

THE CATHOLIC UNIVERSITY OF AMERICA
Washington, DC 20064

SEMINAR IN FUNCTIONAL ANALYSIS
AND RELATED AREAS

Wednesday, September 21, 2022

4:45 p.m. - 6:30 p.m. (including a coffee break)

SPEAKER: Professor Alexander Levin
The Catholic University of America

TITLE: An algebraic approach to the study of ordinary differential equations and integration in terms of elementary functions

ABSTRACT: This expository talk is devoted to an algebraic approach to the study of ordinary differential equations and integration in terms of elementary functions. We consider the concepts of a differential Galois group and a Picard-Vessiot differential field extension, prove Liouville's theorem on the existence of "elementary" integrals of elementary functions and consider some applications of this theorem.

PLACE: Aquinas Hall, room 108. The talk will be on Zoom as well (from 4:45 p.m. to 6:30 p.m. ET). The corresponding link will be sent to everyone in advance.

ORGANIZERS: V. Bogdan (The Catholic University of America), P. Kainen (Georgetown University), R. Kalpathy (The Catholic University of America), and A. Levin (The Catholic University of America).

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<https://mathematics.catholic.edu/faculty-and-research/mathematics-seminar/index.html>