

**Submittee:** James Feng

**Date Submitted:** 2014-07-23 09:39

**Title:** Workshop on Mathematics at the Frontier of Developmental Biology

**Event Type:** Conference-Workshop

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**Location:**

UBC (Earth Sciences Building)

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**Dates:**

July 2-4, 2014

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**Topic:**

Mathematical modeling of embryonic development and tissue growth

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**Methodology:**

Talks by invited speakers; poster presentation by trainees; discussion sessions; roundtable brainstorming session for future directions and collaborative efforts

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**Objectives Achieved:**

1. The workshop outlined the latest advances in several key areas of developmental biology, and highlighted problems ripe for mathematical modeling.
  2. The workshop facilitated networking between mathematical modelers and experimental biologists, and provided a basis for future collaborations.
  3. The workshop introduced trainees in PIMS institutions to this emerging area of applied math, and offered opportunities for direct interactions with leading experts, both mathematicians and biologists.
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**Scientific Highlights:**

The brainstorming session has produced a consensus among the senior attendees that the connection between single-cell behavior and collective behavior of colonies and tissues is an outstanding question to be vigorously pursued. // Plans are being made for collaborative research and joint grant proposals. // A more detailed scientific report outlining the proceedings of the workshop is attached below. //

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**Organizers:**

Feng, James, Mathematics, UBC //

Edelstein-Keshet, Leah, Mathematics, UBC //

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**Speakers:**

See attached PDF.

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**Links:**

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**Comments / Miscellaneous:**

The workshop is apparently a great success, thanks partly to the capable PIMS staff (Ruth Situma and Sarah Daley) who took care of the catering and other logistics. // Invited speakers and student attendees alike have been forthcoming with praises for the event; the comment of Tony Harris (U. Toronto) is attached as an example:

// "The meeting was terrific. // I found the scientific content to be top-notch with an appropriate range of related topics. // The time available to discuss the science as a group, both during and after the talks, was a real plus (and unique among the meetings I normally attend). // The additional interactions at meals and on walks were great opportunities to network further, and the poster session and pub night provided a good chance to interact with trainees. // The meeting was very effective at making connections between mathematicians and developmental biologists, an important initiative for the advancement of science. // I look forward to seeing your notes on the roundtable discussion. // It would be very exciting to build on this." //

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**File Uploads:**

Additional Upload 1: [http://www.pims.math.ca/files/final\\_report/Abstracts\\_4.pdf](http://www.pims.math.ca/files/final_report/Abstracts_4.pdf)

Additional Upload 2: [http://www.pims.math.ca/files/final\\_report/PIMS\\_Report.pdf](http://www.pims.math.ca/files/final_report/PIMS_Report.pdf)

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