

# INTERNATIONAL BIWEEKLY ONLINE SEMINAR ON ANALYSIS, DIFFERENTIAL EQUATIONS AND MATHEMATICAL PHYSICS

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Coordinators: Prof. Alexey Karapetyants, Prof. Vladislav Kravchenko

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22 February 2024, 6 pm (UTC+3)

## How to calculate the roots of an arbitrary polynomial:

Hadamard and Vandermonde determinants and Bernoulli – Euler – Lagrange – Aitken type numerical method for roots of polynomials

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We develop Euler - Lagrange method and calculate all the roots of an arbitrary complex polynomial  $P(z)$  on the base of calculation (similar to the Bernoulli - Aitken methods) of the limits of ratios of Hadamard determinants built by means of coefficients of expansions into Taylor and Laurent series of the function  $\frac{P'(z)}{P(z)}$ . (A joint work with Yu.V. Trubnikov and M.M. Chernyavsky.)

\*Seminar website: <https://msrn.sfedu.ru/sl>. The seminar uses Microsoft Teams online platform. Please send questions to [ademp.seminar@gmail.com](mailto:ademp.seminar@gmail.com) (Tatiana Andreeva, scientific secretary).

The seminar is organized by the coordinators Alexey Karapetyants and Vladislav Kravchenko within the activities of the Regional Mathematical Center of the Southern Federal University in collaboration with Institute of Mathematics, Mechanics and Computer Sciences of the Southern Federal University and the OTHA research group in Operator Theory and Harmonic Analysis.



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