

Bahçeşehir University, Istanbul, Turkey
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, February 22, 2022**

Time: 13.00-14.00 (Istanbul) = 11.00-12.00 (Ghent) = 16.00-17.00 (Almaty)

Zoom link: <https://us02web.zoom.us/j/6678270445?pwd=SFNmQUlVTD0tRaH-IDaVYrN3I5bzJVQT09>, **Conference ID:** 667 827 0445, **Access code:** 1

Speaker:

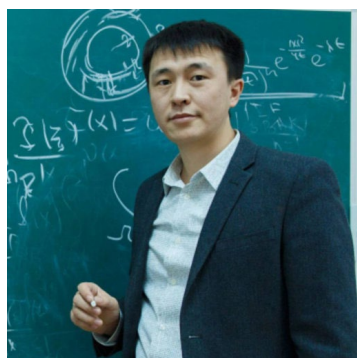
Assoc. Prof. Dr. Durvudkhan Suragan

Nazarbayev University, Nur-Sultan, Kazakhstan

Title: **Remainder term analysis for the higher-order Poincare inequality for vector fields**

Abstract: In this talk, we discuss remainder term representation formulae for the higher-order Poincare inequality for vector fields which imply short and direct proofs of the sharp (classical) Poincare inequalities. The obtained results directly imply sharp Poincare type inequalities for some vector fields satisfying Hormander’s condition, for example. As an application, we obtain a blow-up result for solutions to the Dirichlet initial-boundary value problem for the Baouendi-Grushin heat operator.

Biography:



Durvudkhan Suragan is an associate professor at Nazarbayev University and a leading researcher at the Institute of Mathematics and Mathematical Modeling, Almaty. Dr. Durvudkhan Suragan received his Ph.D. in mathematics from Al-Farabi Kazakh National University in 2013. He has a master degree (with distinction) in theoretical physics from King’s College London. His current research interests include analysis on Lie groups, applied mathematics (mathematical physics), PDE, potential theory and spectral geometry. He won the Ferran Sunyer i Balaguer Prize in 2018. He has previously worked in spectral geometry and in the theory of subelliptic inequalities at Imperial College London as a research associate. In 2020, Dr. Suragan was awarded the Al-Farabi State Prize in Kazakhstan. The Al-Farabi State Prize is the highest recognition of the merits of scientists and technicians to the society and the state.