



PIMS / AMI Seminar

Tuesday, April 30, 2019

3:00 p.m.

CAB 657

“On the solvability of some systems of integro-differential equations with anomalous diffusion in two dimensions”

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Abstract

The work deals with the existence of solutions of a system of integro-differential equations in the case of anomalous diffusion with the negative Laplacian in a fractional power in two dimensions. The proof of existence of solutions relies on a fixed point technique. Solvability conditions for elliptic operators without Fredholm property in unbounded domains are used.

About the author: Professor Vitali Vougalter is current a visiting professor at Department of Mathematics in University of Toronto. He obtained his PhD from Georgia Tech, Atlanta. His fields of research are Partial Differential Equations and Applied Analysis, especially in the context of the nonlocal reaction-diffusion equations when there are nonlocal consumption of resources, intra-specific competition and mutations.