Masterclass

ADVANCES IN
SOLVING POLYNOMIAL EQUATIONS

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A huge amount of problems arising from algebra, geometry and number theory are linked to the solution of distinct polynomial systems over prescribed fields. The study of their solutions and the increasing need for root explicit detection for real-world applications have been leading to vibrant research in computational algebra, which has become prominent in both theoretical and applied uses.

This masterclass aims at providing the attendees with the basic notion of this discipline, together with several modern results pointing to open research lines. We aim at covering the advances in both normal form and homotopy continuation methods, which are two of the leading approaches for polynomial root detection. Such different approaches will be explained, compared and tested against explicit examples of practical interest, highlighting their strong points and limitations.

SCHEDULE AND ROOMS

Povo 1 (Polo Ferrari), Trento

A217, 20 April 2023, h.8.30-11.30
A224, 21 April 2023, h.9.30-10.30
A217, 25 May 2023, h.8.30-11.30
A224, 26 May 2023, h.9.30-10.30

Remote participation via ZOOM platform can be available upon request.
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