

John Paul Ryan

Curriculum Vitae

Education

- 2016–2018 **MS in Robotics**, *Robotics Institute, Carnegie Mellon University, Pittsburgh.*
Beginning in Fall 2016
- 2012–2016 **BA (Honors) in Mathematics and Computer Science**, *New York University, New York, 3.86/4.00.*
Magna Cum Laude, Phi Beta Kappa,
Math GPA: 3.92, Computer Science GPA: 3.94, Physics (Minor) GPA: 3.92

Academic Achievements

- Computer Science Prize for Academic Excellence - NYU Department of Computer Science
- Perley Lenwood Thorne Medal in Mathematics - NYU Department of Mathematics
- Presidential Honors Scholar - NYU College of Arts and Science
- Dean's Honors List (all four years) - NYU College of Arts and Science

Research Experience

- Summer 2016 **Courant Institute**, *Advisor: Miranda Holmes-Cerfon, New York, NY.*
In progress - we are using computer simulations to investigate the dynamics of rolling spheres in a cylindrical dish driven by a circular, periodic motion.
- August 2015 **Courant Institute**, *Advisor: Chee Yap, New York, NY.*
Worked on a soft subdivision search algorithm for robot motion planning for disc, triangle, and link robots. Wrote animation in C++ using Qt Creator and OpenGL. See video demonstration on website, under Research.
- June - July 2015 **Auburn REU in Algebra and Discrete Mathematics**, *Advisor: Peter Johnson, Auburn, AL.*
Spent two months intensively studying algebra and discrete mathematics, especially open and accessible problems. Achieved results in several open problem areas related to abundance indices and integral distance graphs. See publications below.

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🌐 www.johnpaulryan.com • 🗣 [JohnPaulRyan24](https://github.com/JohnPaulRyan24)

Teaching Experience

Fall 2015 - Spring 2016	Department Tutor for CS102 - Data Structures	<i>NYU Department of Computer Science</i>
Fall 2015	Grader for CS102 - Data Structures	<i>NYU Department of Computer Science</i>
Spring 2015 & 2016	Volunteer cSplash Lecturer	<i>Courant Institute</i>
Spring 2015	Department Tutor for Calculus I-III and Linear Algebra	<i>NYU Department of Mathematics</i>
Fall 2014	Grader for Calculus III	<i>NYU Department of Mathematics</i>
Fall 2013 - Fall 2014	SAT Prep Teacher	<i>Kaplan Test Prep</i>

Relevant Skills

Computer Languages:	C/C++, Java, Python, MATLAB, JavaScript, PHP, HTML/CSS
Spoken Languages:	English, Spanish, some Italian

Publications

- Ching-Hsiang Hsu, **John Paul Ryan**, and Chee Yap, "Path Planning for Simple Robots using Soft Subdivision Search," *Multimedia Exposition Proc. 32nd International Symposium on Computational Geometry*, Boston, MA. June 14-18, 2016.
- **John Paul Ryan**, "Coloring Blocks of Consecutive Integers to Forbid Three Distances," *Geombinatorics*, 25 (April, 2016), 168-178.
- Edna Jones and **John Paul Ryan**, "Theoretical Friends of Finite Proximity," *International Journal of Mathematics and Computer Science*, 10 (2015), 205-216.
- Peter Johnson, **John Paul Ryan**, "Coloring the Plane to Guarantee Rainbow Translates" *Geombinatorics*, (submitted).

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