

Nonlinear Differential Systems in Applied Sciences

PNRR-C9-I8 CF 22/14.11.2022

Scientific Seminar

University of Craiova, June 18 2025



PLENARY SPEAKER

Giovany M. Figueiredo

Universidade de Brasilia - UNB

Formation

- 2004 – PhD in Mathematics, UNICAMP State University of Campinas under the supervision of Professor Claudianor Oliveira Alves
- 2017 – Full Professor at UNB - University of Brasilia
- 2021 - 2023 – Board of Directors of SBM – Brazilian Mathematical Society
- In 2021 on the list of the best researchers in Latin America

Existence and unicity of positive solution to a rapidly growing problem via sub-supersolution method

- In this paper we study the validity of the sub-supersolution method for the equation

$$\begin{cases} -\operatorname{div}(K(x)\nabla u) = K(x)|x|^{\alpha-2}f(x, u) \text{ in } \mathbb{R}^N, \\ u > 0 \text{ in } \mathbb{R}^N, \end{cases}$$

where $N \geq 3$, $K(x) = \exp(|x|^\alpha/4)$, $\alpha \geq 2$ and f is a continuous function, the hypothesis will be given later. We apply the method for f singular and f like a logistic function, showing in both cases existence and uniqueness of positive solution.

Domain of interest

- Partial Differential Equations
- Elliptic problems

ORGANIZERS

Faculty of Sciences,
Department of Mathematics,
Location: University of Craiova, Room C219, 16:00

CONTACT

Giovany M. Figueiredo, Universidade de Brasilia - UNB
e-mail: giovany@unb.br

Logistic growth

