Universitatea
Transilvania
din Brașov

ADMISSION TO DOCTORAL STUDIESSession September 2022

Field of doctoral studies: MATHEMATICS
Doctoral supervisor: Radu PĂLTĂNEA

TOPICS FOR THE ADMISSION TO DOCTORAL STUDIES

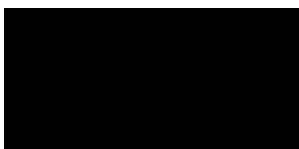| TOPIC 1: *Statistical Structures in Riemannian and Pseudo-Riemannian Geometries* |
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| Content / Main aspects to be considered:

- Positive linear operators defined on spaces of functions with compact or not-compact domains
- Multidimensional approximation
- Moduli of continuity and smoothness
- K-functionals
- Convexity properties
- Theorems of convergence for positive linear operators |
| Recommended bibliography:

1. R. DeVore, *Constructive approximation,*Springer Verlag, 1993
2. F. Altomare, M. Campiti, *Korovkin-type Approximation Theory and its Applications,* Walter de Gruyter, 1994.
3. V. Gupta, G. Tachev, *Approximation by Linea Positive Operators and Combinations,* Springer, 2017
4. Z. Ditzian, V. Totik, *Moduli of Smoothness,* Springer, 1987 |
| Prerequisites / Remarks: *Basic notions on mathematical analysis and functional analysis* |

Doctoral supervisor,

Prof. Dr. Radu PĂLTĂNEA

Signature

Coordinator of the field of doctoral studies,

Prof. Dr. Radu PĂLTĂNEA

Signature