

# Double phase problems: concentration of the spectrum and equations with mixed regime

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**Abstract:** In this talk, I shall report on some recent joint results (with N. Papageorgiou, C. Alves and D. Repovs) about some striking phenomena that appear in the study of stationary double problems. In the isotropic case, we establish both the existence of a continuous spectrum as well as an interesting discontinuity property of the spectrum (in the sense of multi-valued mappings). In the second part of this talk, I shall consider the anisotropic case and I will discuss sufficient conditions for the existence of solutions in the case of double phase problems with mixed “subcritical–critical–supercritical” growth. Several perspectives and open problems will be given in the final part of this talk.

报告人简介: Vicentiu D. Radulescu, 克拉约瓦大学教授、罗马尼亚国家科学院和波兰AGH科技大学终身教授。博士毕业于巴黎六大, 师从世界著名偏微分方程专家Haim Brezis教授。主要从事非线性椭圆方程、带退化和奇异线性的数学物理方程、非齐次微分算子的谱分析及其在电流变液中的应用等工作, 尤其在非线性分析和非线性椭圆方程方面具有较深的学术造诣和威望, 出版专著12部, 发表高水平和高影响的学术论文423篇, 论文被引用8643次, 连续多年都是高被引科学家, 多次主持罗马尼亚国家科学研究委员会科研项目, 应邀主题发言、大会报告和邀请报告50余次, 作为大会主席组织了多个专题国际学术大会, 得到了国际学术界的高度认可。

Organizer: Quanqing Li, Department of Mathematics