



Welcome to the October newsletter! Highlights this month include the ASE Convocation, impressive student achievements, an introduction to the new ASE Club Executive Committee, and interviews with Edwin Tan from the IT team and alumni Mock Yuan Ning.

Staff turnover

New additions to ASE

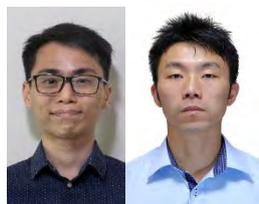


Heng Su Ping and Muhammad Faiq Mohd Saleh

Three new research assistants have joined ASE in the last month:

- **Heng Su Ping** joins Asst Prof Patrick Martin's team.
- **Muhammad Faiq Mohd Saleh** joins Asst Prof Joyce Ong's team.
- **Ng Zu Xiang** joins Asst Prof Janice Lee's team.

Dr Lam Weng Ngai joined Janice Lee's team [Coupled Human and Natural Systems Lab](#) as a Research Fellow.



Ng Zu Xiang and Lam Weng Ngai.

Former ASE PhD student **Dr Constance Chua** joins ASE as Research Fellow working with Assoc Prof Adam Switzer's team in the [Coastal Lab](#).

Last but not least, **Asst Prof Edward Park** has become a Principal investigator with EOS. Park holds a position as Asst Prof in Physical Geography at National Institute of Education (NIE). His research investigates the hydrogeomorphic processes responsible for analysis of wetland hydrosedimentary dynamics. His work is strongly based on geospatial technologies, hydrological modeling and statistical methods, in addition to traditional fieldwork in geomorphology. We recently published a story on a successful URECA study supervised by Edward Park, you can find it [here](#).



Constance Chua and Edward Park

Welcome to ASE all!

Also a warm welcome to all new trainees joining various groups in ASE at this time! 😊

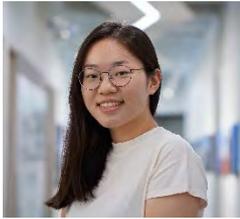
Awards and Recognition



[Global Undergraduate Awards](#) is the world's leading undergraduate awards programme which recognises top undergraduate work, shares this work with a global audience and connects students across cultures and disciplines.



Zhang Yilin



Sun Huiwen

- **Zhang Yilin** has become the first ASE student to win the Global Undergraduate Awards in the highest category – Global Winner! Yilin competed with her FYP project '*Sea surface temperature and sea surface salinity calibration using Porites coral geochemical proxies from Dongsha Atoll in the South China Sea*', supervised by **Asst Prof Xianfeng Wang**. She is now continuing to do research at ASE as a PhD student.
- **Sun Huiwen** won the Global Undergraduate Awards in the category Highly Commended Entrant. Huiwen is a Y4 geoscience specialisation student. She competed with a CNYang semester-long research module (CY1400), '*Determining changes in the plumbing system of Mount Marapi through time using image analysis of lava samples*', supervised by **Asst Prof Caroline Bouvet de Maisonneuve**, and mentored by **Dini Nurfiani**. [Interviews with Yilin and Huiwen on the ASE Newsblog](#)



URECA Research Excellence Award 2020/2021



Ang Wei Jing



Algal blooms – URECA research topic for Cherlyn and Rohan.

- ASE 3rd year geoscience student **Ang Wei Jing** has won the URECA Research Excellence Award 2020/2021 for her project "*Remote Sensing of Rivers*", for which she mapped flood plains in the Amazon River, supervised **Asst Prof Edward Park**. And it doesn't end there, Wei Jing is the first author of a publication based on the study, accepted by the journal [Geomorphology](#). Read more about Wei Jing's URECA experience on the [ASE Newsblog](#).
- **Rohan Shawn** is a 3rd year Biological Sciences student who won the URECA Research Excellence Award for the project "*Investigating Environmental Preconditions for Harmful Algal Blooms*" conducted in the [SLIME Lab](#) at ASE and supervised by **Asst Prof Federico Lauro**. It was the topic of algal blooms, and their detrimental effects that Rohan thought provided real impetus for the project as he could understand the feasibility and tangibility the findings would have, with wider impact on the environment and humanity alike.
- **Chua Xin'Er Cherlyn** is a 3rd year student from the double major programme in Biomedical Science and Biobusiness. She won the URECA Research Excellence Award for the URECA project "*Flow Cytometry enables detection of disturbance in Johor Strait– Implications for the development of Harmful Algal Blooms*", supervised by **Assoc Prof Federico Lauro** in ASE's SLIME Lab. Cherlyn says that besides gaining laboratory and research experience, the increasingly

prevalent topic of harmful algal blooms piqued her interest and she appreciated the collaboration between researchers from different universities and backgrounds here at ASE.

Three students from ASE/EOS won best poster awards at the recent 2021 Asia Oceania Geosciences Society (AOGS) annual meeting



Wong Minn Lin



Gina Sarkawi



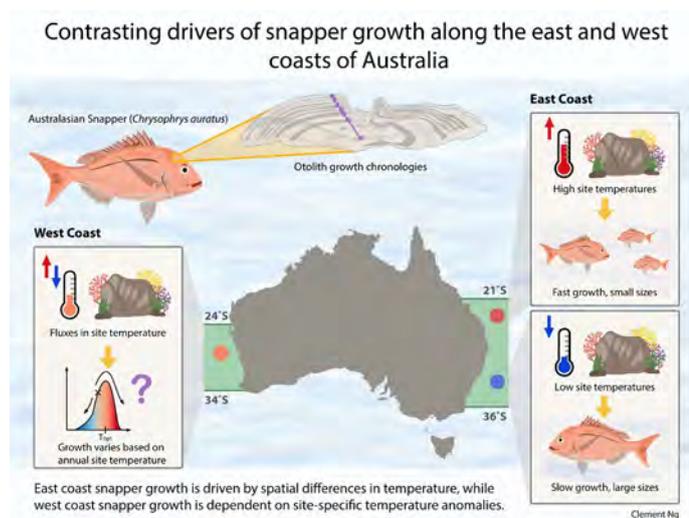
Wee Shi Jun

- **Wong Minn Lin**, PhD student working with Assoc Prof Wang Xianfeng in the Isotope Geochemistry Lab, won AOGS Best Student Poster Award in the Interdisciplinary Geoscience category. Minn Lin presented a poster on a new speleothem record from central Brazil with new insights into the behaviour of the South Atlantic Convergence Zone.
- **Gina Muthia Sarkawi**, PhD student working with Asst Prof Aron Meltzner in the Earthquake and Sea group, won Best Student Poster Award in the Solid Earth Sciences category. She presented a poster on using coral microatolls in west Luzon Island of the Philippines to understand tectonic deformation in the region.
- **Wee Shi Jun**, 3rd year undergraduate geoscience specialisation URECA student with Asst Prof Aron Meltzner, won Best Student Poster Award in the Interdisciplinary Geoscience category. For his study, Shi Jun used photogrammetry to create 3D models and digital elevation models of coral microatolls to study the variability in the upper limit to which microatolls can survive, controlled by extended periods of extreme low water.

You'll find an interview with Minn Lin, Gina, and Shi Jun on the [ASE Newsblog](#)

Last but not least, PhD student **Ng Zhong Wang Clement** has won the **Australian Society of Fish Biology Graphical Abstract Award (Junior)** at the **World Fisheries Congress**.

CONGRATULATIONS
AND WELL DONE
ALL!! 😊



The beautiful work of Clement 😊

MSO

Keeping safe

- Collect your free ART kits from the Lab Support Office (N1.1-B2-01G). Please contact Heryani (heryani@ntu.edu.sg) or Alistair via TEAMS if you have trouble finding it.
- If family member has quarantine order, inform NTU and ASE (notify@ntu.edu.sg)
- Wilderness First Aid training coming up in November, contact Alistair to sign up.

Monthly MSO interview

Over the next few months we will get to know some of the MSOs better through a series of mini interviews. This month we caught up with **Edwin Tan Seng Tat**, Manager (Senior HPC Architect).



Edwin Tan has worked with IT at ASE for many years.

You are on the IT team along with Alison and Kianhua. What are your main tasks and when should people turn to you?

I am a backend infra person. My main task is to support a wide range of backend infra such as server administration and setup, web server, supercomputer cluster, storage, virtual machine, etc. Researchers who need to web hosting, computation needs for computing, simulation, modelling, processing, Artificial intelligent will look for me. Apart from researchers, admin staff who needs shared storage will also look for me. Users who needs a testbed system or additional computer resources will look for me, and I could instantly provide the resources to them. Any users who needs help in linux, such as installation of linux on workstation or opensource software, troubleshooting of linux system/software can also look for me.

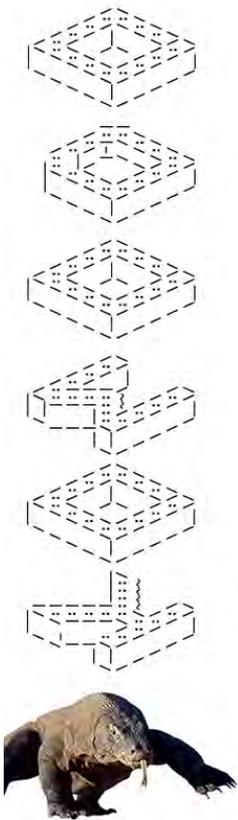
How long have you worked at NTU and ASE?

I first started working in NTU in SPMS back in 2007 as IT analyst. My job scope was to do software development for in-house web projects. In 2009, NTU setup the HPCC centre and my SPMS manager who was also holding a position in HPCC asked me to join him as HPC Engineer. It is where I widen my IT knowledge from software development to system administration. In 2013, DES (Division of Earth Science, divisional of SPMS. Later branch out as school, ASE) was setup. Prof Charles was the Chair at that time and he seek the IT manager for help to setup the computing cluster. I was tasked to help out, and later invite by Prof Charles to join the school. The challenge at that time is that I am the only IT staff, thus I take the role of IT manager doing user support, web development and also server support. During the day, I will do user support and after work, I will do the setup of the computing cluster till 3am. After 2 years, the headcount for IT was increased so the workload was shared.

Users don't see me often as I am consistently moving around, between Section C admin office, to meeting users, HPCC, and the two datacenters. Nevertheless, I am still be easy to be contact by Teams and email. Most of the time, the problem is resolved online. It's a good experiences as I can meet user online whenever I have a gap of



It was Prof Charlie Rubin who hired Edwin.



3D wording – KOMODO

spare times between meetings, rather than schedule a meeting which can be next day or more.

What are some of the problems that it's your job to solve?

Most of the software we use are open sources for Linux. Open sources software does not have any support. Unlike commercial software where you can seek the service support for help, there is no one to fall back to if installation fails. So it required a lot of experiences to install and troubleshooting. Of course, we will seek each other advice in HPCC between the colleagues.

There was a case when a researcher seek help to install a opensource software which fails to get the desired results after installation. Fortunately, the researcher knows developer and we work together and it takes more than half a year to finally get the bug fixed after meeting online for many sessions. This was consider a blessed one because its rare to have chance to connect with the developer.

Can you share a funny story of from your work experience?

I was discussing with Prof Sylvain on naming the computing cluster. So he come out with the name Komodo. He want the cluster to be like a Komodo, which will crunch the data fiercely and ruthlessly. He even create the 3D logo of the word Komodo and user who logon will shows it as welcome screen. This has impact on the name for the new cluster, which is name gekko. Gekko and Komodo are lizard family and gekko is much gentle.



Alison Lau – user helpdesk support, IT teaching labs, issuing of laptops, etc.

What are the best and most challenging parts of your job?

Apart from working in ASE as IT manager, due to the centralise of the IT staff to CITS, I am also taking the role of deputy lead in HPCC. I am also supporting NTU wide researchers in their computation needs. There are consisting of projects involvement.

The challenging part of the job is to be able to do time management and to work effectively, having dual role. Having said that, I benefit from learning skillsets from both the roles. You learn twice as much and its like compressing double the knowledge in a given lifetime.

My job requires me to consistently follow up with new technologies and providing new implementation for HPCC and ASE. Vendors know that we are forward looking, and they are always excited to share with us whenever they have new product and invite us to do a POC (Proof of Concept). We are proud to say, we are risk taker and always adopt latest technologies after careful risk assessment.



Koh Kian Hua E-learning, and ASE

Do you have any general advice to people in ASE when it comes to using IT?

New staff who joined ASE could sent email to us at aseitsupport@ntu.edu.sg to tell us your IT needs. We will definitely give you the best support. For user support matters, you can always drop us an email (aseitsupport@ntu.edu.sg).

Let me introduce our **ASE IT team**. The three of us will be able to cover the IT needs from all angles:

website content update. He will back up Alison on the user support, especially during the job rotation on the WRH.

Alison Lau (alison.lau@ntu.edu.sg) – She joined ASE two months ago and she is doing the user helpdesk support, IT teaching labs, issuing of laptops, etc.

Koh Kian Hua (kiahua@ntu.edu.sg) – He is in-charge of Elearning, and ASE website content update. He will back up Alison on the user support, especially during the job rotation on the WRH.

Edwin Tan (edwintan@ntu.edu.sg) – I am in-charge of any server request, computation needs, etc. If there is any IT outstanding It matters, you can also look for me.

Finally, what do you like to do in your spare time?

I don't really have much spare time. If I do have, I will use the peaceful time for developing programs such as reporting services for the cluster. Its hard to focus in Programming if there is disruption.



Undergraduate students

Congratulations ASE Class of 2021!



ASE Vaedictorian 2021 **Victoria Cahyani** from the inaugural batch of ESPP students. Read an interview with Victoria and [here](#).

ASE Club:

<https://www.instagram.com/aseclub/>

<https://ntuaseclub.wordpress.com/>

Our warmest congratulations to ASE Class of 2021! This year the first batch of our double major programme EESS (2 students) has graduated, along with 25 EESS students. Well done all!



ASE Class of 2021 after the Convocation ceremony. (Photo: Nur Fadhila Binte Abdul Latiff)



David Mah and **Leow Si Lei** won the Keppel Environmental Studies Gold Medal for highest cumulative grade point average (CGPA) for the degree of Bachelor of Science in Environmental Earth Systems Science. Here is what they think are the most important things they learnt from their undergraduate training:

David: 'While the course content for the programme is interesting and exciting, it is only about 30% of the whole learning experience. I think the most important learning outcomes were in how to manage my time, how to work in groups, how to work autonomously, and how to interact with others.'



Leow Si Lei

Si Lei: *'It would definitely have to be the ability to think from more than one perspective. When we study about the environment, we have to understand how every other aspect of the world is intertwined. The faculty members in ASE have definitely done a great job in providing complex and realistic issues for us to ponder over, giving us many opportunities to develop our critical thinking skills and abilities to solve problems. This skill is not just applicable to academics, but also every other aspects of our lives and work.'*

Read the full interview with David and Si Lei [here](#)

Introducing the 7th Executive Committee of ASE Club

Thanks to everyone who voted, here are your newly elected representatives:



President:

Hi everyone! I'm Joan, currently a Y3 ESPP student, specializing in Society. One fun fact about me is that I really love caves! I once visited 3 caves in a day! My aspiration for ASEC is to ensure ASE is a fun and warm environment where all students can grow and forge memories together as a school despite the current Covid-19 situation. I also hope that as President, ASE will be able to establish a stronger presence and effect a visible difference within NTU and the community.

VP-Internal:

Hello! I'm Yi Jin from Y2 ESPP! :) I took up this role because I am really excited to push for student bonding initiatives and strengthen the relationships within our ASE family, despite the limitations of COVID. I hope that through the events organised, we'll all be able to make fond memories of ASE together!



VP-External:

Hey everyone! I am Sherryl, a Year 2 EESS student, looking to specialise in Geoscience. I'm in constant awe when I see pictures of magnificent landforms. It makes me want to be friends with them, to study and know them inside out! As the External VP of ASEC, I look forward to building connections between ASE students and faculty and the wider community, whether it be the NTU population or other external organisations with environmental causes.

Hon Gen Sec:

Hello! I'm Nabil from Y2 EESS, and I hope to specialize in Geoscience. I guess what inspired me was my experience being caught in an earthquake when I was younger. As part of ASEC, I hope to strive towards the successful management of our club and the empowerment of our main committee by



Fin Con:

Hi! I'm Nicholas, currently in Year 2 EESS, planning to specialize in Ecology! I've always had a passion and love for nature so I this was the specialization I always wanted. I was in ASEC serving as the Events Director previously and really felt that the experience was really rewarding! So, I ran for the FinCon position and here I am now! I believe that the team can really make a difference within ASE and provide the student body with a better and more fulfilling University experience.

PhD students

Two oral PhD defences in October

We have two PhD defences to look forward to in October, it's Rishav Mallick on the 7th followed by Sri Budhi Utami on the 11th. Details have been sent out by e-mail. Good luck both!

<p>PhD Oral Defense: Rishav Mallick Thursday, 7th October</p> <p>Linking Short-Term to Long-Term Convergent Tectonics Using Geodetic Observations, Geological Constraints and Numerical Simulations</p>		
<p>PhD Oral Defense: Sri Budhi Utami Monday, 11th October 2021</p> <p>Petrological and monitoring insights into the mechanisms driving eruptions of Kelud volcano, Indonesia</p>		

Who are ASE's new PhD students?

To find out a bit more about our new PhD students, our PhD representatives sent out a form with three questions (10 out of 16 answered). As you can see from the answers below, they represent at least 5 different nationalities and a wide variety of expertise ranging from climate, sea level rise, and hazards to marine biology, seismology, plant and soil, and volcanoes.



Some of the new PhD students at ASE (from the top): Chug-Wing KO, NG Shiyi Trina, PUAH Jun Yu, Cheryl TAY, Win Shwe Sin Oo, Elly Tennant, Zhang Yilin.

What's your name?	Where are you from?	What is your research discipline? (summarize in a few words/one sentence)
Puah Jun Yu	ASE	Storm surge modelling
Zhang Yilin	China	Stable isotopes of tropical precipitation
Jeanette Choong	Singapore	Methods to better quantify losses due to extreme events compounded by sea level rise
Chung-Wing Ko	Austin, Texas (USA)	Plant/soil interactions and their implications for tropical forest restoration :)
Clement Ng	Singapore	Marine Biology, Fisheries Science
Trina	Singapore	Sea level change in Singapore
Elly Tennant	UK	Volcanic hazards and risk
Cheryl Tay	Singapore	I study natural disasters and sea-level through remote sensing.
Win Shwe Sin Oo	Myanmar	Observational Seismology
Elaine	Singapore	Tsunami modelling in the Southeast Asia

(A planned group picture was not possible due to the new COVID-19 SMM).

ASE/EOS Research fellows

Not a lot of news to report from the post doc community but, as usual, look for them in the section on publications 😊

The AOGS Women's Network Cell recently published the below post on Twitter 'celebrating the achievements of the young and talented seismologist Dr. Karen Lythgoe'. Dr Lythgoe is a Research Fellow with EOS. Congratulations!

AOGS- Women's Network Cell
Encouraging Women Geoscientists

Dr. Karen Lythgoe
Presidential Postdoctoral Fellow
Earth Observatory of Singapore

Her research creatively applies seismological techniques to Earth Science problems, from seismic hazard to urban development applications. She is also exploring the possibilities that 'big data' can bring to seismology, particularly in answering the fundamental questions regarding earthquake processes, and the structure and dynamics of Earth.

#EOSWomenGeoscientists

The ASE Alumni Association

Monthly interview with ASE Alumni



ASE alumni Mock Yuan Ning.



Mock Yuan Ning on a field trip with ASE.

This month we catch up with Mock Yuan Ning who is an alumni from the second ASE batch.

Where have you been since your graduation? I have generally worked in the area of sustainability – my first job after graduation was at a sustainability consultancy called the Carbon Trust (got to travel to Philippines and London before COVID hit which was great)! After that I spent some time in an Innovation Lab, and I am now an ESG analyst looking to drive sustainable finance.

Who was/were your inspiration in ASE? All the professors who worked really hard to develop the program from scratch. Special shoutout to the Ecology professors who held classes for our batch even when we only had 4 students in the class!

Tell us about some lifestyle changes you have experienced since graduating and starting work!

Starting in a full time job, there are clearer lines drawn between work and play – which now means weekends must be spent to the fullest! Having more limited free time has also taught me to prioritise. I have learnt to be more intentional with the time I have for myself and to focus on the things that matter.

Famous last words for this interview? Treasure your ASE schoolmates! I never expected it but I'm happy to still be in close contact with many of my ASE batchmates as we all start to adult. Also I've been asked to plug this, so do join us for our Campus to Career: Sustainable Finance webinar jointly organised by the ASE Alumni Association and Sustainable Finance Institute Asia (SFIA) on 12th October!

AA Micro-networks

Environment &
Environmental
Consulting

Academic Research
& Education

Geoscience
Consultancy

Corporate
Sustainability &
Governance

Business,
Entrepreneurship &
Technology

Public & Civil Service

ASE Alumni Association

On LinkedIn <https://www.linkedin.com/in/aseaa/?originalSubdomain=sg>

On the NTU website

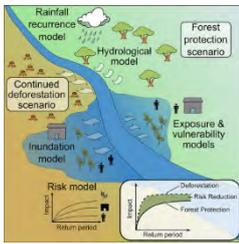
<https://www.ntu.edu.sg/alumni/associations/school/aseaa>

On the ASE website <https://www.ntu.edu.sg/ase/alumni>

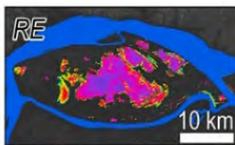
Email ase_alumni@ntu.edu.sg

Some recent outreach and publications from ASE

ASE/EOS authors are in bold. The list is not in alphabetical order and does not aim to include all published papers from ASE/EOS, but to give a taste of the incredible diversity of topics we publish on with some recent examples. Have a recent publication or outreach we could include? Please let Anna know: alagerstroem@ntu.edu.sg



Lallemant et al. explain their publication in this [Twitter thread](#).



Ang et al. used remote sensing to map floodplains of the Amazon River.



Wong et al. used speleothem records from the Angelica Cave in Brazil to study climate systems.

Nathalie F. Goodkin, Dhruvajyoti Samanta, Annette Bolton, Maria Rosabelle K. Ong, Phan Kim Hoang, Si Tuan Vo, Kristopher B. Karnauskas, Konrad A. Hughen (2021) [Natural and Anthropogenic Forcing of Multi-decadal to Centennial Scale Variability of Sea Surface Temperature in the South China Sea](#). *Paleoceanography and Paleoclimatology*

Lallemant, David; Hamel, Perrine; Balbi, Mariano; Lim, Tian Ning; Schmitt, Rafael; Win, Shelly (2021) [Nature-based solutions for flood risk reduction: A probabilistic modeling framework](#) (2021) One Earth. Explained in this Twitter thread: <https://twitter.com/davidlallemant/status/1436127877448155139>

Ang, Wei Jing; Park Edward; Alcantara, Enner (2021) [Mapping floodplain bathymetry in the middle-lower Amazon River using inundation frequency and field control](#). *Geomorphology* 392: 107937

Wong, Minn Lin; Wang Xianfeng; Latrubesse, Edgardo M.; He, Shaoneng; Bayer, Maximiliano (2021) [Variations in the South Atlantic Convergence Zone over the mid-to-late Holocene inferred from speleothem \$\delta^{18}O\$ in central Brazil](#). *Quaternary Science Reviews* 270: 107178.

Grau-Andrés, R., Pingree, M. R. A., Öquist, M.G., Wardle, D. A., Nilsson, M.-C. and Gundale, M. J. (2021) [Biochar increases tree biomass in a managed boreal forest, but does not alter N₂O, CH₄ and CO₂ emissions](#). *Global Change Biology – Bioenergy* 13: 1329-1342.

Prager, C. M., Jing, X., Henning, J. A., Read, Q. D., Meidl, P., Lavorel, S., Sanders, N. J., Sundqvist, M., Wardle, D. A. and Classen, A. T. (2021) [Climate and multiple dimensions of plant diversity regulate ecosystem carbon exchange along an elevational gradient](#). *Ecosphere* 12: e03472.

Media/Public Outreach

<https://twitter.com/sgmarineparks/status/1436511418497462279/photo/1>



On extreme weather and floods in Tamil

ASE PhD student **Sonali Manimaran** was interviewed on local Tamil channel Vasantham in a special feature about extreme weather and floods. Sonali is a PhD student with the [Disaster Analytics for Society Lab](#), headed by David Lallemant.

The clip is available [here](#) (the segment with Sonali is from ~07:35 min onwards).

Newly graduated ASE student **Khoo Zhong Min** has been featured by NTU and The New Paper. Read her inspirational story about graduating from a program with field trips up volcanoes despite being in a wheelchair here: [New NTU graduates overcome obstacles to reach greater heights](#)



NTU
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Congratulations!

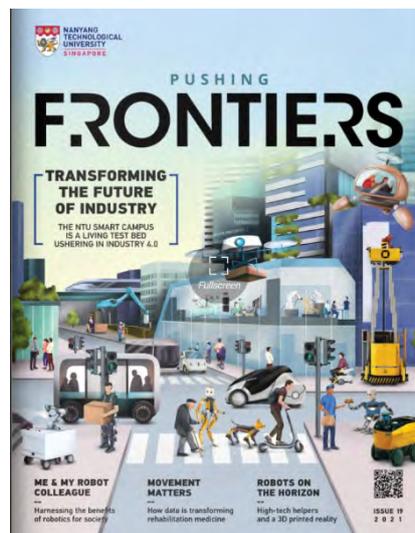


Does Forest Restoration Restore Arthropod Diversity? | My Paper's Secrets | TEE Lab | NTU-ASE

[The Tropical Ecology and Entomology \(TEE\) Lab](#) has a web page that is well worth checking out, and even a Youtube Channel! For example, you can find this excellent video about 4th year **Tay Li Si's** research project "Does forest restoration restore arthropod diversity?", produced by TEE Lab's Marx Yim.

Check their YouTube channel here:
https://youtu.be/RWC0m4_sHgC

A new issue of NTU's [Pushing Frontiers](#) magazine is out. They cover an intriguing study by Assoc Prof Benoit Taisne and Anna Perttu in collaboration with NTU School of Art, Design, and Media.



This newsletter was put together by Anna Lagerstroem. Have some news to share? Please let me know at alagerstroem@ntu.edu.sg