

Bahçeşehir University, Istanbul, Türkiye
Analysis & PDE Center, Ghent University, Ghent, Belgium
Institute Mathematics & Math. Modeling, Almaty, Kazakhstan

“Analysis and Applied Mathematics”

Weekly Online Seminar

Seminar leaders:

Prof. Allaberen Ashyralyev (BAU, Istanbul),
Prof. Michael Ruzhansky (UGent, Ghent),
Prof. Makhmud Sadybekov (IMMM, Almaty)

Date: **Tuesday, January 16, 2024**

Time: 12.00-13.00 (Istanbul) = 10.00-11.00 (Ghent) = 15.00-16.00 (Almaty)

Zoom link: <https://us02web.zoom.us/j/6678270445?pwd=SFNmQUlVt0tRaH-IDaVYrN3I5bzJVQT09>, **Conference ID:** 667 827 0445, **Access code:** 1

Speaker:

Assoc. Prof. Dr. Mohammad Sadek

Sabanci University, Istanbul, Türkiye

Title: **Arithmetic Statistics in Number Theory**

Abstract: In number theory, there are many important questions that have been withstanding our attempts to answer. While a complete answer to these questions may seem out of reach in the near future, certain conjectural answers are widely believed due to significant theoretical and numerical evidence. Arithmetic statistics provides a plausible approach to test these conjectures. In this talk, we plan to overview some of the results offered by arithmetic statistics in Diophantine Geometry.

Biography:

Mohammad Sadek is an Associate Professor in the Mathematics Program at Sabanci University since 2018. After obtaining his B.Sc. from Cairo University in 2005, he joined the University of Cambridge, U.K., for his graduate studies. He obtained the Certificate of Advanced Studies in Mathematics in 2006, and earned his Ph.D. in 2010. During his Ph.D., he answered questions about polynomials of the third degree in three variables, namely, Elliptic Curves. In August 2010, he joined the American University in Cairo as an Assistant Professor. In 2016, he was tenured and promoted to an Associate Professor. His research interests lie within Arithmetic Geometry. This is the field where Number Theory meets Algebraic Geometry. Currently, he is exploring how arithmetic geometry can be used to study the dynamics of iterations of polynomials of low degree.