007)

1-Allagan, J.A., A generalization of the chromatic polynomial of a cycle, Computer Science Journal of Moldova, vol.13 no.1 (2005)

Manuscripts under Review

1-Allagan, J. A., Bobga, B., Cropper, M., Hilton, Johnson. P., Lehel J., Leonard, D., Refinements on Hall’s Conditions

2-Allagan, J. A., Voloshin, V., F-WORM Colorings of some 2-trees: Partition vectors

Manuscripts in Preparation

Industry Experience

○ **Impact of Social Media on S. F. Agents Performance (Spring 2017)**

Analyzed and built an OLS model on a big data to measure the effect of three social media platforms (Facebook, Twitter, LinkedIn) on State Farm Agents performances since 2011. (Skills: SAS and Statistics)

○ **Optimizing a Machine Learning Algorithm (Summer 2017)**

Designed a fitness function for the Genetic Algorithm with the goal of finding the “best possible” set of tuning parameters for a Gradient Boosting Machine, given an arbitrary data with a Bernoulli response (Skills: R, SAS and Statistics)

Grants and Fellowships

Funded Grant Proposals

Affordable Learning Georgia (ALG)

Department of Education

Open Access Course for Calculus 1 that relies on Open source textbooks

2015

Georgia

Proposals under Review.....

Nominations and Awards

- Ann M. Purdy Outstanding Full-time Teaching Award, April 2014
- *Nominee* for *Ann Matthews Purdy Teaching Award*, April 2013
- Virgil C. Collins *Mathematic Award of Excellence*, 2005

Presentations

Invited Talks or conferences (Last five years)

- **Speaker** at *Johnny Houston Mathematical Sciences Lecture Series, ECSU*, Oct. 17, 2017 (Topic: Resolving conflicts with colors)
- **Speaker** at *AMS sectional meeting, Athens GA*, March 2016 (Topic: F-WORM colorings of some 2-trees: partition vectors)
- **Speaker** at *Auburn Conference on Designs, Graphs and Codes*, January 2016 (Topic: On the chromatic spectrum of some 2-trees)
- **Speaker** at *Forty-sixth Southeastern International Conference on Combinatorics, Graph Theory, and Computing*, March 2015 (Topic: Coloring 2-trees with forbidden monochrome or rainbow subgraphs)
- **Speaker** at *Forty-fifth Southeastern International Conference on Combinatorics, Graph Theory, and Computing*, March 2014 (Topic: Tutte polynomials of some multigraphs)
- **Speaker** at *Troy MathFest*, Feb 29th 2014 (Topic: Tutte polynomials of some graphs)
- **Speaker** at *NSF Research Experience for Undergraduates (REU), Auburn University*, June 28, 2013 (Topic: A survey of choice numbers of some complete multipartite graphs)
- **Speaker** at *26th Cumberland Conference on Combinatorics, Graph Theory and Computing*, May 26, 2013 (Topic: Tutte polynomial of some graphs and multigraphs)

Contributed Talks & Posters.....

Professional Development

- Winter Conference and Workshops, Elizabeth City State University, NC (Spring 2018)
- Teachers Teaching with Technology International Conference, Atlanta, GA (Spring 2010)
- Biggio Professional development seminar, Auburn University (Topic: Developing Cases for Active Learning in the Classroom, Fall 2008)

Professional Memberships

- Phi Kappa Phi & Pi Mu Epsilon, 2004
- Who's Who & National Dean's List, 2005
- Alabama Academy of Sciences, since March 2005
- Alabama Association of College Teachers of Mathematics, 2005
- Society of the Industrial and Applied Mathematics (SIAM), Sept 2005
- Mathematical Association of America (MAA), since May 2007

- American Mathematical Society (AMS), since 2007
- Delta Epsilon Iota, since April 2008
- American Statistical Association (ASA), since Aug 2016

Computer skills

Basic: R, SAS, GeoGebra, Mathematica, Matlab, Maple, Web design w/ Dreamweaver

Intermediate: SAS, Desire2Learn, Webassign, MyMathLab

Advanced: L^AT_EX