Board of Governors Report
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B. Mario Pinto, Vice-President, Research

Recent Research News

CWTS Leiden Ranking 2013
The Leiden Ranking reports on the scientific performance of 500 universities worldwide (19 in Canada), based on Web of Science publications between 2008 and 2011. Overall, SFU is ranked #8 in Canada for scientific impact (measured by citations) and #4 in Canada for collaboration (measured by co-authorship). Some of the more notable results include:

- SFU’s top-ranked field for impact is Life & Earth Sciences, ranked 4th in Canada for the proportion of its publications that belong to the top 10 most frequently cited (about 12%).
- SFU’s publications are cited above the world average in two fields: Life & Earth Sciences, and Social Sciences & Humanities.
- In terms of inter-institutional collaboration with co-authors, SFU ranks 4th overall, meaning that 73% of its scientific publications have been co-authored with other organizations. Two SFU fields rank 2nd in Canada on this measure: Biomedical & Health Sciences (behind McMaster), and Natural Sciences & Engineering (behind Victoria).
- Just over 50% of SFU’s scientific publications have been co-authored by two or more countries. This level of international collaboration makes SFU 2nd in Canada on this measure.
- SFU ranks low (#17) among Canadian universities for its level of industrial collaboration, with just under 5% of its publications co-authored with one or more industrial partners.
- SFU comes in 2nd in Canada for the greatest geographical distance between SFU and its collaborators (4871 kilometers).

QS World University Rankings by Subject 2013
The QS World University Rankings by Subject will be released on May 8th. These rankings include (from the QS website): “only those indicators that bypass the direct involvement of institutions and can reliably be stratified by subject discipline.”

This year, SFU has improved its standings in four subjects: Computer Science & Info Systems, Mathematics, Accounting & Finance, and Communication & Media Studies. Its highest-ranked subject is Geography; SFU is listed among the 51-100 top institutions in the world in this subject. Computer Science & Info Systems is SFU’s 2nd-ranked field and Mathematics comes in 3rd.

In terms of citations per faculty (QS uses Scopus for its data source), Computer Science & Info Systems is SFU’s top-ranked subject, with Environmental Sciences a close second.
Canada Research Chairs (CRC) Latest Funding Decisions & Reallocation
The renewals of four SFU Canada Research Chair positions were part of the latest national announcement: Neil Branda (Tier 1 in Materials Science), Karen Kohfeld (Tier 2 in Climate, Resources and Global Change), Charlotte Waddell (Tier 2 in Children’s Health Policy), and Nick Dulvy (Marine Biodiversity and Conservation). Collectively, the funding for these four renewals totals almost $2.9 million. Two additional renewals will be officially announced in the near future: Diane Gromala (Tier 2 in Multidisciplinary and Multimedia Arts) and Cenk Sahinalp (was a Tier 2, but has been awarded a Tier 1 in Computational Genomics).

There are two types of Canada Research Chairs (CRCs): Tier 1 ($200K/year over 7 years, renewable), and Tier 2 ($100K/year over 5 years, renewable once). Based on a calculation of its Tri-Council research funding over the past three years, SFU was allocated five additional CIHR Canada Research Chairs this year (two Tier 1 and three Tier 2), and maintained its quota of NSERC and SSHRC Chairs. SFU now has 22 Tier 1 and 25 Tier 2 CRCs, for a total of 47. A full listing of SFU’s research chairs is available on the Vice-President, Research website.

Latest Research Grant Results
• In the 2013 NSERC Research Tools and Instruments Grants competition, SFU received a total of $1.2 million in new research funding for 13 projects (a 42% success rate)
• In the latest NSERC Discovery Grants competition, SFU’s established researchers who did not hold a Discovery Grant in 2012 more than doubled the national success rate at 68% versus 30%. The success rates for SFU’s Early in Career researchers receiving a first grant was 60% (the same as the national average), and 65% for SFU’s Established Researchers who renewed a grant (but below the national average of 76%)
• Ash Parameswaran of Engineering Science has received a $100,000 Grand Challenges Canada grant that will support three of his graduate students to spend a year working on a smartphone “lab on a chip” technology as a remote healthcare tool. An SFU Faculty of Environment graduate student is involved in another Grand Challenges Canada grant, helping to develop an app that can track the risks and resiliency of maternal health outcomes.
• Three SFU researchers will lead collaborative research projects supported by grants from Genome Canada: Steven Jones and the BC Cancer Agency to improve cancer testing; Cenk Sahinalp and the Vancouver Prostrate Centre to apply computational methods to the study of prostate cancer; and Fiona Brinkman to develop better tools to identify and track disease-causing bacteria.

These successes can be attributed in part to the bridging grants instituted by the Vice-President, Research and the work of SFU’s grant facilitators and Office of Research Services staff in assisting researchers with the application process.

SFU Project Mentioned in Federal Budget 2013
The SFU-led (Majid Bahrami, Engineering Science) $2.9M project to develop next-generation green technologies promising to end truck idling and cut emissions was featured in Budget 2013 as an example of how the Canadian government is fostering collaborative research between industry and post-secondary institutions. Also mentioned was the retrofit of the SFU Chemistry facilities under the Knowledge Infrastructure Project.
**Recent Accomplishments: Awards & Honours**

**“Sweet Sweep” - Canadian Society of Chemistry Awards**

Three SFU chemists will be recognized with awards at the 2013 Canadian Society for Chemistry Conference in May. **Mario Pinto** will receive the CSC Bader Award in recognition of his outstanding research contributions in organic chemistry. **David Vocadlo** will receive the Boehringer Ingelheim Research Excellence Award for his research in medicinally relevant chemistry. In addition, Andy Bennet’s PhD student **Jeffrey Chan** will receive a doctoral award.

**David Vocadlo, Horace S. Isbell Award, American Chemical Society**

The Horace S. Isbell Award, one of the ACS Division of Carbohydrate Chemistry Awards, acknowledges "excellence in and promise of continued quality of contribution to research in carbohydrate chemistry" by a scientist under the age of 45.

**Robert Hogg, Career Achievement Award, CUFA BC**

The CUFA BC Career Achievement Award recognizes "sustained contributions over the course of a career to the non-academic community through research and scholarly activity.” The body of research that Dr. Hogg has developed over his 20-year career has prompted changes to HIV prevention and treatment efforts in Canada and beyond.

**Updates: Innovation Activities**

**Michael Cheng, WittyCookie Founder, Profiled in Vancouver Sun**

School of Interactive Arts & Technology student and SFU Venture Connection client Michael Cheng was featured in the *Vancouver Sun* under the headline, “The New Surrey: 11 startups and counting for 23-year-old Michael Cheng.” Michael was named the 2012 Student Entrepreneur of the Year by the Surrey Board of Trade, and he was selected for the 2013 cohort of The Next 36 entrepreneurship development program. His startup web design company WittyCookie, founded in 2011, currently employs up to 40 people and has more than 600 clients.

**SFU Faculty of Business Launches RADIUS**

The Faculty of Business has launched a new social innovation and venture incubator program, entitled RADIUS (RADical Ideas, Useful to Society). The program was recently featured in *Business in Vancouver* magazine. The article quotes RADIUS’ co-founder and chairman David Dunne from a press release, “RADIUS will teach students to rethink problems from the ground up, empathize with those affected, and create radical, sustainable opportunities.”

**SFU Spinoff Lungpacer Medical Inc.**

Lungpacer Medical Inc. and the Royal Columbian Hospital have received a grant from the Canadian Institutes for Health Research (CIHR) to fund a first in-human trial of the company’s transvenous diaphragm pacing device. Based on technology developed in Andy Hoffer’s lab, the minimally invasive device makes it easier for patients to “wean” from ventilators, thereby improving health outcomes and resulting in significant cost savings for the health care system.