# Pacific Institute *for the* Mathematical Sciences

# PIMS Workshop on Nonlocal Variational Problems and PDEs

**13-17 June, 2016**                    **Earth Sciences Building, UBC Vancouver**

Non-locality with respect to nonlocal interactions and nonlocal equations is a common theme in many recent pure and applied mathematical works. It has attracted attention from all branches of mathematics, including applied math, math biology, nonlinear PDE, differential geometry, probability and statistics.

This five-day workshop will bring together both pure and applied mathematicians focusing on models and equations in the following areas:

- Nonlocal diffusivity, nonlocal minimal surfaces and regularity
- Nonlocal variational problems arising in dfferential geometry;pattern formation; phase transitions; Bose-Einstein condensates; image processing.
- Equations with nonlocal transport terms and the modelling of crowd/population dynamics.

**MINICOURSE SPEAKERS:**
- Theodore Kolokolnikov (Dalhousie, Canada)
- Enrico Valdinoci (Weierstrass Institute, Berlin)

**INVITED SPEAKERS:**
- Laurent Betermin (University of Heidelberg)
- David Bourne (Durham University)
- James van Brecht (California State University, Long Beach)
- Martin Burger (University of Münster)
- Katy Craig (University of California, Los Angeles)
- Qiang Du (Columbia University)
- Razvan Fetecau (Simon Fraser University)
- Eliot Fried (Okinawa Institute of Science and Technology)
- Changfeng Gui (University of Connecticut)
- Xin Yang Lu (McGill University)
- Antoine Mellet (University of Maryland)
- Cyrill Muratov (New Jersey Institute of Technology)
- Monica Musso (Pontifical Catholic University of Chile)
- Anthony Pierce (University of British Columbia)
- Xiaofeng Ren (George Washington University)
- Xavier Ros-Oton (University of Texas at Austin)
- Ovidiu Savin (Columbia University)
- Yannick Sire (Aix-Marseille University)
- Susanna Terracini (University of Turin)
- Ihsan Topaloglu (McMaster University)
- Enrico Valdinoci (Weierstrass Institute)

**ORGANIZERS:** Rustum Choksi (McGill), Michael Ward (UBC), Juncheng Wei (UBC)

**WEBSITE & REGISTRATION:** *http://www.pims.math.ca/scientific-event/160613-pwnvpp*