

Monthly Report to the Provost – Faculty of Science

The Faculty of Science (FoS) has the following to report for **September 2023**:

Engaging Learners

The Department of Agriculture Technology is happy to welcome their new sessional instructor, **Tristan Bouwman**, who will be teaching AGRI 142 and co-teaching AGRI 247 with **Dr. Renee Prasad**. The AGRI 256 class welcomed David Dyble from Trouw Nutrition, who shared his knowledge and experience on principles of poultry nutrition.

UFV's new Centre for High-Pressure Research will open this fall thanks to \$530K in targeted funding. **Dr. Jake Spooner** and his co-applicants, including Professor Emeritus **Dr. Noham Weinberg**, received the funding for the only one of its kind in Canada. Read more: <https://blogs.ufv.ca/blog/2023/08/new-ufv-centre-offers-nationally-unique-research-opportunities/>

Dr. Carin Bondar, Biology Adjunct Professor and Sessional Instructor, was on Vancouver Island shooting a documentary called 'Animal Pride' for The Nature of Things. This documentary is all about queer sex in nature, and she has requested a Chilliwack premiere for its release in the spring. She recently completed her first contract with Blackburn Entertainment on a cruise ship from Seattle to Alaska. She will be heading to Spain later this month on another voyage.

Drs. Kseniya Garaschuk and **Vanessa Radzimski**, Associate Professors in Math and Stats, are organizing a session for the 2023 Canadian Mathematical Society Winter Meeting in Montreal in December 2023. The title of their session is "Supporting Numeracy for Non-STEM Students."
https://www2.cms.math.ca/Events/winter23/sessions_scientific#snn

Dr. Cherie Enns, Associate Professor in Planning, Geography, and Environmental Studies (PGES), has been invited to present at the 5th Urban Economic Forum in Toronto in October. She is also the guest editor for the Public Space Journal (UN Habitat). <https://www.journalpublicspace.org/index.php/jps/announcement/view/35>

The FoS hosted a Faculty Welcome Session on September 5th in Evered Hall. **Dr. Ian Affleck**, Associate Dean, welcomed 230+ new science students and introduced **Dr. Michael Hitch**, Dean of the FoS and **Dr. Teresa Kisilevich**, Dean of the Faculty of Applied and Technical Studies. Following introductions, the students participated in a lively icebreaker game of Bingo. 4th-year Physics major **Catherine Laflamme** and 2021 BSc graduate, Governor General Silver Medal Recipient and Math and Stats Sessional **Tanner Boos** shared their experience. They encouraged students to get involved in campus life. Students spent the remainder of the hour visiting with science faculty. The departments of Biology, Chemistry, Math and Stats, PGES, Geoscience, Agriculture Technology, Physics, School of Computing, and Kinesiology participated in our event.

The FoS has released the 3rd issue of our Science Magazine. It not only spotlights some of our amazing students but also highlights some of the wonderful science that takes place here at UFV. <https://issuu.com/goufv/docs/2022-2023.ufvscience> To view previous editions, please visit <https://ufv.ca/science/deans-office/science-magazine/>.

Transforming Lives

UFV BSc Alumni 2019, **Eryn Braley** was chosen for the Young Distinguished Alumni award for 2023.

<https://blogs.ufv.ca/blog/2023/09/young-distinguished-alumni-2023-eryn-braley-advocates-for-indigenous-peoples-in-public-health-setting/>

UFV BSc Alumni 2009, **Eric Gerbrandt** receives UFV's Distinguished Alumni award for 2023.

<https://blogs.ufv.ca/blog/2023/09/ufv-distinguished-alumni-2023-blue-skies-ahead-for-eric-gerbrandt/>

The London International Youth Science Forum <https://www.liysf.org.uk/> was held July 26 – August 9, 2023. We were thrilled to send two students this year. Biology major **Manjot Benning** and Physics major **Catherine Laflamme** joined 500 other leading young scientists from more than 70 participating countries. Their activities can be read on the FoS blog at: <https://blogs.ufv.ca/science/category/trips/science-in-london/>.

Building Community

Dr. Cherie Enns, PGES Associate Professor with community engagement funding through the #QEScholars University programme hosted a successful event, "Future of Cities: Role of the United Nations," on September 11 at UFV. This event also highlighted the role of UFV global internships and collaborative partnerships related to city challenges.

Stefanie Laframboise, Program Technician and Agriculture student **Alan Fraser**, participated in the Maple Ridge/Pitt Meadows Country Fest held at the Albion Fairgrounds in July. **Michelle Morier**, Agriculture Department Coordinator, and students **Joshua Stolee** and **Megan Petty** joined **Addy Schneider** from the Future Students Office and attended the 151st Chilliwack Fair from August 11-13 held at the Chilliwack Heritage Park.

The new FoS Dean, **Dr. Michael Hitch**, hit the ground running since he started on September 1st. In between meeting one-on-one with science faculty and staff and attending to his dean duties, he's been visiting CEP and touring the barns with **Dr. Renee Prasad**.

Our annual Science Social was held on September 28 and was a huge success! We had a record number of students attend. Full write-up and photos can be found here: <https://blogs.ufv.ca/science/2023/09/29/record-numbers-attend-ufvs-16th-annual-science-social/>

Sample List of Presentations/Publications (UFV student names underlined> by FoS personnel:

Ahmad, B., Ali, S.H., Wahid, A., Bashir, Y., Shoukat, N., Qadri, S.M.T., et. al. 2023. Soft Sedimentary Deformations Structures (SSDS) in Neoproterozoic Sharaban Formation, Kirana Complex, Pakistan: Regional Tectonic Implications. *Doklady Earth Sciences* 510, 371–386. <https://doi.org/10.1134/S1028334X23600159>

Ba, H., Li, W. Ni, Y. Li, Y. Ju, B. Zhao, G. Wen, M. Hitch (2023) Effect of calcium to silicon ratio on the microstructure of hydrated calcium silicate gels prepared under medium alkalinity. *Construction and Building Materials*. <https://doi.org/10.1016/j.conbuildmat.2023.131240>

Baras A. Li, W. Ni, Z. Hussain, M. Hitch (2023) Evaluation of potential factors affecting steel slag carbonation: Opportunities and challenges. *Processes*. <https://doi.org/10.3390/pr11092590>

Garaschuk, K. Ugenti, C. "Tips for new (and Seasoned) Instructors" *Canadian Mathematical Society Notes*, 55 (4), <https://notes.math.ca/en/article/tips-for-new-and-seasoned-instructors/>

Hakimi, M.H., Abass, A.N., Rahim, A., Varfolomeev, M.A., **Qadri, S.M.T.**, et. al. 2023. Geochemical characteristics and genetic types of crude oils from a variety of geological reservoir rocks (Cretaceous–Palaeogene) in the Melut Basin, southern Sudan based on biomarker and carbon isotope composition. *Wiley-Geological Journal* <https://doi.org/10.1002/gj.4824>

Hakimi, M.H., Alaug, A.S., Kahal, A.Y., Rahim, A., Radwan, A.E., **Qadri, S.M.T.**, Kahn, W. 2023. Organic matter characteristics and gas generation prospect of the Late Cretaceous fluvial deltaic organic-rich shale in the offshore Jiza-Qamar Basin, Yemen based on organic geochemical, macerals composition, and biomarker results combined with 1-D basin modeling. *Wiley-Geological Journal* <https://doi.org/10.1002/gj.4846>

Hakimi, M.H., Lashin, A., Varfolomeev, M.A., Rahim, A., Sen, S., Naseem, W., Saeed, S.A., Al-Muntaser, A.A., **Qadri, S.M.T.**, and Mustapha, K.A. 2023. Oil generation and expulsion modeling of the syn-rift Salif oil-source rock in the Tihamah Basin, Yemeni Red Sea: Implications for shale oil exploration. Elsevier-Journal of African Earth Sciences (2023). *Journal of African Earth Sciences*, 202: 104924. <https://doi.org/10.1016/j.jafrearsci.2023.104924>

Hakimi, M.H., Lotfy, N.M., El Nady, M.M., Makled, W.A., Ramadan, F.S., Rahim, A., **Qadri, S.M.T.**, etc. 2023. Characterization of Lower Cretaceous organic-rich shales from the Kom Ombo Basin, Egypt: Implications for conventional oil generation *Journal of Asian Earth Sciences* 241, 105459. <https://doi.org/10.1016/j.jseaes.2022.105459>

Ho, A., Chinnadurai, A., Lemanowicz, A., **Huang, L., Sun, S.Z.**, and Ko, J. Systemic Therapy and Outcomes In Metastatic/Recurrent Endometrial Cancer – Real World Population Study. European Congress on Gynaecological Oncology (ESGO), Istanbul, Türkiye. Sep 28 – Oct 1, 2023.

Jacobs A., **M. Hitch**, S. Mosallanejad. T. Bhatelia, Li, F. Farhang (2023) Mineral carbonation potential (MCP) of mine waste material: derivation of an MCP parameter, *Minerals*. <https://doi.org/10.3390/min13091129>

Kügerl, M-T., **M. Hitch**, K. Gugerell (2023) Responsible sourcing for energy transitions: discussing academic narratives of responsible sourcing through the lens of natural resource justice. *Journal of Environmental Management*. <https://doi.org/10.1016/j.jenvman.2022.116711>

Manzoor, U., Ehsan, M., Hussain, M., Iftikhar, M.K., Abdelrahman, K., **Qadri, T.**, et. al. 2023. Harnessing Advanced Machine-Learning Algorithms for Optimized Data Conditioning and Petrophysical Analysis of Heterogeneous, Thin Reservoirs. *Energy & Fuels* 37, 14, 10218-10234. <https://doi.org/10.1021/acs.energyfuels.3c01293>

Maybee, B., E. Lilford, **M. Hitch** (2023) Environmental, social and governance (ESG) risk, uncertainty, and the mining life cycle. *The Extractive Industries and Society*. <https://doi.org/10.1016/j.exis.2023.101244>

Nguyen, B, X., VandeVen, W., MacNeil, G. A., Zhou, W., Paterson, A. R., Walsby, C. J., **Chiang, L.** 2023. High-Valent Ni and Cu complexes of a Tetraanionic Bis(amidateanilido) Ligand *Inorg. Chem.* 62, 37, 15180 - 15194. <https://doi.org/10.1021/acs.inorgchem.3c02358>

Qadri SMT, Hamdan A, Raj V, Ehsan M, Shamsuddin N, Hakimi MH, Mustapha KA. 2023. Assessment of Land Surface Temperature from the Indian Cities of Ranchi and Dhanbad during COVID-19 Lockdown: Implications on the Urban Climatology. *Sustainability* 15(17):12961. <https://doi.org/10.3390/su151712961>

Rodolaki, C., Barakos, G., **Hitch, M.** (Accepted) The role of intercultural differences and challenges faced in communicating rehabilitation of mine sites' integration from Europe to Africa. *The Extractive Industries and Society*.

Sailer, R., VandeVen, W., Teindl, K., and **Chiang, L.** (2023) Ni^{II} and Cu^{II} complexes of a salen ligand bearing ferrocenes in its secondary coordination sphere *RSC Advances* 13, 7293 - 7299. <https://doi.org/10.1039/D2RA07671C>

Sajid, M., Ali, L., Khan, M.Y., Khan, M., and **Qadri, S.M.T.** 2023. Integrated Geophysical and Geochemical Analyses for Assessment of Potential Coal Prospects in Tirah Area, Khyber Pakhtunkhwa, Pakistan. *MDPI-Energies* 16(18), 6541; <https://doi.org/10.3390/en16186541>

Wang, C., Guo, M., **Huang, L., Sun, S.,** Davis, N. 2023. Factors Influencing Recurrence in Medial Breast Cancer Tumors after Skin Sparing Mastectomy and Immediate Breast Reconstruction. *Clinical Breast* ISSN 1526-8209. <https://doi.org/10.1016/j.clbc.2023.09.006>

Wang, C., Guo, M., **Huang, L., Sun, S.,** Davis, N. Factors influencing recurrence in Medial Breast Cancer after Skin Sparing with Immediate Reconstruction. Canadian Association of General Surgeons Conference, Canadian Surgery Forum (CSF), Vancouver, Canada. Sep 20 – 23, 2023.

Yaghmaei-Sabegh, S., Kun, J., and **Qadri, S.M.T.** 2023. Characteristics of records obtained at the 14 November 2021 Fin doublet events, Southern Iran *Nat Hazards* 117, 579-596. <https://doi.org/10.1007/s11069-023-05873-7>

Zhao, A., X. Song, J. Li, Q. Yuan, Y. Pei, R. Li, **M. Hitch** (2023) Effects of a carbon tax on carbon emission reductions: Evidence in China. *Journal of Environmental Research and Public Health*. <https://doi.org/10.3390/ijerph20032289>