

THE G(e)OSSIP

The official newsletter of the Geology Department

27 May 2021 | Issue 3

WELCOME

May has rolled around already, and summer is fast approaching! The renovation on the museum building roof is well underway and we're feeling optimistic about the future as the government's COVID-19 restrictions continue to ease.

The Geology Department is still looking for a new logo. Get your creative juices flowing and send your design submissions to geossip.tcd@gmail.com.

Our newsletters are archived and uploaded on the Geology website. You can find them [here](#).

The G(e)ossip will be released on the last Thursday of each month. If you have anything to be added, please email us at geossip.tcd@gmail.com.

We hope you enjoy reading this with a nice hot cup of coffee or tea. Enjoy the rest of the spring!

The G(e)ossip Team

STAFF MEMBERS IN THE SPOTLIGHT



This month we would like to shine the spotlight on our technicians! These staff members are spread between the museum building, TTEC and the iCRAG lab.

The geology department would not run smoothly without the following people:

Technicians in the Museum Building

Ms. Elaine Cullen - Senior Technical Officer
Mr. Francis Hendron - Chief Technical Officer (Geography and Geology)
Mr. Noel McGinley - Senior Technical Officer
Ms. Maura Morgan - Laboratory Attendant
Ms. Cora McKenna - Technical Officer

Technicians at TTEC (Unit 6 & 7)

Ms. Cora McKenna - Technical Officer, UNIT 7
Ms. Sarah Carty - ESRL Junior Technician and Deputy Quality Manager, UNIT 6
Ms. Clara Decastro - ESRL Instrument & Data Specialist and Quality Manager, UNIT 6

Technicians in The iCRAG Lab

Ms. Leona O'Connor - Chief Technical Officer (Specialist)

For more information on everyone's role, check out the TCD geology [webpage](#).

COVID-19 UPDATE

Please don't forget to sign in on the Geology Google Doc and check in on the [SafeZone app](#) if you're on campus. This is very important for contact tracing in the event of a positive COVID-19 case on campus. As always, wash your hands, practice social distancing and wear a mask. You can stay up-to-date on all TCD statements [here](#).

Francis, Sarah and Leona introduce themselves below and provide further insight into their roles.

Mr. Francis Hendron - Chief Technical Officer (Geography and Geology).

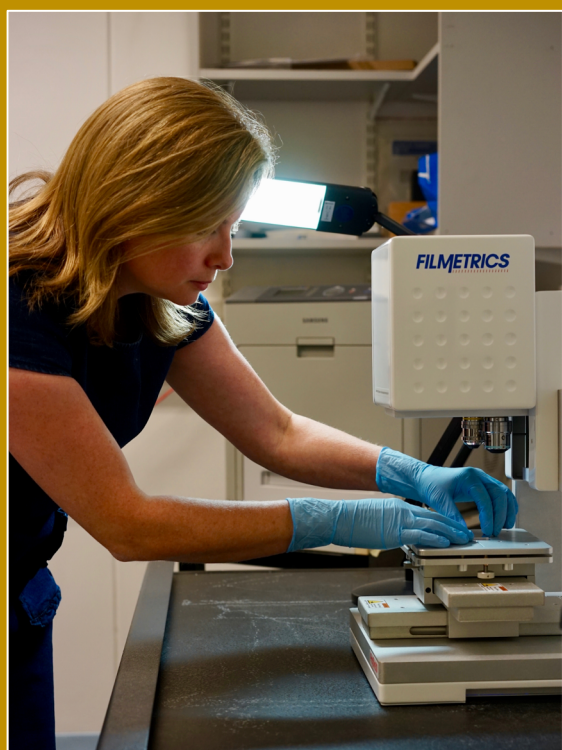
I am Francis Hendron, Chief Technical Officer for Geology and Geography. 1984 is the year I started as a trainee technician, I progressed to technician and then to Specialist Technician in Palynology. I have since been promoted to Chief Technical Officer. To find me you must come down to the basement where my door is always open! My interests include reading, writing poetry, the Irish language, sports, and all types of music.

Ms. Sarah Carty - ESRL Junior Technician and Deputy Quality Manager, TTEC UNIT 6.

Hi all, I'm Sarah. I work in the [Earth Surface Research Laboratory \(ESRL\)](#) based over in Unit 6 TTEC. I studied Earth Science here in TCD before completing a masters in Sustainable Energy & Green Technologies in UCD, and previously worked as a GIS Technician. Aside from helping with the day-to-day running of the lab, my main roles in the ESRL include sample preparation for XRF analysis and working towards achieving ISO 17025 accreditation. I also help provide access to Unit 36 for those looking to use equipment kept there.



Ms. Leona O'Connor - Chief Technical Officer (Specialist), iCrag Lab.



My day to day work is with our busy ISO9001:2015 accredited commercial analysis laboratory in the basement of the Panoz Institute (codename CMA), our analytical capabilities are utilised by industry nationally and internationally for forensic failure analysis, foreign material identification/classification analysis etc. With iCrag Lab@TCD, we offer fantastic sample preparation and material characterisation research facilities with Scanning Electron Microscopes coupled with EDS, CL, Raman microscopy and soon to arrive EBSD, LA-ICP-MS, White Light Interferometry and much more. There's much analytical knowledge from 20 years working between industry and academia as well as equipment training and other support that can be provided to students so check it out on [Leona \(Mulvey\) O'Connor | LinkedIn](#)

PUBLICATIONS

PhD candidate Brendan Hoare has published a paper in *Chemical Geology* titled *Metasomatism of the Kaapvaal Craton during Cretaceous intraplate magmatism revealed by combined zircon U-Pb isotope and trace element analysis*. You can read it [here](#).

TCD alumnus Aodhán Ó Gogáin and Geology Head of School Patrick Wyse Jackson have a new publication titled *Microcomputed tomography of the holotype of the early tetrapod Ichthyerpeton bradleyae (Huxley in Wright and Huxley, 1866) from the Pennsylvanian of Ireland*. You can read it in the *Journal of Paleontology* [here](#).

WEBINARS

8th June - John Howe, Getting into deep water: adventures in marine geology.

Register [here](#).

16th June - Witold Szczuciński, What is left after tsunami disasters? – a sedimentological perspective. Click [here](#).

UPCOMING STUDENT TALKS

Environ 2021

Niamh Faulkner and Lucy Blennerhassett will be presenting at Environ 2021 from 17th-19th June. Check back on their website for abstracts [here](#).

PRIDE in Research 2021

Lucy Blennerhassett will be giving a presentation at PRIDE in Research at TCD on 17th June. Check their [Twitter](#) page for updates.

EDUCATION

Quentin Crowley is working with [An Taisce](#) on a networked GLOBE Europe-Eurasia citizen science project. The project will involve national and secondary schools in Ireland to develop a protocol for teachers and students to collect surface water samples and search for microplastics. The aim is to build awareness of science subjects amongst school children and to test the microplastic sampling protocol before it is submitted to the GLOBE Program as a "New Hydrosphere Protocol Proposal". [GLOBE](#) is a worldwide science and education programme which receives support from several US governmental agencies, including NASA, NOAA and NSF.



Lecturers from Geology (Profs. Sean McClenagan and Juan Diego Rodriguez-Blanco) will contribute to a new Postgrad Diploma in the Circular Economy and Recycling Technologies that will begin in September 2021. With teaching from the School of Chemistry, Engineering, Natural Sciences and Physics, this course will offer students a unique opportunity to learn about this critical area from a multidisciplinary perspective.

The main goal of this course is to provide necessary education in the Circular Economy and recycling technologies area. The course will provide teaching on relevant aspects of the Circular Economy and will examine the recycling, reprocessing and remanufacturing processes required to achieve the Circular Economy framework. It will also explore designs to recover and reuse materials. Waste management, scarcity of resources, minimizing emissions and energy use, while maximizing selective reuse and recycling processes are extremely important for further economic growth, reduction of environmental impacts and to tackle climate disruption.

For more information on this course and the application process, please register [here](#).

LAB UPDATES



The ESRL will be launching an open call for projects to use the laboratory facilities in mid-June. Proposals will be reviewed by the ESRL Scientific Management Committee and successful applicants will receive free at the point of use analyses, subsidised by GSI.

The call will be open to researchers at all levels but projects cannot already have funding. If you have any questions, feel free to send an email to Mike Stock at michael.stock@tcd.ie.

FIELDWORK AT SEA

Since last month's issue, Niamh Faulkner and Erica Krueger have set sail on board the RV Celtic Explorer with the PoRo-Clim research team. They have been at the mercy of the weather in the North Atlantic and have battled through some pretty intense seasickness, but they are still obtaining some fantastic results! The crew have seen some amazing sights, including whales, stunning sunsets and stormy seas! You can read more about the expedition and their research on the PoRo-Clim [blog](#) or follow them on [Twitter](#) and [Instagram](#) @poroclim.



PODCASTS

iCRAGorama had two episodes this month.

- S3E4 - "Scientists Behind Screens" with Drs Nick Scropton and Lingli Zhou.
- S3E3 - "Irish Stratigraphy: The Blue Book Project" with Rob Doyle and Eoin McGrath.

You can find all the episodes [here](#).



Here are some other science podcasts that our editors recommend:

- In Our Time [The PETM](#)
- Ologies [Biomineralogy](#)
- 99 Percent Invisible [Welcome to Jurassic Art](#)



NEW POSITION

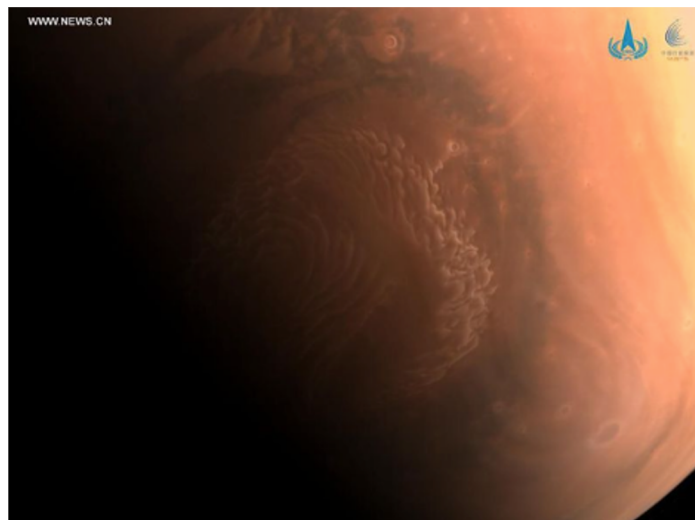
We would like to welcome **Remi Rateau** who started a new position as a Research Assistant (Jan 2021 to end of August 2022). Remi is co-organizing the Senior Sophister field trip with Micha Ruhl which is a replacement for the Spain field trip. The trip is dedicated to the Paleozoic geology of North County Dublin. He is also helping with a couple of other field trips and doing some research activity on the side.

DON'T FORGET!

Goldschmidt 2021: early registration deadline **1st of June**

Chinese rover lands on Mars

The Chinese rover 'Zhurong' touched down on the surface of Mars on Saturday May 15th as part of China's Tianwen-1 mission. The mission comes with excitement as it is the only successful landing of a non-American rover on the red planet, where other missions have previously failed or lost contact upon touch down. The rover landed in the Utopia Planitia, a 3300 km diameter basin formed from an early impact. The terrain is predominantly made up of volcanic rock and is an ideal location to land as it is mostly flat. Utopia Planitia is also thought to have contained a former ocean and is therefore, a potential source for the detection of water. Geoscientists will now use Zhurong's landing to study Martian geology and look for signs of water above and below ground. The Chinese team hopes to get about 90 Mars days (93 Earth days) of service out of it. Zhurong has a laser like NASA's 'Perseverance' that vaporises rocks up to 7 meters away where geochemistry is then determined by a spectrometer. Other Instruments on board the rover include a magnetometer, radar that penetrates the ground surface and highly sophisticated cameras.



Sources:

Smithsonian Magazine (2021). China's Zhurong Rover Lands on Mars. [Link](#).

BBC Science News (2021). China lands its Zhurong rover on Mars. [Link](#).

The Planetary Society (2021). Tianwen-1, China's Mars Rover and Orbiter Mission. [Link](#).

China National Space Administration (CNSA). [Link](#).

Mount Nyiragongo Erupts

Mount Nyiragongo is a stratovolcano in the Democratic Republic of Congo and has the world's largest active lava lake. It is one of the world's most active volcanoes and is considered among the most dangerous. The volcano is only 10km away from the town of Goma, which has a population of about 2 million people. An effusive eruption began on the volcano's eastern flank on the evening of Saturday 22nd May and lava flows reached Goma. A mass evacuation has occurred since the eruption and seismic activity has continued around the volcanic centre, indicating the upwards movement of magma. You can read more about the eruption at the sources below.

Sources:

Valade, S., Ripepe, M., Giuffrida, G., Karume, K., & Tedesco, D. (2018). Dynamics of Mount Nyiragongo lava lake inferred from thermal imaging and infrasound array. *Earth and Planetary Science Letters*, 500, 192–204.

National Geographic Science News (2021). Mount Nyiragongo just erupted—here's why it's one of Africa's most dangerous volcanoes. [Link](#).

BBC News World Africa (2021). Mount Nyiragongo: DR Congo residents flee as volcano erupts. [Link](#).

