



Alfonso Gracia-Saz was a very well-loved and innovative professor at University of Toronto who was due to receive the 2021 Excellence in Teaching Award from the Canadian Mathematical Society. He passed away on May 6, 2021 in Toronto.

Alfonso was born in Zaragoza, Spain, in 1976. His love of mathematics and physics was clear from a young age. He competed in the 1993 and 1994 International Physics Olympiads, earning an honourable mention in the second year. In 1994, he also won the Spanish Physics Olympiad. He went to the University of Zaragoza for his undergraduate education, earning a BSc in Mathematics in 2000 and a BSc in Physics in 2001. He won the Primer Premio Extraordinario Fin de Carrera, an award granted yearly by the Ministry of Education to the top student in each major. Remarkably, he won it in two subjects: mathematics in 2000 and for physics the next year.

In 2001, Alfonso moved to the United States for a PhD in Mathematics at UC Berkeley, where his advisor was Alan Weinstein. While in Berkeley, he made many friends with his unique blend of whimsy and seriousness. Alfonso had a habit of touching people's noses as a greeting (instead of handshakes). A friend's officemate took offence to this practice, leading to an evening visit from the Berkeley Police. Alfonso was extremely generous and loyal to his friends. Once, he lent a fellow student thousands of dollars to help support him during his final PhD year. While in Berkeley, he also volunteered as an instructor for the Prison University Project at San Quentin State Prison (now Mount Tamalpais College).

He completed the PhD in 2006; his thesis was titled «the symbol of a function of an operator» and concerned computations in deformation quantization. He moved on to postdoc at Keio University in Japan (2006-2007) and then at the University of Toronto (2007-2010). During these postdocs, his research focus changed and he began studying Lie algebroids and multiple vector bundles, working with collaborators Kirill Mackenzie and Rajan Mehta.

After these postdoc positions, Alfonso moved to a career in teaching, first at the University of Victoria (2010-2013) and then at the University of Toronto in 2013, as a teaching-stream professor. Alfonso compared this move to teaching to coming out as gay: in both cases he was defying expectations, and in both cases making this public brought an enormous sense of relief.

He took on some of the most challenging teaching assignments at the University of Toronto. For many years, he coordinated MAT137 (Calculus with proofs), a course with over 1000 students, 7 instructors, and dozens of TAs. Alfonso brought an inverted classroom and active learning approach to this course. He created a video library with over 200 video lectures for students to watch before class, so that class time could be devoted to working on carefully prepared activities. These videos have been extremely popular with Toronto students and beyond, with over 3 million views. This year, working with Beatriz Navarro Lameda (a former PhD student and MAT137 instructor), he prepared extensive notes on these activities so that they could be easily used by other instructors.

As course coordinator and as a service to the University, Alfonso played a central role in training incoming instructors and TAs. He also always had a regular group of undergraduate and graduate students who worked as TAs with him and whom he mentored through formal class observations or chats in the hallway. Some of these undergraduate students were not intending on majoring in math when they took MAT137, but under Alfonso's influence, they fell in love with math and with teaching.

Alfonso's love for teaching mathematics led him to become a long time staff member at Mathcamp (2003-2017), an intensive summer camp for mathematically talented high school students. At Mathcamp, Alfonso was a teacher, mentor, and friend to countless campers and staff. His contributions to Mathcamp were incalculable, from leading a staff workshop on inquiry-based learning, to improving the system for running relays, to orchestrating the best April Fool's prank in Mathcamp's history. His nose touching greeting even became a regular part of Mathcamp for more than a decade.

Throughout all these activities, Alfonso was passionate, principled, and caring. Alfonso's passion was evident in his legendary classroom teaching, where he inspired students. In committee meetings, Alfonso had a strong sense of justice and always pushed for what he believed was right. When a colleague was being mistreated, or his students weren't being given the resources they needed to learn, Alfonso always stood up for them. He pushed the university very hard to develop a more robust academic integrity system. When it came to his students, he was a self-described "Momma Bear". If a student was caught cheating, he would meet with them and set them back on the correct path. Alfonso always gave his best and brought out the best in his students and colleagues.

Alfonso died in hospital, a week after receiving a COVID-19 diagnosis. He leaves behind his beloved partner of six years, Nick Remedios. Alfonso and Nick enjoyed contra dancing, complex board games, and cooking together. In Spain, Alfonso is mourned by his mother, Carmen; his father, Antonio; his sister, Rebeca, and her children, Mario and Carla. All around the world, he is mourned by his many friends and the many people whom he taught and inspired.

A scholarship fund has been set up in Alfonso's memory. The scholarship will be used to fund undergraduate mathematics students at University of Toronto. To contribute, please visit the [website](#).

