$$\sum_{\ell=0}^{4} \binom{4}{\ell} \left(\frac{d^\ell \overline{\gamma}_2}{dt^\ell}(t)\delta_4^\ell + \frac{4!}{\ell!} \left(2\overline{A}\frac{d^\ell \overline{\gamma}_4}{dt^\ell}(t) \right) t^\ell + O(t^{\ell+1}) \right) = 0$$
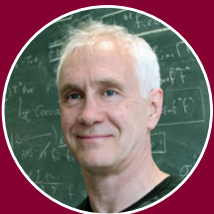
CIMPA SCHOOL 2023
COMPLEX ANALYSIS & GEOMETRY

JASMIN RAISSY

FRANCINE MEYLAN

MICHAEL EASTWOOD

SHIFERAW BERHANU

PURVI GUPTA

SERGUEI IVASHKOVICH

ABSTRACT

Two centuries after its origin, complex analysis remains a vibrant and fruitful field of research. Its applications go well beyond the realm of mathematics and range from physics to engineering. Current research in complex analysis blends techniques from a variety of mathematical areas and thus requires a broad expertise. Following this philosophy, the school will expose students to a wide spectrum of fields interacting with complex analysis. Special emphasis will be put on differential geometry, partial differential equations, dynamical systems and algebraic geometry.

The school is addressed to graduate students in Lebanon and abroad, and its program is spread over two weeks. The first week will serve as a preparation and will focus on introductory topics. The second week will present more advanced and modern developments. In addition to the mini courses, complementary activities will engage the students more directly with open problems, exercises and career opportunities.

JUNE 5 TILL 16, 2023

AUB, NICELY HALL, ROOM 415

SCHOOL COURSES:

- **"On Nondegeneracy Conditions for the Levi Map in Higher Codimension"**, Francine Meylan (Université de Fribourg, Switzerland)

- **"Complexes of Differential Operators"**, Michael Eastwood (University of Adelaide, Australia)

- **"Approximation Theory in Complex Analysis"**, Purvi Gupta (Indian Institute of Science Bangalore, India)

- **"Vanishing Cycles in Holomorphic Foliations by Curves and Foliated Shells"**, Serguei Ivashkovich (Université de Lille, France)

- **"Introduction to Holomorphic Dynamics in Several Complex Variables"**, Jasmin Raissy (Université de Bordeaux, France)

- **"Nonlinear Fourier Transforms and Applications to Complex Analysis"**, Shiferaw Berhanu (University of Maryland, USA)

ORGANIZING COMMITTEE

Rafael Andrist (American University of Beirut, Lebanon) | Florian Bertrand (American University of Beirut, Lebanon) | Léa Blanc-Centi (University of Lille, France) | Giuseppe Della Sala (American University of Beirut, Lebanon) | Francine Meylan (University of Fribourg, Switzerland).

For more Information: AUB CIMPA 2023

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CENTER FOR ADVANCED MATHEMATICAL SCIENCES

AMERICAN UNIVERSITY OF BEIRUT
FACULTY OF ARTS & SCIENCES
Department of Mathematics

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