

Gregory J. Clark

University of Oxford, Saïd Business School

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Academic Employment

University of Oxford

2019 – Present

Research Fellow in Marketing and Reputation

Future of Marketing Initiative & Centre for Corporate Reputation

Industry Employment

Augmented Intelligence Labs

2020 – Present

Co-founder, Director, and Inventor

Develop analysis and decision support systems for marketing leaders.

Education

Ph.D. Mathematics

May 2019

University of South Carolina, Columbia, SC.

Dissertation Title: [On the Characteristic Polynomial of a Hypergraph](#)

Advisor: Professor Joshua N. Cooper.

B.S. Mathematics

May 2014

Westminster College, New Wilmington, PA

Budapest Semesters in Mathematics

Spring 2013

Budapest, Hungary

French Language and Culture Immersion Program

Summer 2012

Paris, France

Research Interests

Mathematics

Spectral Hypergraph Theory

Graph Statistics

Computational Algebra

Pseudorandomness

k -planar Crossing Numbers

Additive Combinatorics

Interdisciplinary

Social Networks

Trend Forecasting

Multi-Touch Attribution

Social Evaluations

Digital Migration

Echo Chambers

Awards and Honors

SSRN Top Ten Downloaded Papers

August-September 2021

Artificial Intelligence - Law, Policy, & Ethics

Cybersecurity, Data Privacy & eDiscovery

[Preparing Future Faculty Certificate With Distinction in Teaching](#)

Spring 2019

Outstanding Graduate Teaching Award

Spring 2018

Graduate Peer Excellence Award

Spring 2015

Research Publications

11. Gregory J. Clark, Felipe Thomaz, and Andrew Stephen. On the Effect of Data Dimensionality on Eigenvector Centrality. <https://arxiv.org/abs/2201.12034>. *Submitted*
10. Gregory J. Clark. Comparing Eigenvector and Degree Dispersion with the Principal Ratio of a Graph. <https://arxiv.org/abs/2202.00325>. *Submitted*
9. Gregory J. Clark and Joshua N. Cooper. Applications of the Harary-Sachs Theorem for Hypergraphs. <https://arxiv.org/abs/2107.10781>. *Submitted*
8. Gregory J. Clark and Joshua N. Cooper. A Harary-Sachs Theorem for Hypergraphs. *Journal of Combinatorial Theory, Series B*, 149:1–15, 2021.
7. Gregory J. Clark and Joshua N. Cooper. Adjacency Spectral Theory for Uniform Hypergraphs, *IMAGE (Bull Lin. Alg. Soc.)*, **62** (2019), pp. 7-19.
6. Gregory J. Clark and Joshua N. Cooper. Stably computing the multiplicity of known roots given leading coefficients. *Numer Linear Algebra Appl.* 2020; 27:e2275.
5. John Asplund, Éva Czabarka, Gregory J. Clark, et al. Using block designs in crossing number bounds. *J Combin Des.* 2019; 27: 586-597.
4. Gregory J. Clark and Joshua N. Cooper. On the Adjacency Spectra of Hypertrees, *Elec. J. Comb.*, **25** (2018), no. 2, pp. 2-48.
3. Gregory J. Clark and Gwen Spencer. New Bounds on the Biplanar Crossing Number of Low-dimensional Hypercubes. *Bulletin of the Institute of Combinatorics and its Applications (BICA)* 83(2018), 52-60.
2. Amanda Bright, Gregory J. Clark, Charles Dunn, et al. Tiling Annular Regions with Skew and T-tetrominoes, *Involve, a Journal of Mathematics* 10-3 (2017), 505–521.
1. Gregory J. Clark. Optimal Numbers and Solutions in the Euclidean Algorithm, The Pentagon, *A Mathematics Magazine for Students*, 73-01 (2013), 23-35.

Externally Commissioned Reports

2. **Mars Campaign to Advance Action on Gender Equality**
Title: Here to be Heard 2021
Summary: Global study to shape a more inclusive society for all women.
Contributed to modeling of data and data analysis
Available at: <https://www.mars.com/heretobeheard>
1. **International Chamber of Commerce Research Foundation**
Title: Ethics for AI in Business 2021
Summary: Managerial framework for ethical adoption of AI in business.
Gathered and processed data, contributed to analysis and interpretation
Available on SSRN: <https://ssrn.com/abstract=3871867>

Selected Work-in-Progress

3. Gregory J. Clark and Felipe Thomaz. Reputation as a Function of Message Speed.
2. Gregory J. Clark, Alexander Wiedemann, Felipe Thomaz, and John Hulland. Designed to Go Dark: An Examination of Incentives for Digital Black Markets to Self-Terminate.
1. Felipe Thomaz, Gregory J. Clark, and Andrew Stephen. A report on the linkage between brand purpose and financial return. *In partnership with Reckitt-Benckiser.*

Grants

SPARC Grant Recipient (\$5,000)

Summer 2017

“A Mathematical Model of Dark Net Markets.” Collaboration with the Darla Moore School of Business. Graduate Research Grant is a merit-based award designed to ignite research and creative excellence across all disciplines.

University of South Carolina

Teaching Experience

Tutorial Leader

Saïd Business School, University of Oxford.

- Undergraduate Marketing Core

Hilary 2022

Teaching Assistant

Saïd Business School, University of Oxford.

- MBA Marketing Core
Segmentation, targeting, positioning, and customer value

Michaelmas 2021, 2019

Invited Lecturer

Saïd Business School, University of Oxford.

- Oxford Executive Diploma in Artificial Intelligence for Business
Descriptive, predictive, and prescriptive analytics

Hilary, Michaelmas 2021

Instructor of Record

Department of Mathematics, University of South Carolina.

July 2015 – Spring 2019

- Math 115: Precalculus
- Math 122: Business Calculus
- Math 170: Finite Mathematics

Fall 2015

Fall 2018, Spring 2018, Fall 2017

Fall 2015, Spring 2016, Summer 2015

Graduate Student Mentor

Fall 2016 – Spring 2017

NSF EAGER Grant for Innovative Research award ID #1725295

Department of Mathematics, University of South Carolina.

Graduate Teaching Assistant

Department of Mathematics, University of South Carolina.

Fall 2014 – Spring 2015

- Math 141: Calculus 1

Fall 2014, Spring 2015

Undergraduate Research Advisement

Upon completion, each advisee composed a poster and presented their work at local conferences

A Summary of Splitting Numbers for Integer Tiles

Summer 2016

J. Folks, S. Lee, S. Miyasaki, C. Simmons, C. Stewart
Support for Minority Advancement in Research Training
University of South Carolina Program for Research Interns
University of South Carolina

Generalized Dinitz Conjecture

Fall 2015-Summer 2016

E. Miller
Magellan Scholars Program
University of South Carolina

Workshops Attended

(Travel support denoted by asterisk.)

3. **Teradata Vantage Workshop for Data Scientists** *Fall 2019*
Learned how to use Vantage platform for data science
London, UK
2. **NSF-CBMS Workshop on Additive Combinatorics*** *Summer 2018*
University of South Carolina, Columbia, SC
1. **Mathematical Research Communities*** *Summer 2017*
Beyond Planarity: Crossing Numbers of Graphs
Snowbird Resort, Snowbird, UT

Invited Talks

(Travel support denoted by asterisk.)

7. **PNC Bank Innovations and Technology Division** *Fall 2021*
Current Research in Modeling Social Ecosystems
Pittsburgh, PA
6. **Reputation Symposium*** *Fall 2018*
Distinguishing Between Reputation and Influence of Users in a Complex System
University of Oxford, UK
5. **Research Highlight*** *Spring 2018*
Designed to Fail: Determining Illicit Market Life Spans with Stochastic Calculus
University of Oxford, UK
4. **Practice for Coordinators of Large Undergraduate Courses on Campus** *Fall 2017*
A Mentorship Model for Graduate Student Instructors in Large Undergraduate Courses
University of South Carolina Center for Teaching Excellence, Columbia, SC
3. **Joint Mathematics Meeting*** *Spring 2017*
Graduate Student Instructor Mentorship Model: A professional development that trains experienced graduate students to pedagogically mentor novice mathematics graduate student instructors
Hyatt Regency Atlanta and Marriott Atlanta Marquis, Atlanta, GA
2. **AMS Sectional Meeting*** *Fall 2016*
The Splitting Number of an Integer Tile
North Carolina State University, Raleigh, NC
1. **Carolina Math Seminar** *Fall 2016*
The Splitting Number of an Integer Tile
Columbia College, Columbia, SC

Selected Conferences and Seminars Attended

(Travel support denoted by asterisk.)

UofSC Discrete Mathematics Seminar <i>The Effect of Data Dimensionality on Eigenvector Centrality</i> University of South Carolina, Columbia, SC	<i>Spring 2022</i>
College of Arts and Science Seminar Series <i>Spectral Hypergraph Theory in Practice</i> Westminster College, New Wilmington, PA	<i>Spring 2022</i>
American Marketing Association Winter Academic Conference* Las Vegas, NV	<i>Spring 2022</i>
Future of Marketing Initiative Partners' Meeting <i>Deep Dive into Multidimensional Trend Forecasting</i> University of Oxford, UK	<i>Hilary, 2021</i>
American Marketing Association Winter Academic Conference <i>Marketing Vice: The Influences and Impacts of Vice Platforms, Products, and Services</i>	<i>Spring 2021</i>
Oxford Strategy, Innovation and Marketing Seminar <i>A Measure for Echo Chambers and its Implications for SIM</i> University of Oxford, UK	<i>Hilary 2021</i>
Future of Marketing Initiative Partners' Meeting <i>Attribution in Higher Dimensions</i> University of Oxford, UK	<i>Michaelmas 2019</i>
The Future of Digital Disruption University of Oxford, UK	<i>Summer 2019</i>
Reputation Symposium University of Oxford, UK	<i>Annual, Fall 2019 – Present</i>
Reputation: Ethics, Trust, and Relationships Seminar Series University of Oxford, UK	<i>Fall 2020</i>

Service Activities

St Antony's Senior Common Room	<i>Michaelmas 2021 – Present</i>
Oxford Saïd Business School SIM Meetings	<i>Hilary 2021</i>
Data Science and AI Capabilities Study Participant	<i>Michaelmas 2020</i>
Azure in Research Focus Group	<i>Hilary 2021</i>
USC Combinatorics Seminar Organizer	<i>Fall 2016 – Spring 2017</i>
Peer Reviewer for Involve, a Journal in Mathematics	<i>Fall 2017 – Spring 2018</i>
Community Organization Diversity and Inclusion Chair	<i>Spring 2020 – Present</i>
USC Center for Teaching Excellence Symposium Moderator	<i>Spring 2016, 2017</i>
Discover USC Poster Session Judge	<i>Spring 2016, 2017</i>
High School Mathematics Competition Volunteer	<i>Fall 2017</i>
Completed Safe Space Training	<i>Spring 2015</i>