



# National Centre for Mathematics

[www.ncmath.org](http://www.ncmath.org)

(A joint centre of TIFR and IIT Bombay)

## Advanced Training in Mathematics Schools

[www.atmschools.org](http://www.atmschools.org)

(Supported by National Board for Higher Mathematics)



### ONLINE NCM WORKSHOP ON HARMONIC ANALYSIS

(7th to 12th December 2020)

This will be an advanced workshop in four different themes in harmonic analysis. The first lecture of all the topics will be accessible to any graduate student working in Analysis and related areas.

The first set of lectures will be delivered by Professor Christoph Kreigler (University of Blaise-Pascal, France) on "Spectral multipliers for  $c_0$ -semigroups acting on Bochner spaces and non-commutative  $L_p$ -spaces".

His lectures would focus on proving the boundedness of spectral multipliers on non commutative  $L_p$  spaces as well as the state of the art of some of these spectral multiplier theorems. This includes maximal operators, semigroups, Hormander functional calculus on Bochner spaces.



The second set of lectures will be delivered by Professor Alessio Martini (University of Birmingham, UK) on "Spectral multipliers for sub-Laplacians: classical results and recent progress". In this series of lecture Prof. Alessio Martini will present old and new results about the functional calculus for subLaplacians 'L' on Lie groups of polynomial growth and more general sub-Riemannian manifolds.



The third set of lectures will be delivered by Prof. Michael Ruzhansky (Ghent University, Belgium).  
Title: TBA

The fourth set of lectures will be delivered by Prof. K. Sandeep (TIFR, Bangalore) on "Inequalities, best constants and extremal functions." He will address the question of best constant and classification of extremal functions for Sobolev type inequalities in the Euclidean space and in some general Riemannian and Sub-Riemannian geometries.



#### Organizers

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Application form and other information about the programme are available on the following website:

[www.atmschools.org/2020](http://www.atmschools.org/2020)

Last date for receiving completed application is : List of selected candidates will be posted on the above mentioned website on :  
**November 8, 2020** **November 15, 2020**