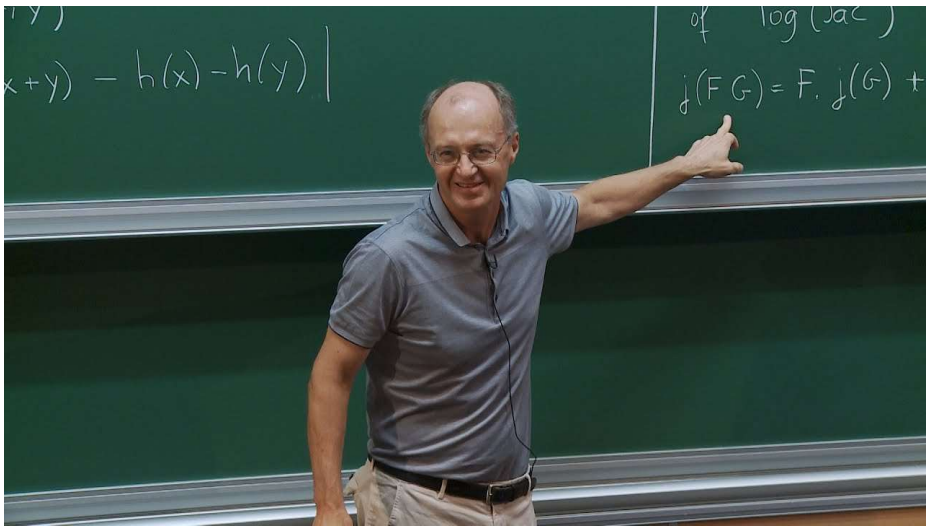
Department of Mathematics and Computer Science
@ St.Petersburg State University

COLLOQUIUM

Thursday, October 14, 17:15

Zoom 958-115-833, room 105 (14th line V.O., 29)



Anton Alekseev (University of Geneva)

Secrets of the Gelfand-Zeitlin integrable system

The Gelfand-Zeitlin integrable system for the unitary group U(n) was discovered by Guillemin and Sternberg in the beginning of 1980s. It gives action-angle variables for linear Poisson brackets on the space of Hermitian matrices. The angle variables take values in an interesting polytope (the Gelfand-Zeitlin polytope) defined by interlacing inequalities.

During the last 40 years, there were many attempts to construct Gelfand-Zeitlin type integrable systems for other compact Lie groups. Recently, this goal has been achieved. In the talk, we'll briefly explain the construction of large Darboux charts defined using Poisson-Lie groups (following Alekseev-Hoffman-Lane-Li) and the construction of Gelfand-Zeitlin type integrable systems defined using toric degenerations (following Hoffman-Lane).

Everyone is welcome!