Science Research and Innovation Newsletter – January 10, 2022

**Thesis Defense Seminars**

**CHEM** MSc Final Seminar “Molecular Perylene Diimide Organic Film Formation: Utility of Polymers and Volatile Additives to Control Crystalline Aggregation” by Greg Bannard (Supervisor: Gregory Welch) on **Tuesday, January 11, 2022, at 1:00pm**. Please contact the Department of Chemistry for zoom details (chem.info@ucalgary.ca).

**BISI** MSc Final Seminar “The effects of the Kenow wildfire on the bat community in Waterton Lakes National Park, Alberta.” by Erin Low (Supervisor: Robert Barclay) on **Thursday, January 13, 2022, at 1:00pm**. Please contact the Supervisor for zoom details.

**CPSC** PhD Final Seminar “Requirements Dependency Extraction: Advanced Machine Learning Approaches and their ROI Analysis” by Gouri Deshpande (Supervisor: Guenther Ruhe) on **Friday, January 14, 2022, at 11:00am**. Please contact the Department of Computer Science for zoom details (cpsc@ucalgary.ca).

**Seminars**

**PHAS** Candidate Spousal Hire Research Presentation: “Combined ML/DFT for Clean Energy Technologies” by Dr. Mohammadreza Karamad on **Wednesday, January 12, 2022, at 3:00pm**. Please contact the Department of Physics and Astronomy for Zoom details (phasoffice@ucalgary.ca).

**MTST** CalgaryR presents “Validation of the underlying construct of survey instruments” by Cherri Zhang, Gata Manager and Analyst, Department of Psychology, UofC on **Wednesday, January 12, 2022, at 5:30pm**. RSVP at https://www.meetup.com/calgaryr/events/282613720/

**PHAS** Candidate Spousal Hire Teaching Presentation by Dr. Mohammadreza Karamad on **Friday, January 14, 2022, at 10:00am**. Please contact the Department of Physics and Astronomy for Zoom details (phasoffice@ucalgary.ca).

**MTST** PIMS Geometric analysis Seminar: “Multi-marginal optimal transport and graph theory” by Dr. Brendan Pass, Department of Mathematical and Statistical Sciences, University of Alberta on **Friday, January 14, 2022, at 3:00pm**. Please contact the Department of Mathematics and Statistics for zoom details (mathadmin@ucalgary.ca).

**FoS** Early Career Researcher Workshop: Supervision of Grad Students by Dr. Tara Beattie, Associate Dean, Graduate Sciences Education, Faculty of Grad Studies and Dr. Cathy Ryan, Associate Dean, Research and Grad Education, Faculty of Science on **Wednesday, January 19, 2022, from 2:00-3:30pm**. The goal of the workshop is to highlight the roles and responsibilities of supervisor, highlight best practices and share tips for improved supervisor and student relationships. Faculty interested in a refresher who are not ECR are also welcome to join. Faculty members interested please email Chadwick Dawes (cdawes@ucalgary.ca).

**GEOS** Gallagher Colloquium Series: “How Life and Rocks Co-Evolve: The 4.5 Billion-Year Story of Earth” by Dr. Robert M. Hazan, Senior Scientist, Carnegie Institute for Science, George Mason University. On **Thursday, January 27, 2022, from 6:30- 7:45 PM**. For further information and to register please click [here](#).

**CHEM** NSERC CREATE ME’ (Material for Electrochemical Energy Solutions): Solid Electrolytes for All-Solid-State Batteries workshop presents “Advancing All-Solid-State Batteries” by keynote speaker Dr. Linda Nazar, Department of Chemistry, University of Waterloo on **Thursday, January 27, 2022, from 10:00am to 12:00pm (MST)**. This workshop will also include a presentation from the CREATE ME2 trainees, Dr. Chengtian Zhou and Akhil Abraham. For further information or to register please click [here](#).
University of Calgary Biostatistics Centre is hosting an **Introduction to R Programming Workshop** on **February 22, 2022, from 4:00-6:30pm** and **February 23, 2022, from 9:00-11:30am**. Please see attached pdf for details.

**Opportunities**

**NSERC Alliance International Grant** is a new, permanent funding stream will support Canadian university researchers working with leading international academic researchers to establish and grow international research collaborations and projects of global importance that will generate benefits to Canada. The international collaborator(s) must be from the academic sector, and they must have secured funding from their national funding agency to cover their participation in the project.

Alliance International offers two grant types:

1. **Alliance International Catalyst** grants will provide up to $25,000 for one year to support Canadian researchers in initiating international research collaborations in the NSE disciplines.
2. **Alliance International Collaboration grants** will provide up to $100,000 per year for up to three years, allowing Canadian researchers to participate in international projects and leverage the best international expertise to help address research challenges in the NSE disciplines of impact and benefit for Canada.

There is no deadline to apply, and grants will be awarded throughout the year. Please see [NSERC’s page](#) or view the [funding calendar](#) for further details. **RSO Contact**: Alisha Kadam

**REMINDER: Mitacs Elevate & Mitacs Elevate (Thematic)** - a two-year training program for postdoctoral fellows (PDFs), where participants lead and undertake a research project with an industry partner. Open to all disciplines and all industry sectors. **Mitacs Elevate Award**: $55,000 per year and **Thematic Award**: $70,000 per year if the project addresses at least one of the key priority sectors of artificial intelligence, biomanufacturing, clean tech, or quantum science. **RSO Final Internal Deadline (Full Application)**: Friday, January 14, 2022, at noon. More information in the [Funding Deadline Calendar](#).

**International Research Partnership Workshop Grant**

University of Calgary International is pleased to announce a call for proposals for the International Research Partnership Workshop Grants in support of the Global Engagement Plan 2020-2025. Application and information: [https://ucalgary.ca/international/funding-opportunities](https://ucalgary.ca/international/funding-opportunities)

Six successful applications will be funded for up to $10K each that will be tenable between April 1, 2022 and March 31, 2024. **Applications are due by Jan 14, 2021** (and decisions made in mid-February). **Heather Clitheroe** can provide details and assistance.

**Panmure House Prize** will award $75,000 for the best research proposal on the topic of long-term funding of innovation in the spirit of Adam Smith. Projects should explore a critical question pertaining to the issue of long-term investing to fund innovation. Research Services’ final internal deadline for the full application is **noon** on **March 31, 2022**. For more information see the [Funding Deadline Calendar](#). **RSO Contact**: **Anna LeMarquand**

**Opportunities – Awards**

If you are planning on submitting a nomination for yourself or someone else, and would like support in developing the nomination package, please contact [Danielle Demiantschuk](#) as early as possible.

**Calgary Awards**, offered by the City of Calgary, celebrate and recognize outstanding achievements and contributions made by Calgarians. Last year there were four major categories which included: [The Award for Accessibility](#); [The Community Achievement Awards](#); [The Environmental Achievement Award](#); [The International...](#)
Achievement Award. The Calgary Awards are now open until **February 9, 2022**. Further information on these awards will be communicated in early January.

**Royal Society of Canada Awards and Medals** nomination period, which will be open from **January 15 to March 31, 2022**. Please visit the [RSC Awards and Medals page](#) for the 2022 opportunities.

**The Japan Prize Foundation** is an annual award for scientists and engineers from around the world who have made significant contributions to the advancement of science and technology, thereby furthering the cause of peace and prosperity of mankind. The eligible fields for the 2023 prize are: Electronics, Information, Communication and Life Sciences. Please visit the [Prize page](#) for more details. **Deadline: January 31, 2022.**

**Emerald Awards** celebrate individuals who are raising the bar in addressing local, regional, and global environmental and climate issues. These environmental awards celebrate excellence across all sectors, more information can be found on the [awards page](#). **Deadline: February 11, 2022.**

**The Global Energy Prize** is awarded to the world’s leading scientists, whose discoveries and technological innovations meet global energy challenges. For more information, please visit the [website](#). **Deadline: March 20, 2022.**

**NSERC Prizes**, due in April, celebrate researchers at different career stages who are advancing research in the natural sciences and engineering fields. The Faculty of Science Awards Committee is seeking nominations (a short paragraph about why the nominee should be considered and a current CV) for the following prizes:

- [Arthur B McDonald Fellowships](#)
- [Brockhouse Canada Prize for Interdisciplinary Research](#)
- [The Donna Strickland Prize for Societal Impact](#)
- [The Gerhard Herzberg Canada Gold Medal](#)
- [The John C. Polanyi Award](#)
- [Synergy Awards](#)

Please submit nominations to Danielle (contact above) no later than **January 24, 2022**.

**Calgary’s Top 40 Under 40** features young business and community leaders who are excelling in their careers, are giving back to the community, and who, through personal and professional efforts, are raising the profile of Calgary. Please visit the [website](#) for more information. **Deadline: April 30, 2022.**

**Opportunities – Health Sciences**

**CIHR Project Grant**

The Project Grant program is designed to capture ideas with the greatest potential for important advances in fundamental or applied health-related knowledge, health care, health systems, and/or health outcomes by supporting projects of research proposed and conducted by individual researchers or groups of researchers in all areas of health. The best ideas may stem from new, incremental, innovative, and/or high-risk lines of inquiry or knowledge translation approaches. Registration is now open and required to be submitted to CIHR.

- The deadline for registration is **February 9, 2022**
- Research Services’ final internal deadline for the full application is **9:00am on March 7, 2022**.

For more information, please see our [Funding calendar](#).

RSO Contact: Lindsey Hritzuk
**CIHR Project Grant Webinars**

CIHR will be hosting the following webinars to support participants with the requirements of the funding opportunity “Project Grant – Spring 2022” and to answer questions on how to apply.

**Duration: 60 minutes**

**When:**
- Wednesday, January 26, 2022 at 9:00 am Calgary time | Join
- Thursday, February 17, 2022 at 11:00 am Calgary time | Join

**Alzheimer’s Drug Discovery Foundation: Prevention Pipeline**

The ADDF seeks to support studies of cognitive symptoms due to health conditions, comparative effectiveness research, and epidemiological studies that probe whether the use or choice of drugs alters the risk for dementia or cognitive decline.

Research Services’ final internal deadline for the Letter of Interest is noon on **February 1, 2022**

RSO Contact: Caitlin Janzen

**Alzheimer's Drug Discovery Foundation: Diagnostics Accelerator and Target ALS Foundation Biomarker Discovery RFP**

The Diagnostics Accelerator and Target ALS are joining forces to fund biomarker research targeting biomarkers that might be common to disease pathways or pathophysiology in Alzheimer’s disease, FTD and ALS to facilitate biomarker discovery and validation. In doing so, the Diagnostics Accelerator and Target ALS aim to drive towards an improved understanding of the heterogeneity of these neurodegenerative diseases and offer potential solutions for differential diagnosis.

Research Services’ final internal deadline for the Letter of Interest is noon on **February 25, 2022**

RSO Contact: Caitlin Janzen

**CIHR Operating Grant: Cannabis Research in Longitudinal studies (Supplementary Grants for Cannabis Research in Longitudinal Studies)**

CIHR has extended the full application deadline to January 26, 2022.

Accordingly, RSO’s final, internal deadline has been moved to **Friday, January 21, 2022**.

For more information, please see the [Funding Deadline Calendar](#).

RSO Contact: Lindsey Hritzuk

**Opportunities – Postdoctoral Scholars**

**REMEMBER: 2022 Killam Postdoctoral Fellowship**

The Killam Postdoctoral Fellowship enables postdoctoral scholars to engage in postdoctoral training at the University of Calgary, consolidate their research training, develop and initiate original research in their discipline, and contribute to the activities of the host unit. The fellowship is open to all faculties and research areas.

Postdoctoral scholars who have completed their PhD or equivalent degree from another institution between 1 September 2019 and 1 September 2022 are eligible to apply. Please visit the Research Services [funding and fellowship calendar](#) for full details.

**Award:** $50,000 per year for two years and a one-time $6,000 research allowance

**Deadline:** Friday, February 18, 2022 at 11:59 p.m. MST **Contact:** vprawards@ucalgary.ca

**National Science Foundation- STEM Education Postdoctoral Fellowship**

The National Science Foundation has a new STEM education Postdoctoral program that is soliciting applications for postdoctoral fellowships. The Fellowships are open to U.S. citizens, national or legally admitted permanent resident alien of the United States. For more information on eligibility and award details please visit [https://www.nsf.gov](https://www.nsf.gov)

**Award:** Up to $300,00 over two years (up to $150,000 annually)

**Deadline:** March 1, 2022
Did You Know?

Graduate Science Centre offers Virtual Drop-in Advising Session for Academic Programs – January 10th, 2022
Sessions are scheduled bi-weekly on Mondays at 2pm. Please drop in if you have any questions regarding your program.
Virtual Drop In Advising etiquette:
Please make sure your audio is always muted. To ask a question, please type it in chat or use the raise hand function. When called upon your name feel free to unmute yourself to ask the question.
Virtual Drop-in Advising: Time: 2:00-3:00pm Please email sci.grad@ucalgary.ca for the zoom details.

Winter 2022 Grad Special Topics Courses
Below is a list of new (or relatively new) W22 graduate courses in ‘special topics’ courses and/or graduate courses that may be beneficial to, and attended by, students outside of the program in which the course is scheduled. If you are interested in enrolling in one of the below classes, please contact sci.grad@ucalgary.ca for assistance.

**BIOL 607.08 Special Problems in Biology (R-Wizardry)**
R-Wizardry is a once-a-week course to develop basic and advanced skills in computer programming using R/RStudio. These skills include data management, processing, exploratory data analysis, flow control, data visualization, publication-quality plots, among others. The last two weeks of the course will touch on special and advanced topics depending upon needs of attending students. Each class will consist of a short lecture into the day’s objectives, followed by directed learning with example programming, concluding with a short homework assignment to reinforce the skills learned.
Meeting time: Wednesday, 2:00-4:45pm, Instructor: Paul Galpern

**ECOL 603.06 Advanced Behavioural Ecology**
Behavioural ecology is a discipline that is asking how natural and sexual selection shape animal behaviour. The most important questions being asked are: 1) why do they behave the way they do? 2) What are, if any, the fitness advantages to individuals’ behaviours? or, in other words, 3) What are the ultimate explanations for observed behaviours? The currencies we measure to answer these questions are either proxies of, or direct benefits to the survival or reproductive success of individuals. In this class, we will cover some of the most important topics in the study of behavioural ecology, the questions asked, experimental and observational approaches, and how these inform and shape our current understanding of the behaviour and ecology of individuals.

The pedagogy behind this course is to get you to ask pertinent questions, discuss current literature and present individual topics to the class. Each weekly meeting will be a combination of lectures and discussions of focused studies on the topics of your choice (listed below). The end goal is for you to write a review paper on a specific topic, that can, but does not have to be, on an aspect of your own research.
Meeting time: Tuesday, 11:00am-1:45pm, Instructor: Kathreen Ruckstuhl

**PHYS 619 Statistical Physics II**
This course gives an introduction to equilibrium and non-equilibrium critical phenomena corresponding to phase transitions as well as to methods to study complex systems including complex network theory, extreme value theory and causality analyses. The goal of this course is to develop specific conceptual, mathematical, and numerical skills for understanding and analyzing critical phenomena and associated fluctuations in different settings as well as complex systems and their dynamics in general.
Meeting time: Tuesday/Thursday, 11:00-12:15pm, Instructor: Jörn Davidsen
SCIE 601- Theory and Practice of University Teaching and Learning in STEM
Emphasizing a research-to-practice approach, this course will engage students in readings and discussions about current research, theory and methodological approaches, and pedagogical approaches in Discipline-Based [STEM] Education (DBER) research. Course readings will be varied and include scholarly, practical, and popular readings in order for students to gain nuanced understandings of the social contexts and related issues and challenges of college and university STEM education. Course materials will also emphasize critical, antiracist and decolonizing approaches to build frameworks of transforming postsecondary STEM Education cultures towards belonging of diverse students and cultural-scientific worldviews. While there will be seminal readings, aspects of the course will be co-designed with students’ interests and professional needs in mind. Activities will be geared towards designing environments for equitable postsecondary STEM education, broadening ideas about assessments and evidences of student learning, SoTL research and other topics and interests that emerge from students’ interests and experiences.
Meeting Time: Tuesdays, 3:30-6:15pm, Instructor: Jennifer Adams

Please send any seminar notices or events or CONGRATULATIONS notes to be included in the newsletter to sci.borg@ucalgary, subject line SRIN.