

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, June 7, 2022**

Time: 14.00-15.00 (Istanbul) = 13.00-14.00 (Ghent) = 17.00-18.00 (Almaty)

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

Speaker:

Prof. Dr. Yusif Gasimov

Azerbaijan University, Baku, Azerbaijan

Title: **On one inverse spectral domain identification problem**

Abstract: In this talk an inverse spectral problem is considered with respect to the domain for the Schrödinger equation. Using the introduced space of the pairs of the convex domains a new definition of the domain variation is given. The first variation of the eigenvalues with respect to domain is calculated, a new formula for the eigenvalues of the Schrödinger operator is proved. A definition of s -function is introduced and a scheme is proposed to reconstruct the domain by the given set of the s -functions. Some particular cases are also considered.

Biography:

Yusif Gasimov – Doctor of Sciences in Mathematics, was born in 1968 in Azerbaijan. He graduated from Baku State University in 1992. In 1996 he got his Ph.D. degree in Mathematical Analysis from the Institute of Mathematics and Mechanics, Azerbaijan National Academy of Sciences. In 2010 he got his Doctor of Sciences degree from Institute of Control Systems, Azerbaijan National Academy of Sciences. In 2006 and 2009 he was a visiting professor at the University de Nantes (France). Currently he is a Vice-Rector at the Azerbaijan University.

Prof. Y. Gasimov works with PDEs, spectral theory, optimization, shape optimization, numerical methods, etc.

Prof. Y. Gasimov is Editor-in-Chief of journal *Advanced Mathematical Models & Applications*, Guest Editor of the Special Issues "Entropy and Its Applications across Disciplines II" and "Entropy and Its Applications across Disciplines III" of the journal *Entropy*, Editorial Member of many international journals, co-organizer of a number of International conferences.