

THE G(e)OSSIP

The official newsletter of the Geology Department

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WELCOME

We'd like to welcome you and the summer back again after three endless weeks of grey skies and no sunshine! We hope you have all had a chance to take a holiday of some form before term starts again for 2021/2022. It looks like we're in for a busy academic year!

The roof work on the museum building is coming along and it's finally bright again inside! Cheers to a nice last few days of August for you all and we hope you enjoy reading this month's issue.

The first part of the IPCC Sixth Assessment Report was released earlier this month. You can access it in full [here](#).

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

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

-The G(e)ossip Team

STAFF MEMBER IN THE SPOTLIGHT



Juan Diego Rodriguez-Blanco (a.k.a. "JD") grew up in North Spain, where he completed his undergraduate in geology, MSc in mineralogy, and PhD in mineral-water interaction processes in 2006. From 2007 to 2012 he worked as a Marie Curie postdoctoral researcher at the School of Earth and Environment, University of Leeds (UK), before moving to Denmark as an Assistant Professor at the Nano Science Center (Department of Chemistry, University of Copenhagen). In 2016 he was appointed as a lecturer at the Department of Geology in TCD. He teaches mineralogy and geochemistry, and his research interests are the study of mechanisms of crystallisation of carbonates, phosphates, and sulphates at the nanoscale to understand (bio)chemical element cycling and mineral-water interaction processes.

Juan Diego's experience also includes many stays at synchrotron facilities (e.g., Diamond Light Source, ISIS neutron source, Daresbury SRS, Advanced Photon Source) and a NASA/ESA astrobiology expedition in Svalbard (AMASE) where he participated as a mineralogist. He has supervised 5 PhD students to completion and currently has a research group of 5 PhD and 1 postdoc at TCD. Outside of geology he has been an amateur astronomer since he was a teenager and has participated in observation campaigns led by the American Association of Variable Star Observers to study several cataclysmic variable stars and novae with photometric observations. He loves photography, listening to classical music from the 20th and 21st centuries and music from the 80s, reading (he particularly loves science-fiction), walking, and cycling with his wife and 6 year old kid. Get to know Juan Diego's team on the following page and read about his past and present students [here](#).



Niamh Faulkner

Hi all, I'm Niamh, I am about to start the final year of my PhD (eek!) under the supervision of Juan Diego. I study the effect of factors (e.g. the presence of foreign ions) on carbonate minerals formation, within the context of carbon capture and storage. This involves using techniques such as UV-vis spectrophotometry and X-ray Diffraction. I am passionate about the application of geology and geological techniques in tackling the climate crisis. I also really enjoy working in science communication, including co-hosting the iCRAGorama podcast. I love sailing, hiking, swimming and baking (when coffee mornings start back up I'll bring in plenty of tasty treats!). I am also the postgraduate rep, so if you ever have any issues or questions, I'm here to help :)

Adrienn Maria Szucs

Hi all. I am Adri, a PhD student starting my 3rd year with Juan Diego Rodriguez-Blanco. I play with rare-earth carbonates to find out more about their nature, origin, chemistry, and general behaviour at low temperature under Earth surface conditions. As I am in the carbonate world, I also find great interest in the dolomite problem through working with Mg-rich carbonates and stromatolites. If I am not working, I am fostering my houseplants (there are never enough of them) or trying to learn Korean. I would never say no to an invitation for a coffee, swimming in the cold sea or a game/quiz night (just drop me an email).



Luca Terribili

Hi I'm Luca. The research project in which I am involved is called SEleCTOR (SEparating Critical metals ThrOugh mineRal crystallization) and its main objective is to develop novel, clean and cheap methods to separate rare earths elements from wastewaters through mineral crystallization. The starting date was 1st September 2020 and my supervisor is Dr. Rodriguez-Blanco. I already live in Dublin. I got both the bachelor and master degrees at University of Trieste (Italy) where I had been working as a research assistant in the past two years. I really like geochemistry but my research interests range also in hydrogeology, geomorphology and applied geology. In my spare time I like playing volleyball, volunteering, reading books and doing historical research too.

Melanie Maddin

Hi, I'm Melanie. I started my PhD in September 2020 with Juan Diego Rodriguez-Blanco. The aim of my research is to determine the effect of rare earths during the crystallisation of carbonates from solution at various physicochemical conditions. I am a 2020 Earth Science graduate from Trinity College Dublin. I am originally from Canada, but have been living in Ireland since 2006. When I am not studying I am usually creating something. I love painting, drawing and embroidery and have just started making and selling jewellery.



LAB UPDATES



The preparation laboratory at Unit 7 of Trinity Technology and Enterprise Center is being reorganised for the PhD students and postdocs working with Micha Ruhl, Mike Stock and Juan Diego Rodriguez-Blanco. In parallel, the iCRAGLabs@TCD are welcoming a new mass spectrometer. Thank you very much to all staff and students making this possible, in particular to Cora McKenna and Robbie Goodhue.

VIVAS

Congratulations to those that successfully defended their PhD vivas.



Eoghan Corbett, Refinement of high-spatial resolution U-Pb geochronological methodologies in zircon.

DEPARTURES

Ricardo Silva has recently left his [postdoctoral position](#) in the Department of Geology to take up a tenure-track position in Palaeoenvironmental Sedimentology at the Department of Earth Sciences at the University of Manitoba (Winnipeg, Canada).

We congratulate Ricardo on obtaining his new position and wish him all the success in his future research endeavours!

CONFERENCES



We are happy to announce that the **Irish Geosciences Early Career Research Symposium (iGEO)** is back and is being planned for June 2022. iGEO2022 aims to provide early career geoscientists with an opportunity to collaborate and benefit from the multidisciplinary nature of research across Ireland. This two-day event will be held in-person for the first time at University College Cork (UCC). The planning committee would love to get your opinion on what you'd like to see at iGEO2022 - please take a few minutes to complete [this survey](#)! This will also offer you the opportunity to sign up to the dedicated mailing list for this event. For further information please visit their website [here](#).

Registration is now open for the **EPA Circular Economy Conference 2021** - Ireland's move to a new economy, which is taking place online on 15-16 September. Click [here](#) for more information and to register.

PODCASTS

iCRAGorama is returning next month!



Check their podcast page for upcoming episodes on your favourite streaming platform [here](#).

FIELDWORK

The new Junior Sophister (3rd year) field mapping class took place in Leenane, Co. Mayo on the 26th - 30th July. This trip was led by Chris Nicholas and Dave Chew, and gave training to the JS students who wished to undertake a field-mapping dissertation for the new TR062 (Geography & Geoscience) degree. They spent four days mapping and interpreting the sedimentology of the Silurian succession at Lough Fee, and one day on the lovely Dalradian rocks of Cleggan Head.



They were also joined by a first year and two second year students who signed up to gain extra field experience, and in the evenings by various itinerant geologists who happened to be nearby (Jerry, Una and John & Alison Graham). Chris and Dave would like to thank the students whose enthusiasm during the fieldwork made for a great trip.



PUBLICATIONS

Ricardo Silva and Micha Ruhl, Pacing of late Pliensbachian and early Toarcian carbon cycle perturbations and environmental change in the westernmost Tethys (La Cerradura section, Subbetic Zone of the Betic Cordillera, Spain). You can access the paper [here](#).

Ricardo Silva and Micha Ruhl, An Early Jurassic (Sinemurian-Toarcian) stratigraphic framework for the occurrence of Organic Matter Preservation Intervals (OMPIs). Accepted.

Micha Ruhl, Primary versus carbonate production in the Toarcian, a case study from the Llanbedr borehole (Mochras Farm, Wales). You can access the paper [here](#).

Micha Ruhl, Molecular and petrographical evidence for lacustrine environmental and biotic change in the palaeo-Sichuan mega-lake (China) during the Toarcian Oceanic Anoxic Event. You can access the paper [here](#).

Micha Ruhl, Response of Carnian Pluvial Episode evidenced by organic carbon isotopic excursions from western Hubei, South China. Accepted.

Daniel Gonzalez-Santamaria, SEM-EDX study of bentonite alteration under the influence of cement alkaline solutions. This paper would have been impossible to carry out this study without the help of Colin Reid, Leona O'Connor, and Paul Guyett at iCragLabs@TCD. You can access the paper [here](#).

Underwater volcano creates new island off of Japan



A recent eruption of the underwater volcano Fukutoku-Okanoba has led to a new island near Iwo Jima off the southern coast of Japan. So far, the new island is only one km in diameter, but the underwater volcano continues to erupt. Japan has had landmasses appear before (1904, 1914, 1986, only to have them disappear shortly after due to coastal erosion. It is believed that the entire caldera will eventually surface, and eruptions will continue to produce a steady amount of lava flow that will allow this landmass to become a permanent fixture. If this is the case, geopolitical ramifications are a possibility. You can watch a video clip of the eruption from mid-August [here](#). Japan is currently comprised of 6,852 islands, with the newest island named Nishinoshima having appeared in 2013. Sources: [BBC](#), [IFLScience](#)

NEW POSITIONS

Juan Diego Rodriguez-Blanco will become the new Director of the MSc Environmental Sciences as well as the new Deputy Director of the MSc Energy Sciences, from September 2021.

We would like to welcome Dave Chew as the new Geology Postgraduate Coordinator that will be taking over from Juan Diego in September.

WEBINARS

[Irish Geological Association](#)

4 September - Shane Tyrrell, *Irish Triassic palaeogeography*; register at info@geology.ie

[Net Zero Series](#)

21 September - Sustainable Supply Chains

[Ore Deposits Hub](#)

22 September - TBA; check their [archive](#) for previous webinars

[Global Climate Action Symposium](#)

27-29 September - Sustainable Food, Climate & Health, UN's Ocean Decade

MENTAL HEALTH MATTERS

Did you know that TCD's Student Counselling Services is open and available to all students? Check out their website to read about the services they provide [here](#), email them at student-counselling@tcd.ie to request an appointment, and follow them on Instagram at [@tcd_headspace](#) for mindfulness and mental health awareness tips.



COVID-19

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](#).