PIMS / AMI Seminar

Friday, October 2, 2015
3:00 p.m.
CAB 657

"Symbolic-numeric algorithms for computing validated results"

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Abstract

In this talk, we will introduce how to compute validated results via hybrid symbolic-numeric algorithms. These hybrid algorithms start with computing an approximate solution of good quality for a given problem using numerical algorithms, then a verification step using exact rational arithmetic or interval arithmetic is appended. If this step is successful, then a validated result is computed for the previously computed approximation. For instance, we will show how to certify a rational function to be non negative or the existence of real solutions of a positive-dimensional polynomial system.

Refreshments will be served in CAB 649 at 2:30 p.m.