



25rd March 2024 | Issue 24

Hello and welcome to the March edition of the G(e)ossip! This month has been especially busy in our department from conferences to field trips to freak snow storms! Read on to find out more.

We're looking forward to seeing what everyone gets up to next month. Also, good luck to our 4th year students who are wrapping up their Capstone projects!

The G(e)ossip will be released every month. Past issues are archived and uploaded on the Geology website which you can access [here](#).

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

DEPARTMENT NEWS

This month we said goodbye to **Elliot Carter**. It has already felt much emptier around here and we'll very much miss seeing him around the department! We'll especially miss watching him valiantly lug his bike up all those stairs... Elliot will be moving to the U.K. to begin a lecturing position at Keele University. We're all wishing him the best of luck – congratulations on the exciting new position, Elliot!



CONTRIBUTIONS

We want to hear from you! Did we miss something? Have you got any news to share with the department? Please let us know at geossip.tcd@gmail.com to be featured in the next newsletter. We would love to hear from you!



DEPARTMENT NEWS

Quentin Crowley and **Subhash Chandra** participated in a communication workshop in Portlaoise, as part of a new community-based education project in the Irish Midlands (www.ikc3.ie).



IKC3
CARBON, CLIMATE
& COMMUNITY
ACTION

STAFF SPOTLIGHT – MATTHIAS SINNESAEI



Hugging Devonian sedimentary (diagenetic?) cycles in a quarry in Germany.

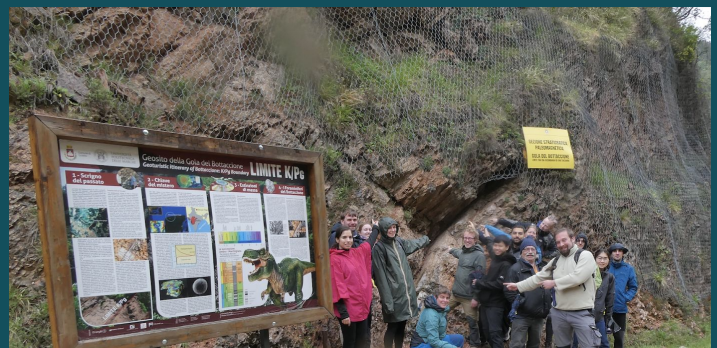
This issue, our staff spotlight is our newest edition, **Mathias Sinnesael** – welcome to the department, Matthias! Read on to find out more about Matthias' story and how his adventures led him to our department...

Once upon a time, in a world where things tend to be pulled straighter and faster, there was a geologist who loved all things curved and cyclic. His hero was Milutin Milankovitch. He grew up in the capital of the EU Empire in a small country surrounded by many big ones. Torn by a passion for both history and the environment around him, he found a perfect home in the study of geology.

He acquired a never-ending curiosity into better understanding the arts of stratigraphy and palaeoclimatology to gain more insight in the evolution of life and climate on Earth. Then, after long and intense training in field and lab skills, struggling with some of the oldest rocks (Paleozoic) from all around the world (Canada, Morocco, Siberia, ...) he finally graduated (2020 PhD, Vrije Universiteit Brussel) and set sail to discover new horizons. While the Brexit nation was breaking with the Empire, and the whole world was attacked by a mysterious virus, he explored a parallel universe of Bayesian statistics and British culinary practices (2020-2021 Post-Doc, Durham University). Longing for a different type of cuisine, he escaped back to the continent through a deep tunnel to reach the land of cheese and wine; and learn more about how the dances of the Earth, Moon, and Sun with each other and surrounding planets can change climate on Earth (2021-2024 Post-Doc, Paris Observatory).



Discussing Cretaceous sedimentary strata on an outcrop in Italy.



Fieldtrip to the Cretaceous-Palaeogene boundary in Gubbio, Italy (with Irish weather).

His travels have now brought him to the Emerald Isle. You might find him in a quiet corner of the Museum Building (Office 1.12) pondering how to spread the cycle gospel. Possible known tactics might include lecturing, taking students out to hammer rocks and dissolve them in acids, publishing geofantasy stories and bugging colleagues with questions. When he does not think about cycles, he enjoys good company, nice food (often too much of it), walking and running around, discovering the world and sometimes stretching his rusty fingers over a piano keyboard (if anyone knows of a good place to practice?!). His door is always open, and he looks forward to get to know you all better.

More official information and links to relevant webpages can be found on:

<https://www.tcd.ie/Geology/people/sinnesam/>

M4284
Aurichalcite
Yekaterinberg, Russia



TCD Geological Museum

1 cm

The specimen of the month is...**M4284**, chosen by **Eimear Furlong**!

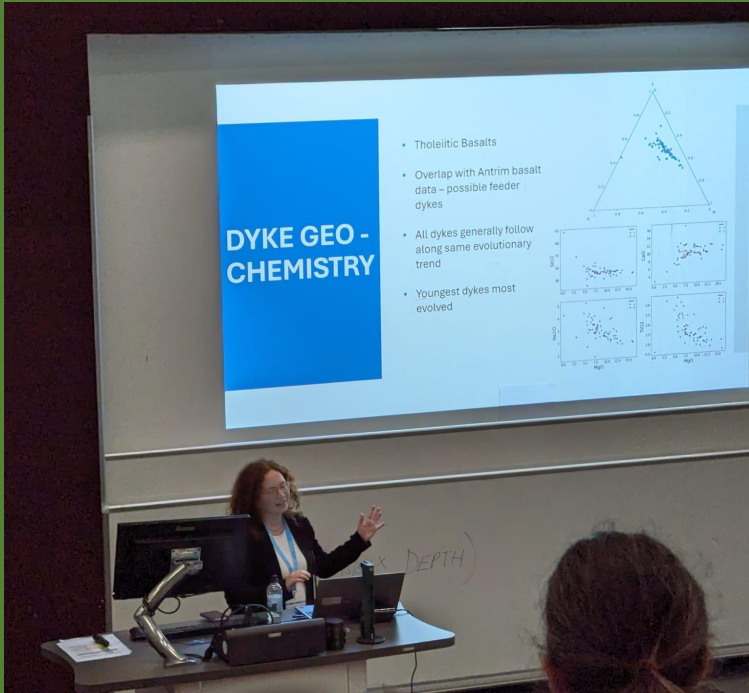
This beautiful specimen of aurichalcite is from Yekaterinberg, a city just east of the Urals and west of Siberia. The area has been known for mineral resources for a long time – back to prehistory and was certainly important from the 18th century onward. We know this specimen was collected sometime before 1850 as it is in Apjohn's catalogue where he describes it as "Of a green colour, foliated structure, and pearly lustre, on yellowish-white common calamine; accompanied by particles of earthy black oxide of manganese. Catherineberg, Siberia". Aurichalcite is a hydrous zinc copper carbonate that typically occurs in the oxidation zone of zinc and copper sulphide deposits, where it is deposited by circulating carbonate-rich fluids.

COMMUNICATION

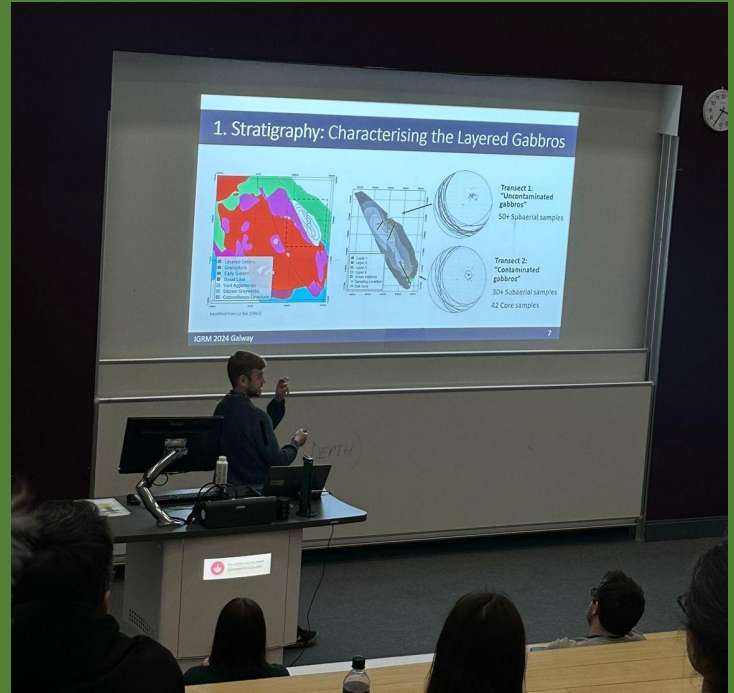
Dublin Magmatism Group at TCD bring together researchers from across different volcanology and magmatism research teams aiming to facilitate collaboration across different institutions invested in volcanological research across Dublin. There are now active social media channels on both Instagram and [X \(Twitter\)](#) please follow [@dublinmagma](#) for updates.



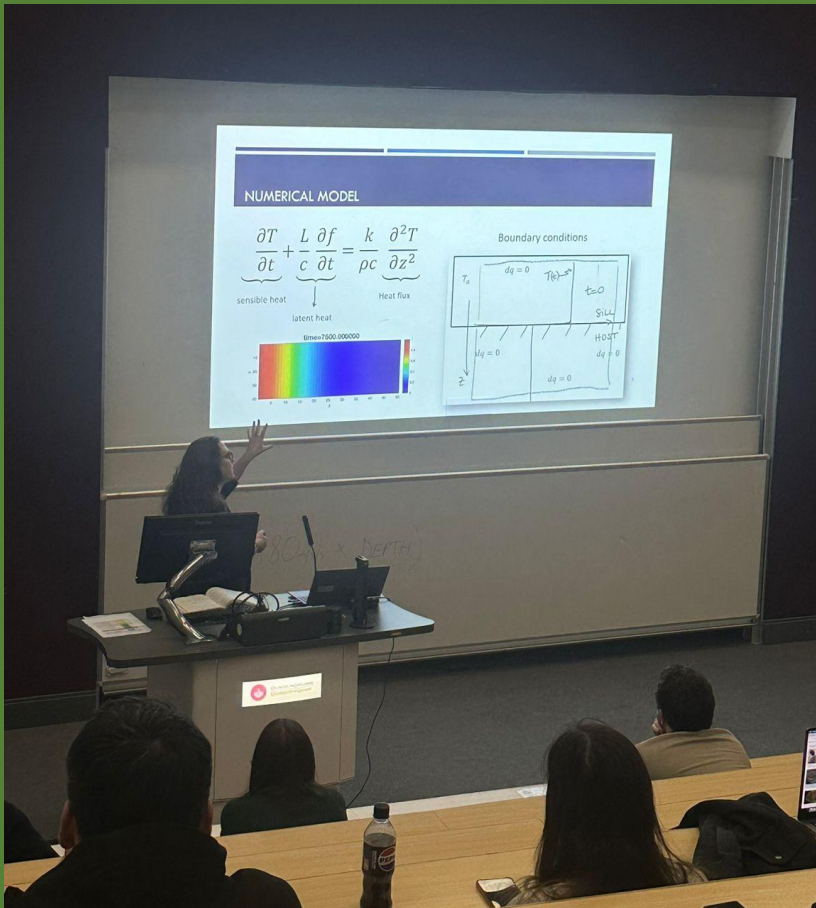
Jack Beckwith, Eloïse Bretagne, Eshbal Geifman, Anna Morrison, Amanda Perera, Mike Stock, and Luca Terribili attended IGRM in Galway from 1-3 March to present their research. Jack, Eloïse, Eshbal, Amanda, and Mike all gave talks, and Anna presented a poster.



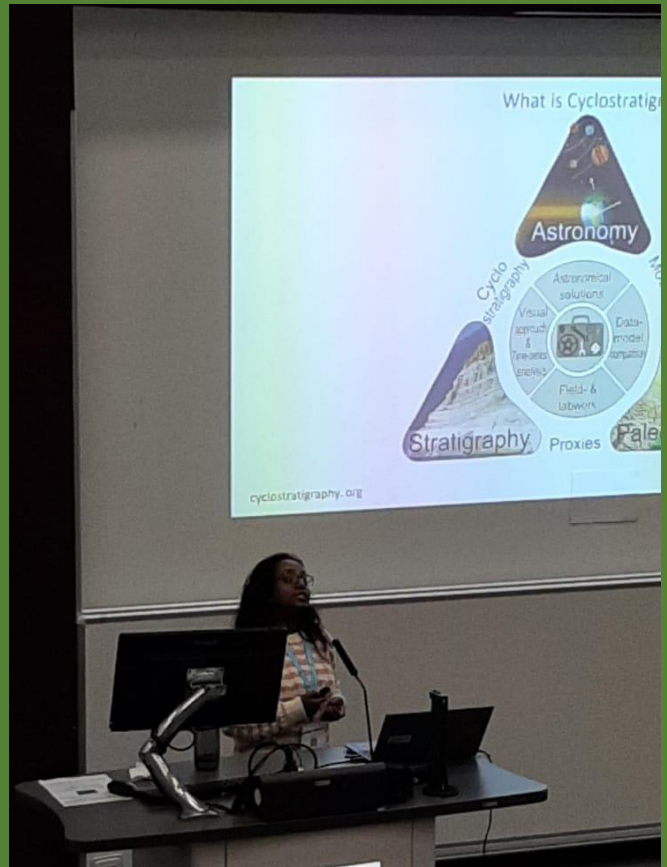
Eshbal's talk, *Rare Earth Element Indicators of Assimilation in Magmas of the British and Irish Paleogene Igneous Province*



Jack's talk, *A new geochemical characterisation of a classic Palaeogene layered intrusion: the Carlingford Complex*

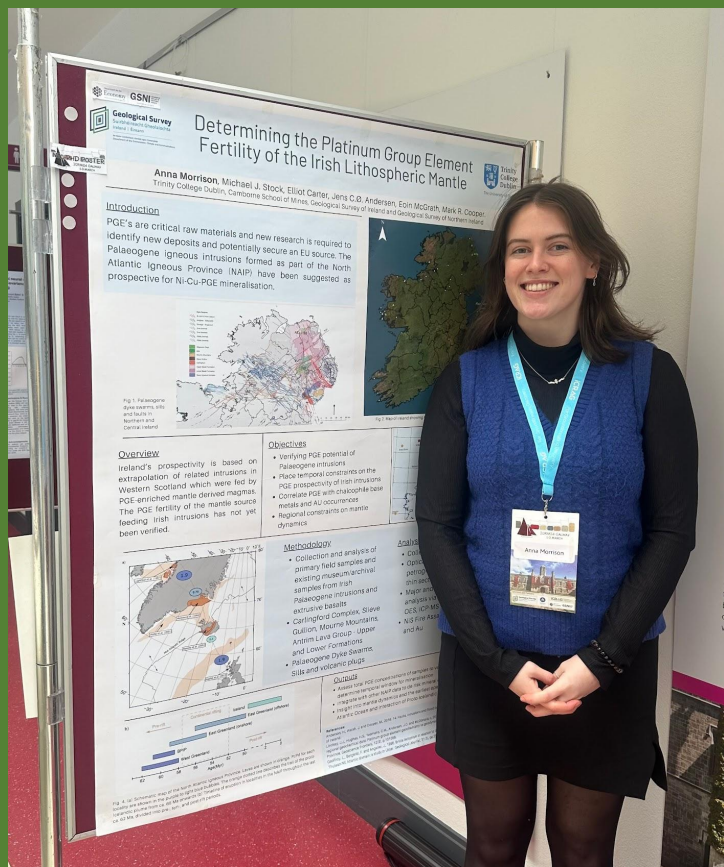


Eloïse's talk, *Numerical modelling of the thermal evolution of shallow-crustal sills and the associated assimilation of host-rock material*



Amanda's talk, *Cyclostratigraphic chronometry of the end-Triassic mass extinction and global carbon cycle perturbations (Larne Basin, Northern Ireland)*

CONFERENCES



Anna Morrison presenting a poster on her current work, *Determining the Platinum Group Element Fertility of the Irish Lithospheric Mantle*.

Within the Post Graduate section, she was awarded runner up and highly commended for her poster. Congratulations Anna!

DEPARTMENT NEWS

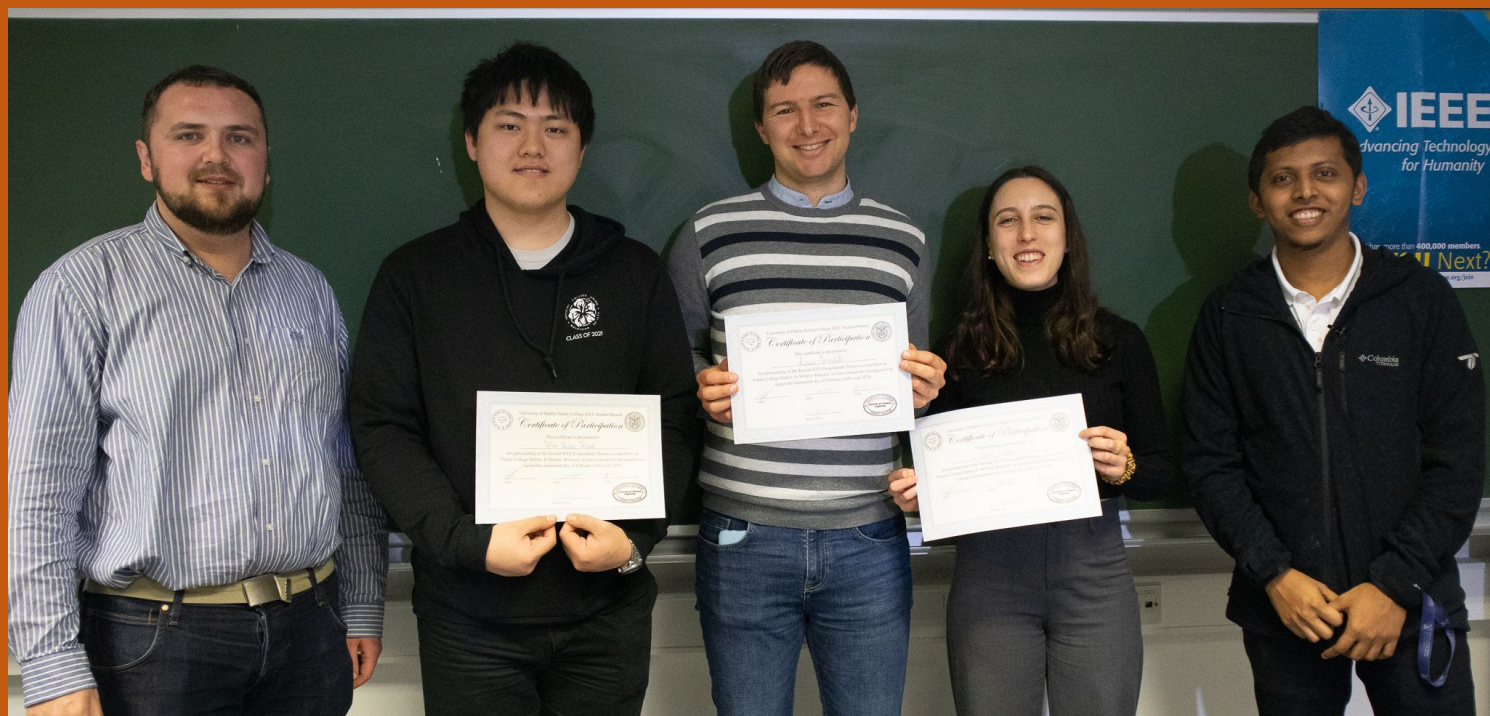
Quentin Crowley delivered an invited talk "Machine Learning Applied to Topsoil Geochemistry to Model Radon Distribution" at the iCRAG datathon in UCD on March 19th.

iCRAG
SFI RESEARCH CENTRE
IN APPLIED GEOSCIENCES

DEPARTMENT NEWS

Thresis is the annual flagship event of the local IEEE Student Branch of Trinity College Dublin, where early-stage researchers are invited to present an accessible 3-minute presentation of their research intended for a broad audience. The event was open-to-all with more than 40 attendees participating, with a broad pool of audience members with diverse expertise.

Luca Terribili came as first runner up his topic Unlocking the secrets of rare earth minerals: finding a path to sustainable extraction which proposes new techniques to extract rare earth minerals in a more environmentally friendly way using applied mineralogy and geochemistry. Congratulations Luca!



CHORAL SOCIETY CONCERT

You are cordially invited to the Choral Society's Concert on **27-28th March** in the Exam Hall, where Brahms's Requiem and Mendelssohn's Christus will be performed. Departmental members **Dave Chew**, **Eimear Prendergast**, and **Blanka Kovács** are all part of the choir and would be delighted to welcome you to the Exam Hall for a nice evening of music. You can get your tickets through [this link](#).

Hope to see you there,
Choral Society

Wednesday, 27th of March

Thursday 28th of March

7:30 p.m.



UNIVERSITY OF DUBLIN CHORAL SOCIETY PRESENTS



BRAHMS' REQUIEM & MENDELSSOHN'S CHRISTUS

Exam Hall TCD

Tickets:

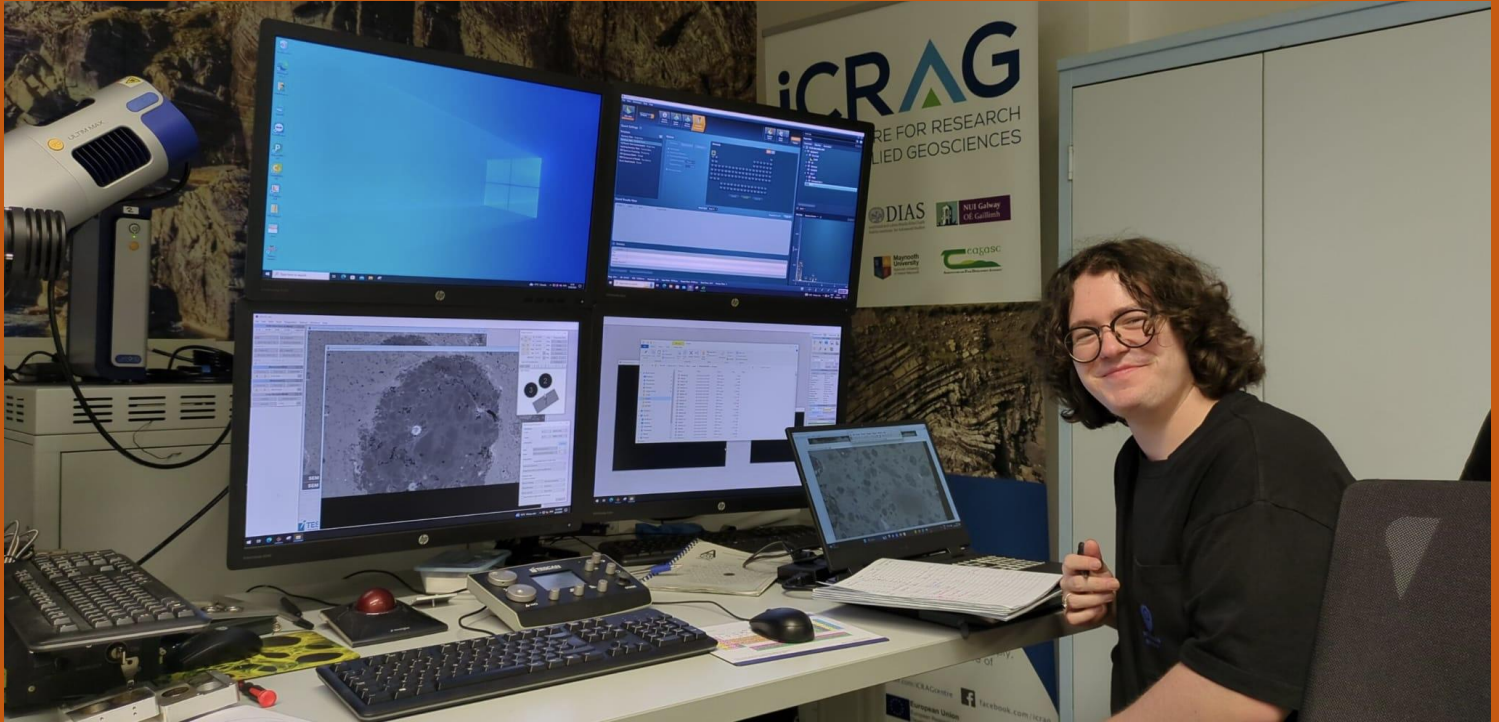
€5 student / €15 concession / €20 general



DEPARTMENT NEWS

Fourth year Geoscience student **David Farrelly** has recently been accepted into the Lunar and Planetary Institute Summer Internship Program this year! David will be travelling to Houston, Texas from 3 June to 9 August to be involved in hands-on research with cutting edge tech and old, old space rocks.

David would like to thank his capstone supervisor **Dr. Swetha Venugopal** for introducing him to the world of the beyond with a capstone project dedicated to a chondrite (which you can visit on 3 April in the main atrium – refreshments provided)! Congratulations David! We wish him the best of luck on his adventures and can't wait to hear all about it!



DEPARTMENT NEWS

The 2023-24 cohort of the postgraduate certificate in Climate Entrepreneurship had their final session on March 16th. The course is a collaboration between the School of Natural Sciences under the Directorship of **Quentin Crowley**, and Tangent, Trinity's ideas and innovation workspace.





60th Anniversary Seminar Series

Modern advancements in volcano monitoring: petrological insights and volcano seismology



Prof. Chris Bean
Head of Geophysics
Dublin Institute for Advanced Studies

Dr. Swetha Venugopal
Assistant Professor
Trinity College Dublin



Also accessible via Zoom,
Scan here to add to your calendar!

Wednesday 3rd April, 6-7:30pm
Museum Building, Trinity College Dublin
Open to all!

Our department will be hosting an international online seminar on the evening of **Wednesday 3 April** on “Modern advancements in volcano monitoring: petrological insights and volcano seismology” with guest speakers Prof Chris Bean (DIAS) and **Dr Swetha Venugopal (TCD)**.

This is the first of a series of online seminars being broadcast by different UK and Irish Universities to celebrate the 60th anniversary of the Volcanic and Magmatic Studies Group.

HEARTSAVER AED COURSE

Heartsaver AED

Cardio Pulmonary Resuscitation (CPR) and early defibrillation, with an Automated External Defibrillator (AED), can more than double a person's chance of survival. The provision of automated external defibrillators (AED's) in workplaces to assist in the prevention of sudden cardiac death is increasingly common today. Using an AED defibrillator is one of the vital links in the “chain of survival”. **Within our building, the AED is located at the entrance of the Geography Office, on the ground floor of the Museum Building.**



This course will give the learner the skills and ability to provide CPR and use an AED at the earliest stages of Cardiac Arrest. Read on [here](#) for more information!

Certification is valid for 2 years and **provided free of charge** by the University Safety Office. #savealife

FIELD TRIP

The first-year students enjoyed their first field trip in Co. Antrim from 4-6 March. The trip was led by **Chris Nicholas** and **Micha Ruhl** and was accompanied by four postgraduate demonstrators **Lydia Whittaker**, **Andrea Pierozzi**, **Amanda E. A. Perera**, and **Blanka Kovács**. The students learned how to make a cross-section at the Giant's Causeway, made their first geological map in Ballintoy Harbour and logged their first section in Waterloo Bay at Larne. The trip was filled with laughter, geology and (mostly) sunshine.



Lydia explains how the basalt columns formed (Giant's Organ, Giant's Causeway)



Students are learning about the Triassic-Jurassic boundary from Micha at Waterloo Bay (Larne)



Students are learning about the globular iron-rich lithology at Portrush from Chris

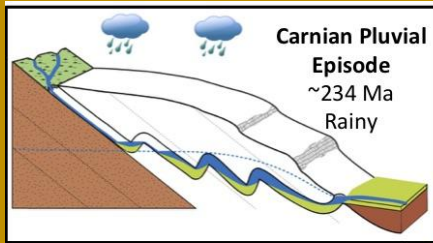


Students are working on their first geological map in Ballintoy Harbour



Every evening, each team had to recount their observations and interpretations from the day

Michael Simms and Kerstin Dorst have recently published their work on Caves, [Dinosaurs and the Carnian Pluvial Episode](#)! Read on to find out more from Michael & Kerstin:

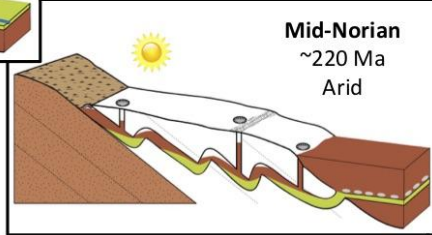


1. Rain during Carnian Pluvial Episode forms caves, hydrologically graded to a mid-Carnian surface in adjacent valleys. Abundant sediment and bones are washed into the caves.

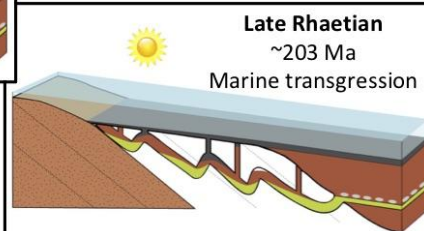


Caves, Dinosaurs and the Carnian Pluvial Episode

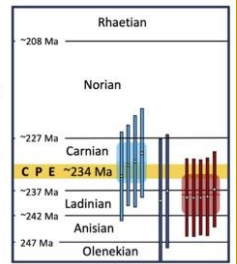
When did Britain's Triassic caves form? How old are the fossils that they contain? Caves do not form in arid environments. None of the terrestrial vertebrate species in these caves occur in dated surface strata. Palynology suggests a Rhaetian age; geomorphology and radiometric dating shows that they are 30 million years older.



2. Topographic relief is reduced through prolonged surface erosion and sediment accumulating in valleys. More sediment and bones enter cave passages breached by erosion.



3. Topography is further reduced by marine planation. Minor infiltration of Rhaetian marine sediment and microbiota into much older caves.



Radiometric dating

U-Pb radiometric dates, from three speleothems at two sites, are consistent with cave formation and speleothem deposition during the Carnian Pluvial Episode (CPE).

POSTGRAD STUDENT SUPPORT

GRAD CHATS

FOR ALL POSTGRADUATE STUDENTS

To equip students with the skills to manage stress, work-life balance, increase self-care practices, communication and assertiveness skills, and look at how best to negotiate the supervisory relationship

Mondays from 2pm - 3.10pm in-person at the Student Counselling Service offices (3rd floor, 7-9 Leinster Street South, Dublin 2)

With: Tom Adams (SCS) and Martin McAndrew (Postgraduate Advisory Service)

Scan me to sign up

Learn more on the PG Grad Chats [webpage](#) and pre-register [here](#).

WELLBEING

The [Silver Cloud programme](#) provides a great online tool to help you improve and maintain your wellbeing by addressing issues that can have a negative impact on your life. The program is provided by Student Counselling and is available to everyone in the Trinity Community.

“Triassic caves, in Carboniferous limestone of parts of southern England and South Wales, have yielded many small dinosaurs, mammals and lizards, but their age has been contentious. Many consider them Rhaetian in age (~203 Ma), but their geomorphological context suggests, instead, that they are Carnian (~234 Ma). Most geologists don't really understand the finer points of cave geomorphology (after all, Irish caves are cold, wet, muddy, unpleasant places) so such geomorphological arguments have, for more than 30 years (I published a paper on this in 1990), fallen on deaf ears. But for all of those years I carried with me (well, not actually on my person, but in a box somewhere in the garage) some pieces of calcite flowstone from two of these Triassic caves; one in South Wales and the other in Gloucestershire. In 2021, I sent these to Kerstin Drost to see if she might be able to extract a U-Pb date from them, and what an absolute star she turned out to be! All of the dates were centred pretty much on the Carnian, suggesting that the caves formed during the Carnian Pluvial Episode. None came anywhere near the Rhaetian. This is important because it means that all those critters (dinosaurs, etc) found in the caves are among the very earliest of their kind rather than being evolutionary relics as some have suggested. The various geomorphological arguments for a Carnian age are convincing enough (at least to me and a handful of other karst people), but Kerstin's radiometric dates have proven the real 'killer blow' to anyone suggesting a younger age. The 'Rhaetianists' have been strangely quiet since the paper was published...”

The first day of this month, we were all surprised with a bit of late wintry weather here on campus! We hope everyone had a chance to enjoy the snow while it lasted – which it turns out was barely for a day. Several members of our department snapped some lovely pictures to commemorate the occasion.



The Campanile bell tower. Photo courtesy of **Dani Vitarelli**.



Eimear Prendergast and **Dani Vitarelli** after a good frolick – snowman Steve's origins unknown.



The snowy view from Minion Mansion. Photo courtesy of **Eshbal Geifman**.



The campus view from our main lab here in the department. Photo courtesy of **Blanka Kovács**.



The following day after our very brief snowy weather. Photo courtesy of **Blanka Kovács**.

PUBLICATIONS

Heszler, B., Katchinoff, J., Palcsu, L., Horváth, A., Vallner, Z., **Kovács, E.B.**, Planavsky, N. and Pálffy, J., 2024. Marine Strontium Isotope Evolution at the Triassic-Jurassic Transition Links Transient Changes in Continental Weathering to Volcanism of the Central Atlantic Magmatic Province. *Geochemistry, Geophysics, Geosystems*, 25(3): [e2024GC011464](https://doi.org/10.1029/2024GC011464)

Higgins, O. and Sheldrake, T., 2024, Identifying Distinct Pre-Eruptive Composition-H₂O-Time Trends Using Plagioclase: *Geochemistry, Geophysics, Geosystems*, v. 25, no. 2., doi: [10.1029/2023GC011369](https://doi.org/10.1029/2023GC011369)

Michael J. Simms and **Kerstin Drost**, 2024. Caves, dinosaurs and the Carnian Pluvial Episode: Recalibrating Britain's Triassic karst 'fissures'. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 638, 16 pp., doi: [10.1016/j.palaeo.2024.112041](https://doi.org/10.1016/j.palaeo.2024.112041)

DEPARTMENT NEWS



Adrienn Szucs (who defended her PhD thesis in mid-2023) was awarded the [Environmental Science Association of Ireland \(ESAI\) Postgraduate Researcher of the Year 2023](#) for her work:

"Advancing Rare Parth Element Science: Mimicking Nature for Sustainable Solutions and a Greener Tomorrow".

It is the second award her PhD thesis obtains, as she also got an award from the MDPI journal *Minerals* earlier this year. Congratulations Adrienn!

SAFETY AND ENERGY SAVING

Turn off the light!



Please make sure when you're leaving your office for the day to close the door properly, turn off all the lights and appliances. This includes the hallway lights as well.

DEPARTMENT NEWS

The [Irish Times](#) ran a feature on a new micro-credential on Climate Leadership Development being developed by **Quentin Crowley** and **Subhash Chandra**. The micro-credential course fee is subsidised by 80% by the Higher Education Authority. Anyone interested can register their interest [here](#).

WEBINARS

Engineering are running another really interesting lunchtime webinar series this year on **Climate Action & Sustainable Development**.

Seminars are Wednesdays at lunchtime from 1.00-2.00pm during the months of March & April. Each week is on a different topic relating to sustainability and starts with short presentations from each of the panelist who are a mix of internal and external speakers, followed by an open panel discussion with Q&As.

You can also find recording of last years series on the [TCD YouTube channel!](#)

CONFIDENTIAL HELPLINE

[NiteLine](#) is a non-profit, non-judgemental, non-directive, anonymous and confidential listening service run by students for students. Our service is completely free and open every night of term from 9pm to 2.30am through instant messaging and over the phone. We are run by a team of dedicated volunteer students who have undergone rigorous training with the intention of supporting our peers. Our motto is "no problem is too big or too small."



Free
Anonymous
No problem too big or too small

Freephone: 1800 793 793
Instant messaging: niteline.ie
9pm - 2:30 am every night of term

COMMUNITY



As a member of the **Trinity community**, you have the right to study or work in an environment that is **free from bullying, harassment, and sexual misconduct**. [Speak Out](#) provides the opportunity for you to make the University aware of incidents that you have either experienced or witnessed by reporting them anonymously.

MENTAL HEALTH MATTERS

TCD's Student Counselling Services is open and available to all registered students.

Check out their website [here](#) to read about the services they provide, 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.

They now offer [PhD research support groups](#) to keep you on track!

UPCOMING CONFERENCES

- **Environ 2024, 34th Irish Environmental Researchers Colloquium**
(25-27 March, Waterford)
- **Geographic Perspectives on Climate Change Mitigation in Urban and Rural Environments Conference 2024**
(25-27 June, Italy)
- **12th International Kimberlite Conference**
(8-12 July, Canada)

STUDENT 2 STUDENT PEER SUPPORT

Student 2 Student Peer Support is back!

Thanks to the support of Trinity Trust, Student 2 Student is delighted to announce the return of our Peer Support Programme after 4 long years! **This is not the same as our Mentoring Programme**. S2S Mentors are student volunteers who offer group support to every incoming undergraduate student. Peer Supporters are student volunteers who provide **face-to-face, confidential listening and support to any TCD student** on request!

Peer Supporters have undergone over 35 hours of intensive training in active listening, emotional support and self-care. They are highly confidential, non-judgemental and are willing and ready to help! Students don't need to be in distress or crisis to talk to a Peer Supporter, but they can help with the larger problems as well as the smaller things.

[Request a Peer Supporter here!](#)

Please do not fill out a request on anyone else's behalf – but please do encourage any student you know who might need a listening ear to fill this link out themselves.

Peer Supporters aim to respond to requests within 48 hours (excluding weekends). They'll suggest a few possible times and organise an initial meeting. The new S2S space in [House 47](#) has a private room where students can meet for a chat, or Peer Supporters can arrange to go for a walk around campus or meet at a public spot nearby. Meetings can be once off, or as frequent as once a week.

You can find [more information about the Peer Support programme here](#) or email student2student@tcd.ie with any questions.

S2S  **Peer Support**

Student2Student