What's up at Young Universities?

August 2020

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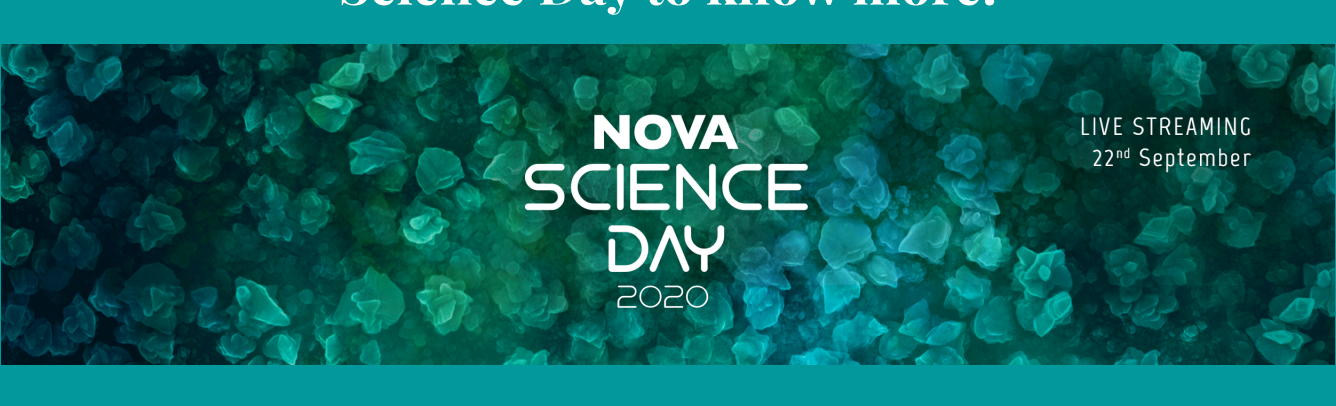
Hello and welcome to the YERUN August Newsletter! We hope you had a good and relaxing summer break. At the YERUN Brussels Office we are ready for a new start! This month we have an exciting bundle of research news coming from our members on various topics. Enjoy your read!

NOVA, Sustainability and the SDGs – join the NOVA Science Day to know more!

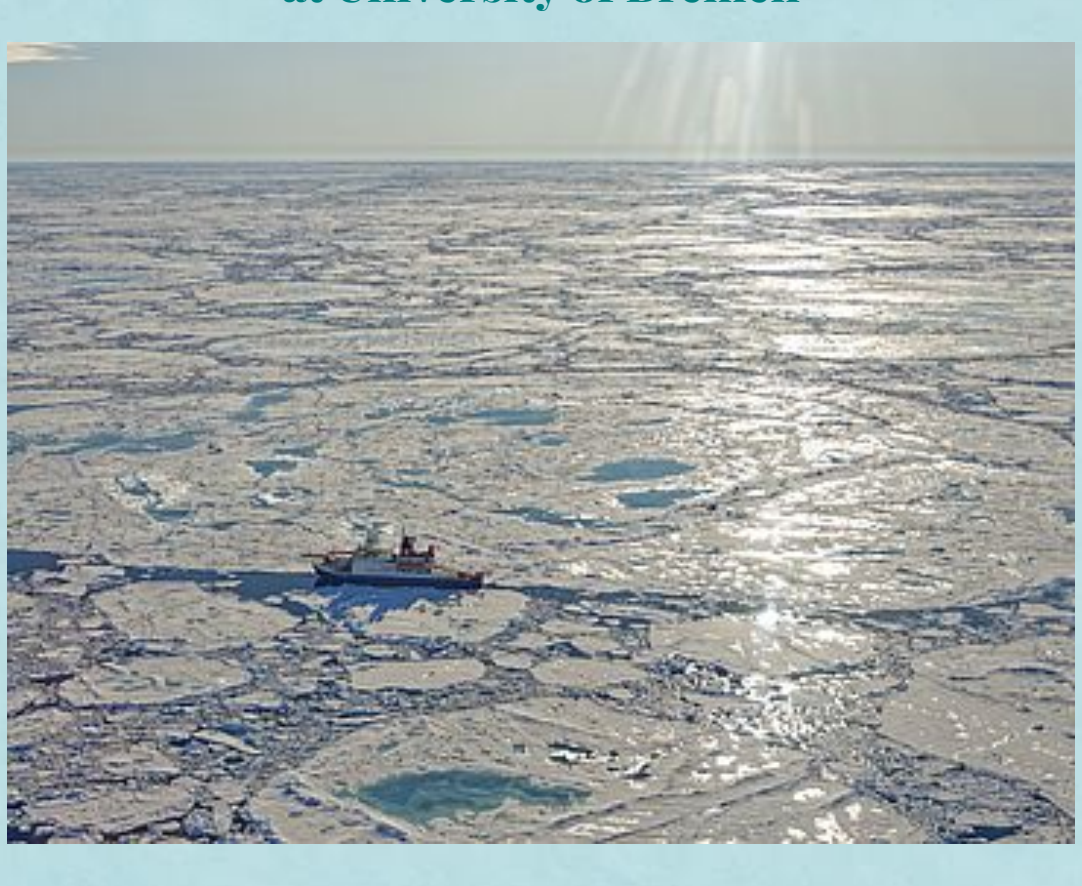


The NOVA Science Day is the annual full day event dedicated to bringing together the scientific community of NOVA University Lisbon and promoting the research produced at the university. NOVA Science Day is back for its third edition on 22 September and will be dedicated to Sustainability and the United Nations Sustainable Development Goals (SDGs). This year, due to the restrictions caused by the COVID-19 pandemic, the event will be broadcast in live streaming on NOVA's Youtube channel for the entire academic and scientific community of the University.

All YERUN members and the wider research community are welcome to join and follow the online event, which will feature leading figures in the field of research and innovation, including the Portuguese Minister for Science, Technology and Higher Education, Professor Manuel Heitor; the Director of the Calouste Gulbenkian Foundation, and former European Commissioner for Research, Science and Innovation, Carlos Moedas; the ERC representative in the area of Engineering and Physical Sciences, Dr. Martin Penny; and also the President of the National Innovation Agency (ANI), Professor Eduardo Maldonado, sharing information about the new European ecological pact - Green Deal.
>>>Click here for more info!

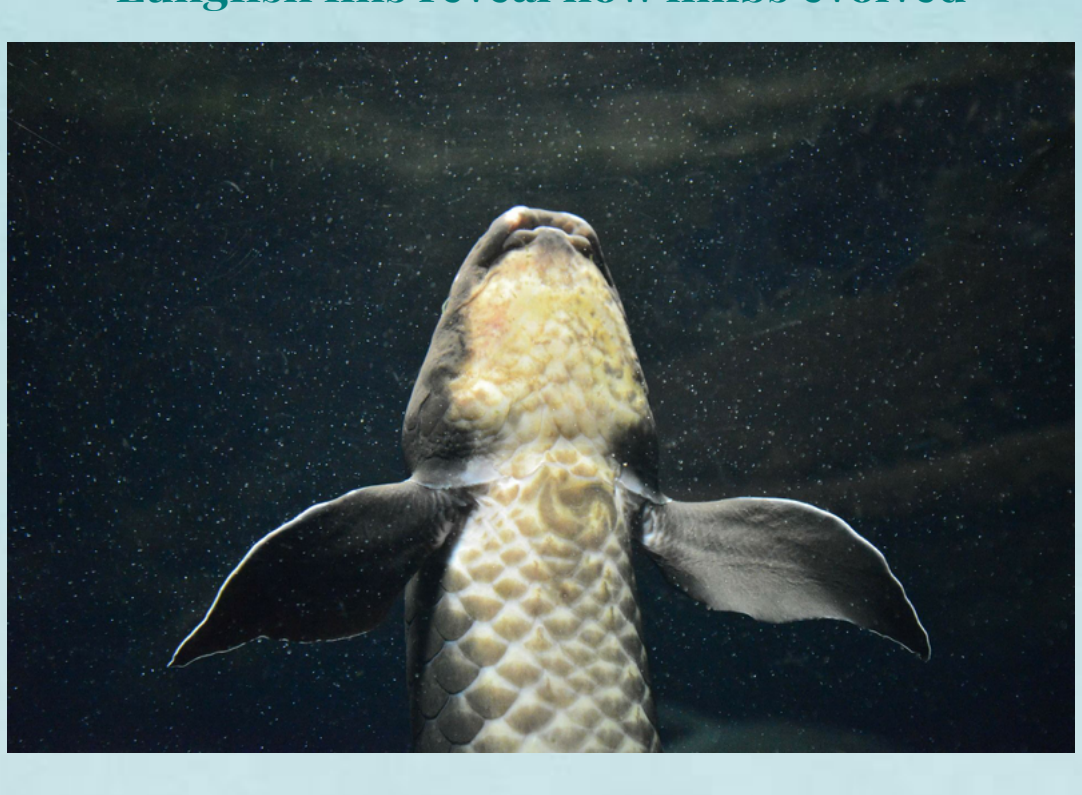
Latest from YERUN research

Sea ice in the Arctic at a historical low, shows research at University of Bremen



The extent of Arctic sea ice in July is the lowest ever recorded. This was discovered by researchers of the MOSAIC expedition of the Alfred Wegener Institute (AWI), a project in which the University of Bremen is also involved. The goal of the MOSAiC expedition is to take the closest look ever at the Arctic as the epicenter of global warming and to gain fundamental insights that are key to better understand global climate change. Hundreds of researchers from 20 countries are involved in this exceptional endeavour.
>>>Click here to continue the journey!

University of Konstanz: Lungfish fins reveal how limbs evolved



New research on the fin development of the Australian lungfish by an international team of researchers from the University of Konstanz (Germany), Macquarie University in Sydney (Australia) and the Stazione Zoologica Anton Dohrn in Naples (Italy) elucidates how fins evolved into limbs with hands with digits. The main finding is that in lungfish a primitive hand is already present, but that functional fingers and toes only evolved in land animals due to changes in embryonic development. The Australian lungfish is the closest living fish relative of tetrapods and is often considered a "living fossil" as it still resembles the fishes that were around at the time when the first four-limbed vertebrates began to walk on land. For these reasons the fins of lungfish provide a better reference to study the evolutionary transition of fins into limbs than any other extant fish species.
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CASIN – Fountain of youth for ageing mice: Ulm researchers turn back the epigenetic clock

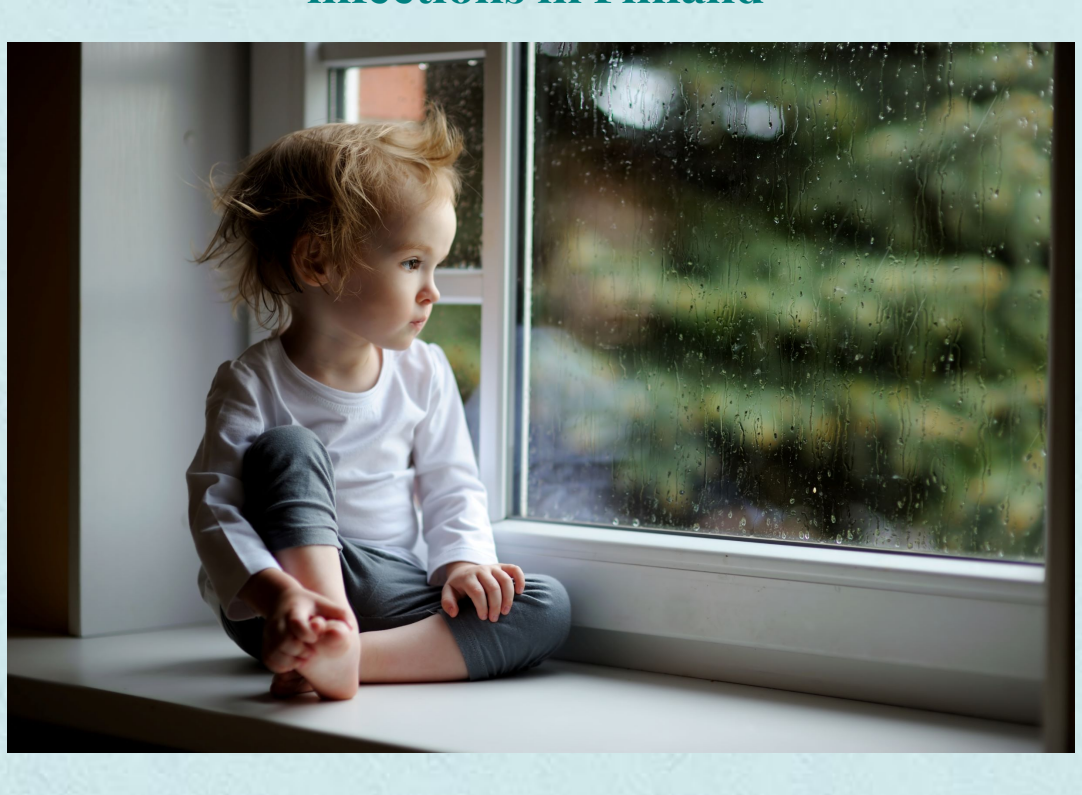
Ageing researchers from Ulm University and IDIBELL Barcelona have 'rejuvenated' elderly mice. As the mice's 'fountain of youth' served a substance called CASIN, which reduces the age-associated protein Cdc42. After only four days of CASIN therapy, the mice lived about 10 percent longer than their untreated conspecifics. The researchers had literally succeeded in turning back the rodents' epigenetic clocks. In the experiment, 75-week-old female mice – this age is the equivalent of about 60 to 70 human years – were given CASIN every 24 hours for four days. And indeed, the researchers found a significantly reduced activity of the age-associated protein Cdc42 in the bone marrow of the animals already one day after the treatment.
>>>Click here to discover more!

DCU research highlights impact of COVID-19 restrictions on young people with autism

A new report from Dublin City University which looks at the current and anticipated challenges faced by young people with autism and their families due to the COVID-19 restrictions, highlights a decline in children's abilities and skills since the introduction of the restrictions and an increase in some challenging behaviours. Led by Dr. Sinéad Smyth from DCU's School of Psychology, the report is part of an ongoing study to look at the current and long term impacts of the COVID-19 related restrictions on the wellbeing of individuals with ASD and their parents.

Speaking about the study, Dr. Sinéad Smyth said: *"The necessary closures and restrictions on movement that have been implemented in response to the COVID-19 pandemic have had wide ranging impacts on us all. For children and young people with ASD, adapting to change at such a rapid rate has been very difficult and it is clear from our findings that these children and their parents are experiencing a multitude of unique challenges. Additional challenges arise as restrictions are lifted and children incorporate more activities into their lives again."*
>>>Click here to know more.

UEF: Social distancing decreased paediatric respiratory tract infections in Finland



Finland declared a lockdown in response to the coronavirus pandemic in March 2020, and the ensuring social distancing measures decreased the number of paediatric emergency room visits to nearly one-third of what they used to be, according to a recent register-based study conducted in collaboration between the University of Eastern Finland (UEF), Kuopio University Hospital and the National Institute for Health and Welfare. The researchers looked at the number of paediatric emergency room visits in two Finnish hospitals four weeks before and four weeks after the country went into lockdown. Besides a decrease in paediatric emergency room visits, the number of hospital referrals was also decreased by half since the start of the lockdown. A similar decrease was observed in both hospitals and in children of all ages.

"We are used to the idea that children have respiratory tract infections almost all the time; most commonly they suffer from bronchitis and middle ear infections. Children under the age of one are also frequently hospitalised due to RSV or influenza. However, our findings now show that social distancing plays a major role in reducing paediatric infections, emergency room visits and hospitalisation," Professor of Paediatrics Marjo Renko from UEF says.
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University of Antwerp: Spin-off CrowdScan measures crowds without compromising personal privacy

CrowdScan, a spin-off from imec and the University of Antwerp, has developed a system that measures the density of a crowd in real-time using a wireless sensor network. Based on six years of research at the UAntwerp and imec, CrowdScan has developed a system to measure crowd densities without using camera images, mobile phone data or other privacy-sensitive information. By transmitting low-energetic radio waves (868 MHz), CrowdScan measures the average signal attenuation of a wireless sensor network relative to the empty environment. The technology was validated at different large-scale events such as Tomorrowland.

"In Antwerp's innovation ecosystem for metropolitanism and smart city, our university is focusing more than ever on value creation from research. To do this, we collaborate with the city government, local businesses and citizens. Open innovation hubs such as The Beacon facilitate this process by bringing people together and actively setting up projects that effectively benefit partners. That's how CrowdScan grew into a startup that, due to the coronavirus crisis, became more relevant than ever", says Silvia Lenaerts, Vice Rector Valorization and Development of the UAntwerp.
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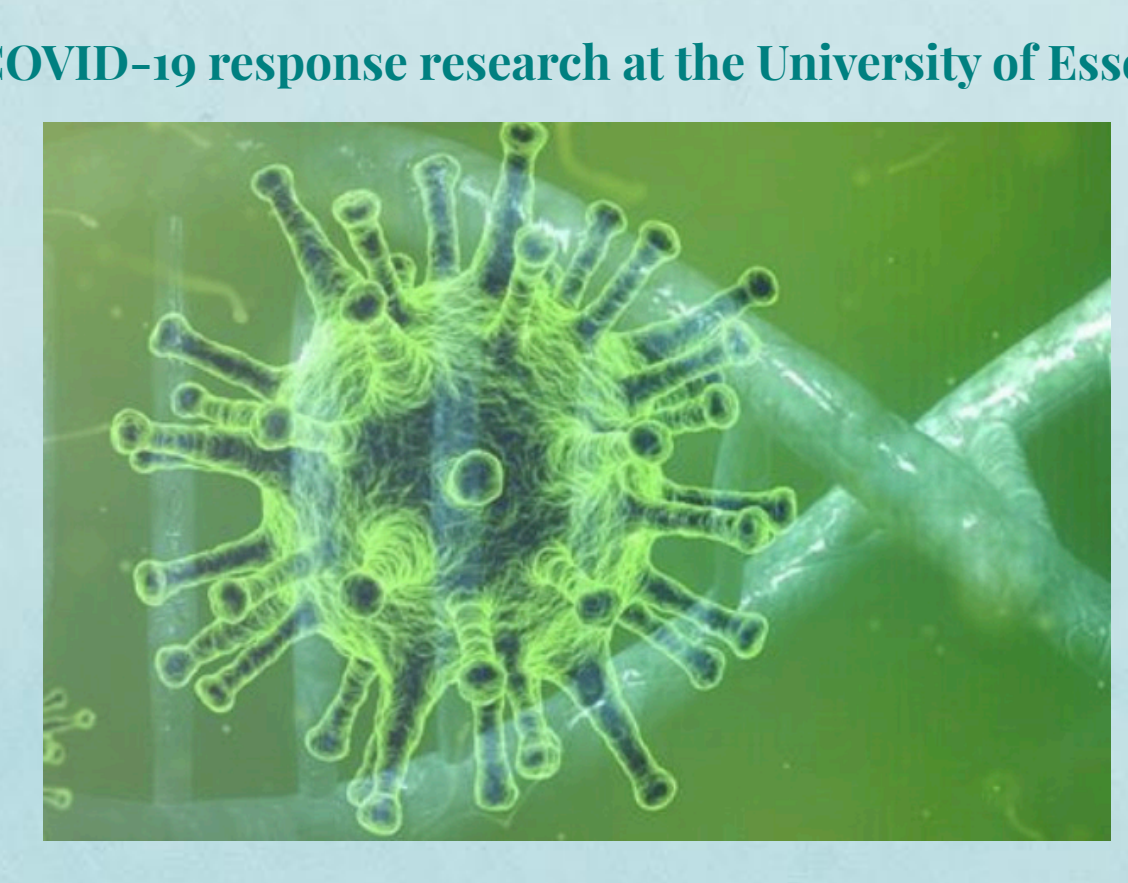
COVID-19 response research at the University of Essex



An investigation into the impact of COVID-19 on how we communicate with each other, alongside other human rights and social care research, is forming an extensive research response to the coronavirus pandemic at the University of Essex. This research is also encouraging further debate and guiding policy for the post-COVID-19 world.
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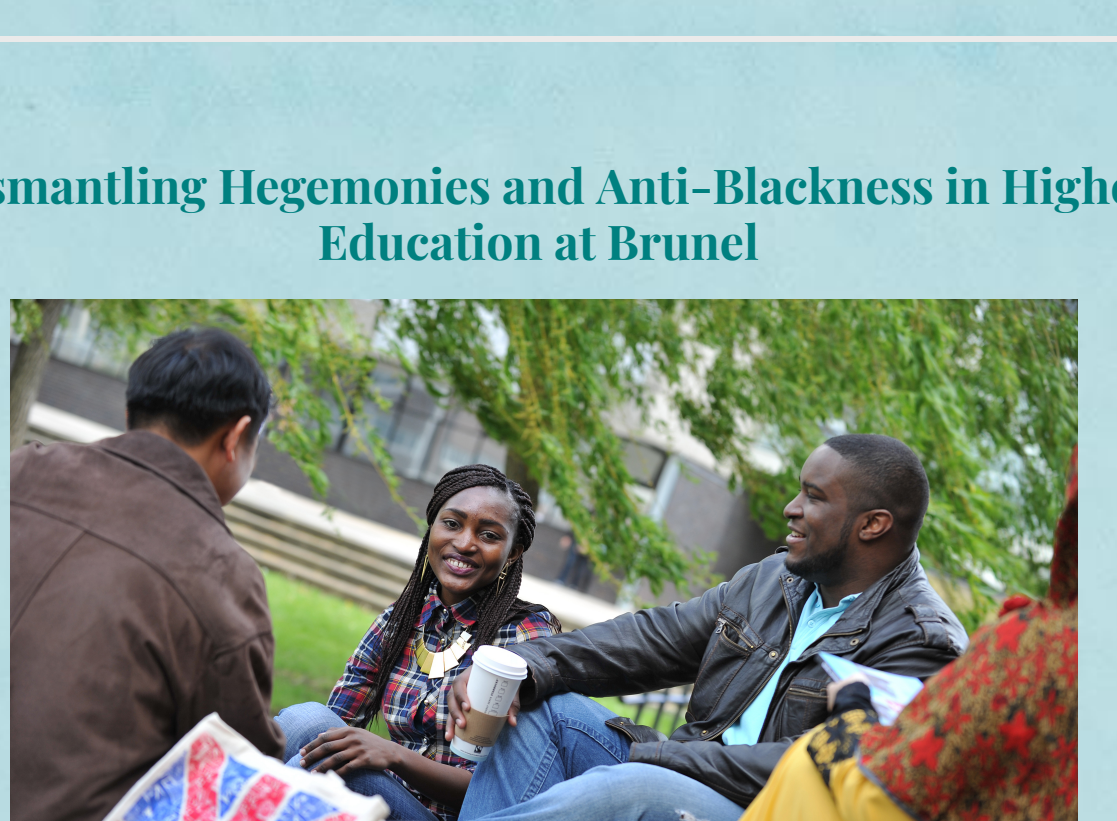
Dismantling Hegemonies and Anti-Blackness in Higher Education at Brunel



Student Success Project manager Abigail Elliott invited eight experts to a symposium called 'Dismantling Hegemonies and Anti-Blackness in Higher Education' to share their experiences and knowledge of how the legacies of slavery and racism continue to set Black people at a disadvantage. From exposing how Black girls are judged as being more adult-like from as early as age 5 to how UK doctors are only now questioning clinical signs of ill-health for people with darker skin – consider how 'looking pale' is observed – as well as racism experienced by the tiny 1.2% of Black researchers, who dare to question a system which favours the white experience in both ethics and peer review.
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UC3M: New connectors for the high frequency industry

TERAmeasure

Designing and demonstrating a new generation of high frequency interconnections, this is the main objective of a European research project called TERAMeasure, which is being coordinated by the Universidad Carlos III de Madrid (UC3M). This technology is primarily intended for high frequency instrumentation and devices as well as biomedical (subcutaneous skin cancer detection) and silicon industry quality control applications.

"The greatest challenge that scientists are facing is how to reach this frequency range, which sources to use and which connectors to employ, given the serious limitations of current technology. TERAMeasure aims to revolutionize high frequency technology by developing connectors that operate continuously over the entire range from 30 GHz up to 3000 GHz", explains Guillermo Carpintero, the TERAMeasure coordinator, professor at the UC3M's Department of Electronic Technology.
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