CHRISTOPHER JANKOWSKI
SENIOR ACADEMIC PROFESSIONAL
SCHOOL OF MATHEMATICS
GEORGIA INSTITUTE OF TECHNOLOGY
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CONTENTS

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I. EARNED DEGREES

2009 Ph.D. in Mathematics, **University of Pennsylvania**.
Dissertation: *On type II_0 E_0-semigroups induced by q-pure maps on $M_n(\mathbb{C})$.*
Thesis Advisor: Robert T. Powers.

2004 B.S. in Mathematics, **University of Notre Dame**, summa cum laude.

II. EMPLOYMENT HISTORY

2016–present **Academic Professional**, Georgia Institute of Technology.

2012–2016 **Clinical Assistant Professor**, New York University.

2011–2012 **Lecturer**, University of Pennsylania.

2009–2011 **Postdoctoral Fellow**, Ben-Gurion University of the Negev, Israel.
Supervisor: Daniel Markiewicz.

III. HONORS AND AWARDS

2020 **Eric R. Immel Memorial Award for Excellence in Teaching**, Georgia Institute of Technology.

2016-present **Recipient of ten Thank a Teacher certificates**, Georgia Institute of Technology.

2007 **Moez Alimohamed Graduate Student Teaching Award**, Department of Mathematics, University of Pennsylvania. Awarded to one graduate student in the math department each year.

IV. SUMMARY OF HIGHER EDUCATION ADMINISTRATIVE AND LEADERSHIP EXPERIENCE

Georgia Institute of Technology, 2016-2020

2017–present **Director of Graduate Advising and Assessment**, School of Math.
The position encompasses a broad range of administrative duties for the graduate program. These include serving on the Graduate Committee, writing annual student evaluations and handling comprehensive exams, ensuring Responsible Conduct in Research compliance from first-year doctoral students, organizing meetings for Admitted Students Day, filing annual OATS reports for the MS Math and PhD Math programs, and handling transfer credit requests for graduate-level mathematics courses.

2017–present **Director of Postdoctoral Teaching Effectiveness**, School of Math.
I mentor postdoctoral faculty in teaching during their first year, and I participate in organizing and running professional development events for the postdoctoral faculty. In addition, I follow their teaching performance throughout their time at Georgia Tech, communicate with their mentors and the Postdoc Committee when appropriate, and assist the Postdoc Committee in writing its annual evaluation letters.

Fall 2017–Spring 2020 and Spring 2021 **Course Coordinator, Math 1553 (Introduction to Linear Algebra)**.
From Fall 2017 through Spring 2020, Math 1553 was the Institute's largest math course

in terms of Fall plus Spring enrollment, with 5,951 students in total. Among the formally coordinated math courses during that period, it was the largest by a substantial margin. The coordinator is responsible for writing the common syllabus, creating and maintaining materials such as worksheets and practice exams, reviewing instructors' exams for fairness, organizing final exam grading, and assisting instructors with final letter grades, among other responsibilities. The instructor count each semester below includes me as an instructor.

(1) Spring 2021: 493 students and 4 instructors.
(2) Spring 2020: 529 students and 4 instructors.
(3) Fall 2019: 1297 students and 8 instructors.
(4) Spring 2019: 592 students and 5 instructors.
(5) Fall 2018: 1477 students and 8 instructors.
(6) Spring 2018: 714 students and 5 instructors.
(7) Fall 2017: 1342 students and 10 instructors.

Fall 2020 **Course Coordinator, Math 1551 (Differential Calculus).**
The course had 5 instructors and 733 students total. As coordinator, I posted all common materials in our shared Canvas site and oversaw the collaborative writing of quizzes, practice exams, and exams. I also mostly handled the homework assignments and the logistics for makeup quizzes and exams with the help of the course's Head TA.

New York University, 2012-2016

2013–2016 **Course Coordinator**, various courses.
Taught the class, created the parent website for the course, set up the WebAssign sites for other instructors in many cases, met with the other instructors of the course to clarify the syllabus and expectations, and stayed in contact with the other instructors throughout the semester to keep the pace and material consistent. When coordinating Algebra and Calculus, Math for Economics I, and Math for Economics II, I also coordinated the writing of the final exam for all sections of the course.

(1) Math for Economics II, Spring 2014.
(2) Math for Economics I: coordinator or co-coordinator in Fall 2013, 2014, and 2015.
(3) Algebra and Calculus, Fall 2013.
(4) Linear Algebra: Spring 2013.

2014–2015 **Credit Transfer Evaluator.**
For those transfer students wishing to receive credit at NYU for their previous math courses, I used the guidelines of the department to evaluate courses for transfer credit.

V. EDUCATION AND MENTORSHIP

A. COURSES TAUGHT

Spring 2021	**Math 1553:** A1-A3 Introduction to Linear Algebra	102 students
Spring 2021	**Math 1553:** D1-D3 Introduction to Linear Algebra	103 students
Fall 2020	**Math 6001:** Introduction to Graduate Mathematics	22 students
Fall 2020	**Math 1551:** Differential Calculus	192 students

Spring 2020	**Math 1553:** A1-A3 Introduction to Linear Algebra	86 students
Spring 2020	**Math 1553:** C1-C4 Introduction to Linear Algebra	116 students
Fall 2019	**Math 6001:** Introduction to Graduate Mathematics	17 students
Fall 2019	**Math 1553:** Introduction to Linear Algebra	161 students
Spring 2019	**Math 2550:** Introduction to Multivariable Calculus	159 students
Spring 2019	**Math 1553:** Introduction to Linear Algebra	104 students
Fall 2018	**Math 6001:** Introduction to Graduate Mathematics	20 students
Fall 2018	**Math 1553:** Introduction to Linear Algebra	179 students
Spring 2018	**Math 1553:** A1-A3 Introduction to Linear Algebra	88 students
Spring 2018	**Math 1553:** C1-C4 Introduction to Linear Algebra	115 students
Fall 2017	**Math 6001:** Introduction to Graduate Mathematics	27 students
Fall 2017	**Math 1553:** Introduction to Linear Algebra	110 students
Spring 2017	**Math 2550:** Introduction to Multivariable Calculus	141 students
Fall 2016	**Math 2603:** Introduction to Discrete Mathematics	98 students
Fall 2016	**Math 1113:** Precalculus	49 students

B.   ACADEMIC AND CAREER ADVISING AND GUIDANCE RESPONSIBILITIES

2017–present   **Postdoctoral Faculty Teaching Mentor**, School of Math.
Teaching mentor for all postdoctoral faculty in the School of Math during their first year. I perform a teaching observation for each postdoc, meet with them to discuss the observation, and do multiple observations if appropriate. After their first year, I serve as a general resource to the postdocs for teaching-related matters.

2017–present   **Lead Organizer, School of Math Informal Postdoc Social Events**.
Generally held three or four times each semester. I work with another faculty member or the Postdoc Committee to plan a theme for each social event relevant for the time of the semester. I host and handle all logistics for these events.

2017–present   **Co-Organizer, New Faculty Orientation in the School of Math**.
Responsible for co-organizing the schedule, communicating with incoming faculty, arranging and running panel sessions, giving multiple presentations during the orientation, and updating and creating materials.

2017–present   **Faculty Mentor for Select Graduate Student Instructors**.
I share past materials and syllabi. Depending on the course, I may create homework sets for instructors. I serve as a source of advice, and for some instructors I do a classroom observation. In total, I have been a mentor for 12 graduate student instructors across three different math courses: Math 1553, Math 2550, and Math 2603.

2017–present   **Graduate Student Advisor**.
I am the designated course advisor for students in MS Math, MS STAT, and MS CSE in the School of Math. In addition, I am an advisor for PhD students with regard to coursework, the doctoral minor, and graduation requirements.

2017   **Undergraduate Student Advisor**.
With our Director of Undergraduate Advising and Assessment, I participated in

FASET orientations over the summer, then handled on-campus undergraduate advising for a period when the DUAA was teaching abroad during Fall 2017.

New York University, 2012-2016

2012-2016 **Math Major Advisor**.
A portion of the math majors looking for guidance regarding their coursework trajectory could seek my advice.

C. Educational Innovations and Other Contributions

2020 **Co-author, PEGS Proposal for School of Math: Recruitment**.
Co-authors were Mitchell Everett and Xingxing Yu. The proposal was awarded $20,000$ by the Georgia Institute of Technology.

2017 **Contributor to Course Coordination Proposal**, Georgia Institute of Technology.
Along with a group of several faculty members, I contributed to the writing of the course coordination proposal. It passed through a faculty vote, and it has been School of Math policy for some of our core mathematics courses since Fall 2017.

2014–2015 **Calculus I hybrid course**, New York University.
Dr. Selin Kalaycioglu, Dr. Drew Youngren, and I created an interactive Calculus I course with the help of an NYU video team. Outside of lecture, students watch videos and participate in assessments we created. They access course readings online and view other material at their class's website. The class launched in Fall 2015.

2012 **Math for Economics III Curriculum**, New York University.
Collaborated with Dr. Selin Kalaycioglu to write the syllabus for the course.

VI. Research, Scholarship, and Creative Activities

A. Publications

All publications below are in refereed journals. *Indicates publications at Georgia Tech.

(1) **Classification of q-pure q-weight maps over finite dimensional Hilbert spaces*, with Daniel Markiewicz and Robert T. Powers, J. Funct. Anal. 277 (2019), no. 6, 1763-1867.

(2) *Aligned CP-semigroups*, with Daniel Markiewicz and Robert T. Powers, Int. Math. Res. Not. IMRN 2015, no. 15, 6639-6647.

(3) *Unital q-positive maps on $M_2(\mathbb{C})$ and cocycle conjugacy of E_0-semigroups*, Houston J. Math. 39 (2013), 1233-1266.

(4) *A family of non-cocycle conjugate E_0-semigroups obtained from boundary weight doubles*, J. Operator Theory 69 (2013), no. 1, 233-256.

(5) *E_0-semigroups and q-purity: boundary weight maps of range rank one and two*, with Daniel Markiewicz and Robert T. Powers, J. Funct. Anal. 262 (2012), no. 7, 3006-3061.

(6) *Gauge groups of E_0-semigroups obtained from Powers weights*, with Daniel Markiewicz, Int. Math. Res. Not. IMRN 2012, no. 14, 3278-3310.

(7) *On type II$_0$ E$_0$-semigroups induced by boundary weight doubles*, J. Funct. Anal. 258 (2010), no. 10, 3413-3451.

(8) *On K$_*$-ultrahomogeneous graphs*, with Daniel Isaksen and Stephanie Proctor, Ars Combin. 82 (2007), 83-96.

B. OTHER PUBLICATIONS AND CREATIVE PRODUCTS

Problem sets for *Interactive Linear Algebra*, by Margalit and Rabinoff. Outside my job of course coordination, I have compiled a collection of homework problems. This is still in progress, and the goal is to incorporate these into the textbook in the future.

C. PRESENTATIONS

C1. **Invited Talks**

Spring 2017 **Prime E$_0$-semigroups**. Mathematics Colloquium, Georgia Southern University.

Spring 2015 **The Evolving Classroom**. Special Colloquium, University of California-Irvine.

Spring 2015 **Mathematics in Cryptography**. Undergraduate Colloquium, University of California-Irvine.

Spring 2015 **Addressing Students' Needs in a Changing Classroom**. Rice University.

Spring 2012 **To infinity and beyond: what they didn't teach us in linear algebra**. Colloquium, Manhattan College.

Spring 2011 **The realm of positivity in linear algebra**. Bryn Mawr College, Spring 2011.

Spring 2011 **Completely positive maps and noncommutative dynamics**. Analysis Seminar, Drexel University.

Fall 2010 **E$_0$-semigroups and boundary weight doubles**. Math Department Colloquium, United States Naval Academy.

C2. **Selected other talks**

Summer 2014 **Prime E$_0$-semigroups**. Great Plains Operator Theory Symposium, Kansas State University.

Summer 2013 **Boundary weight maps and E$_0$-semigroups**. Great Plains Operator Theory Symposium, University of California-Berkeley.

Spring 2011 **Gauge groups of E$_0$-semigroups**. Function Theory and Operator Theory: Infinite Dimensional and Free Settings, Ben-Gurion University of the Negev.

Fall 2009 **Local cocycles of certain E$_0$-semigroups of type II$_0$ after Alevras, Powers, and Price (parts 1 and 2)**. Operator Algebras Seminar, Ben-Gurion University of the Negev.

Summer 2009 **E$_0$-semigroups induced by q-pure maps on $M_n(\mathbb{C})$**. Great Plains Operator Theory Symposium, University of Cincinnati.

VII. SERVICE

A. PUBLIC AND COMMUNITY SERVICE

2013-2014   **Research Mentor**, NYU GSTEM Program.
I volunteered to mentor two high school students in a program for young women in math, covering some basics of number theory and guiding each student through a summer project. The students and their research projects are listed below.

(1) Summer 2014: Alisa Chang, *RSA cryptography from scratch and improving it through the use of cyphers*.

(2) Summer 2013: Eshka Ne-Kumar, *The nature of odd primes and perfect squares in the triangular numbers*.

B. INSTITUTE CONTRIBUTIONS

2020   **Lead organizer of Mandatory Title IX Session** for doctoral students in the School of Math.
The session was conducted by Marcia Bull Stadeker, Georgia Tech's Title IX Coordinator in the Office of Ethics, Compliance, and Legal Affairs.

2020–present   **Institute Assessment Council member**.

2017–2019   **Lead Organizer (2017 and 2018) and Co-Lead Organizer (2019)** of the Georgia Tech High School Math Competition (2017 and 2018), School of Math.
The competition is the Georgia Tech School of Math's largest community outreach event. It hosts 200-300 students from the Atlanta for a full-day event each Spring. The top finishers receive fellowships if admitted to Georgia Tech.

2017–present   **Graduate Committee member**, School of Math.
Secretary of the committee during the 2018–2019 academic year.

2017–present   **Teaching Panels for Tenure-Track Candidates**, School of Math.
Served on approximately 20 interview panels for asking and addressing questions related to teaching and the graduate program.

2017–present   **Contributor**, School of Math Course Materials Respository.
The repository hosts many resources for faculty teaching six of our core courses. I have posted materials there for Math 1553 and Math 2551.

2020   **Judge**, The Career, Research, and Innovation Development Conference (CRIDC) Poster Session, Georgia Institute of Technology.

2018   **School of Math Liaison**, Insight Data Science Workshop and Tech Session, School of Math.

2016   **Judge**, Research Bound Poster Session, College of Sciences.

C. OTHER PROFESSIONAL ACTIVITIES

2020   **T-Book Interview** for the 2020 Georgia Tech T-Book. T-Books are annually distributed to incoming undergraduate students.

2015   **Committee Member for Ph.D. Candidacy Exam**, Leonard Stevenson, Drexel University.

VIII.   Professional Growth and Development

2019 Safe Space Training, Georgia Institute of Technology.

2019 Implicit Bias Training, Georgia Institute of Technology.