

出國報告（出國類別：開會）

參加「2024歐洲地質科學聯合會」  
出國報告

服務機關：國家海洋研究院

姓名職稱：陳麗雯 副研究員

派赴國家/地區：奧地利

出國期間：113 年 4 月 13 日至 4 月 20 日

報告日期：113 年 6 月 18 日

## 摘要

本次歐洲地球科學學會聯合研討會，議題涵蓋包含地質、天文、大氣與海洋等多個不同的子領域，更重要的是積極實踐於跨領域研究之突破及對於人類社會福祉之促進，近年因全球暖化與淨零排放議題，綠能、地質減碳與環境永續更為今年度炙手可熱的議題。本次參與會議所發表的台灣東南海域海底地形與海床不穩定性研究案成果，亦為本次研討會中海床底質特徵研究中跨域整合分析的經典範例，在許多專注精進單一測繪資料的團隊眼中，是值得各種不同地球物理專家們共同討論其整合順位的案例。此外，本次會議期間所參與的「海洋探測技術精進」、「長期研究及資料庫建置」、「綠能與海洋地質減碳」等專案演講及討論，皆值得我們在規劃爾後海域探測作業之參考。

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## 壹、目的

歐洲地球科學學會聯合研討會（EGU General Assembly）為由歐洲地球科學學會(The European Geosciences Union, EGU)每年舉辦之歐洲地球科學領域最大規模之研討會，該研討會議題涵蓋包含地質、天文、大氣與海洋等多個不同的子領域，是全球地球科學領域最大規模之兩大研討會之一(另一為美國地球物理學會秋季聯合大會，AGU Fall Meeting)。2024 歐洲地球科學學會聯合研討會由總部設於德國慕尼黑的歐洲地球科學學會所主辦，該學會除積極推動地球(含海洋)、太空、及行星科學之基礎與應用科學研究外，亦致力於跨領域研究之突破及對於人類社會福祉之促進，近年因全球暖化與淨零排放議題，綠能、地質減碳與環境永續更為今年度炙手可熱的議題。

為與各國海洋地質與地球物理專業人員進行技術與研究交流，提升本院於海洋科學與資訊領域之專業，陳麗雯副研究員以第一作者身分發表論文，並以口頭報告方式呈現，論文題目為：Submarine Geomorphology and Seafloor Instabilities Revealed from Geophysical Data Offshore Southeastern Taiwan。除論文發表外，本次出國期間亦透過積極參加專題演講、海報研討及廠商攤位參訪等多元方式積極與國外專家學者及廠商進行交流，了解國際最新之海洋科學研究與探測技術進展，作為我國海洋科學與資訊研究及未來合作之參考。

## 貳、過程

本案出國日期為 113 年 4 月 13 日至 4 月 20 日，日程表如下(參加議程詳附件)：

日期	地點	行程內容
4/13(六)	前往維也納	
4/14(日)	維也納	會議報到、ice breaker
4/15(一)	維也納	<u>上午</u> 口頭報告、專題演講 <u>下午</u> 專題演講、海報交流
4/16(二)	維也納	<u>上午</u> 專題演講 <u>下午</u> 專題演講、海報交流
4/17(三)	維也納	<u>上午</u> 專題演講 <u>下午</u> 海報交流、廠商展覽
4/18(四)	維也納	<u>上午</u> 專題演講 <u>下午</u> 專題演講、海報交流
4/19(五)	維也納	<u>上午</u> 專題演講 <u>下午</u> 海報交流、廠商展覽
4/20(五) - 4/21(六)	維也納-桃園 機場	<u>回程</u>

## 一、 口頭報告

本次投稿發表之議程為海底地形與震測地形學(Submarine Geomorphology and Seafloor Seismic Geomorphology)，發表日為4/15(研討會的第一天)。在本議程主要內容說明如下：海洋底部擁有豐富多樣的地形，這些地形反映了多種構造、沉積、海洋學、生物和（生物）地球化學過程在不同空間和時間尺度上的作用。當測繪發展道高解析度的海底地形測量，尤其是與海底以下和/或海床測量相結合時，提供了一個將地形學和地球物理學方法整合起來，並將定量地貌學擴展到海洋環境的絕佳機會。三維震測技術的進展也催生了震測地形學(seismic geomorphology)，其相關研究可為大陸邊緣演化提供四維時空尺度視角。本次跨學科會議旨在探討塑造現今海底地形地貌之原因和過程，包括海底侵蝕和沈積、海底山崩和峽谷、沉積物散佈和地殼變形、火山活動、流體遷移和逸出、斷層和褶皺等海底地形變化的驅動因素。

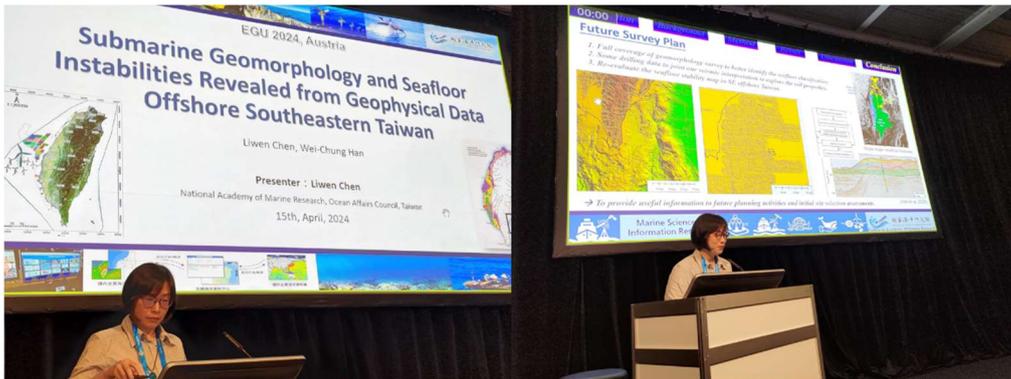
本次會議的總體目標是匯集那些研究過去和現在海底特徵形態、力圖理解地表和地下過程及其影響，或使用海底地形測量和/或三維震測資料結合鑽井岩石地球物理和地質岩心建置地質模型的研究人員。本議程接納包括來自任何深度或地形區域的研究，例如海洋高原、深海丘陵、中洋脊、增積楔和大陸邊緣（從大陸棚到深海平原）。本議程歡迎任何尺度的資料集，從衛星預測的深度到超高解析度的掃測海底地形、地下構造成像和取樣。本議程旨在提供一個震測地形學跨學科研究的窗口，使參與者能夠接觸到不同的視角、最新的工作流程、資料整合的案例，以及在震測解釋中將地球物理剖面視為野外露頭時可能遇到的潛在問題。我們將重點關注如何調查震測資料以及如何應用這些結果的貢獻（例如古地理/古環境重建、海底工程或二氧化碳/核廢料封存等）。

本次在筆者開始進行報告前先由議程主持人開場介紹上述議程框架與演講者資訊，本次報告主題為：Submarine Geomorphology and Seafloor Instabilities Revealed from Geophysical Data Offshore Southeastern Taiwan，研究內容主要為藉由整合分析多種海洋地質資料，如水深地形、側掃聲納、底質剖面、反射震測、岩心採樣等，探討台灣東南海域南縱海槽之海底地形特徵及海床不穩定性(詳附錄)。報告過程中展現了台灣的海洋探測與資料整合分析能力，在報告結束後獲得熱烈的迴響與討論，特別是議程主持人十分肯定本院收集多種海洋地質資料並進行分析處理的能力，而在討論過程中，國外專家學者也特別強調海洋資料庫建置與管理的重要性，可作為未來研究執行規劃之參考依據。

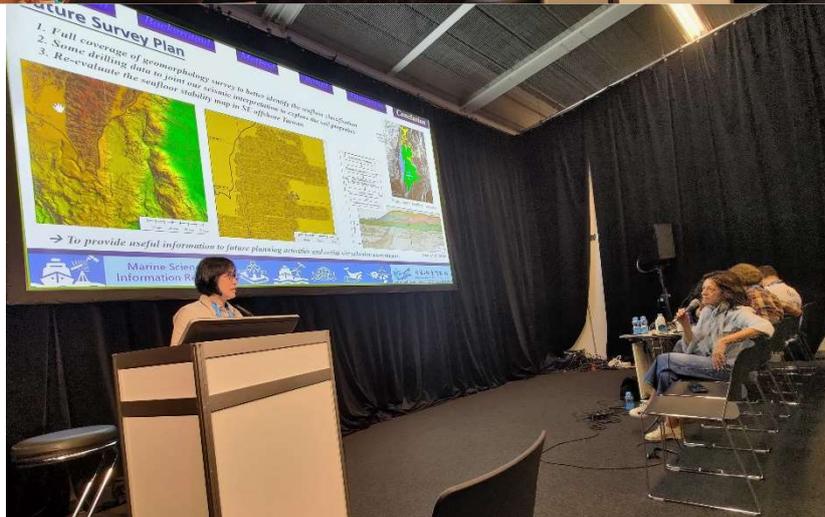


海底地形與震測地形學議程主持人開場致詞

副研究  
場進行  
告



陳麗雯  
員於會  
口頭報



報告結束後與議程主持人及聽眾交流研討

## 二、 專題演講

筆者於本次會議期間每日均積極參加專題演講，吸收國際最新之研究與技術發展趨勢，包含海底地形調查與分析、海洋地質災害調查與評估、海洋科學研究、地球物理技術發展與工程與地質減碳之應用、再生能源等領域，期能對本中心後續業務規劃與推動能有所助益，筆者於本次會議參加之專題演講議程詳見附錄，以下彙整與本院業務較相關之演講重點如下：

### 1. 海底地質災害調查：

- a. 海底山崩：大規模海底山崩或濁流事件可能造成海底電纜斷裂或其他工程設施損壞、甚至可能誘發海嘯，故許多國家均編列相關之海洋地質調查工作，以加強對於致災風險評估的正確性，並作為未來工程施工與減災規劃，藉由精細地海床測繪與底質調查，以及地貌與地層分析，可描繪出近代曾發生海底山崩之區域，並獲得海床坡度及崩積層幾何資訊，若能搭配現地岩心採樣與力學試驗則可進一步估算海床土壤力學強度，滿足海底山崩與海嘯之數值模擬所需之關鍵參數，作為海底災害評估與防災規劃之重要參考依據。受惠於近年來海洋高解析三維震測技術的普及，震測地形學方法在國際上逐漸被廣泛應用於海底山崩與海床不穩定性之調查與分析評估研究。考量台灣天災頻繁，且過往研究指出台灣海域曾發生海底山崩與海底電纜斷裂等海底地質災害，未來若能針對災害潛勢較高區域進行更詳盡地海床測繪與地質調查，將有助於了解致災因子、海域工程設計與選址及防災規劃。
- b. 海底斷層：致災性地震多由活動斷層錯動所造成，過往研究指出此類地震之規模大小主要取決於斷層面長度，地礦中心過往投入許多努力，進行台灣陸地之活動斷層調查並製作陸域地質圖，然許多海陸域斷層在地質上往往是相連的，且台灣周圍之海域面積遠大於陸地，需完善海域斷層調查方能對致災地震有較全面的了解並訂定合乎現實之工程設計與減災規劃，今年花蓮地區發生之0403地震更印證了海域斷層調查之重要性與急迫性。透過本次參加研討會了解到目前國際上認同較好的做法是透過海域反射震測調查，了解斷層在地底深部的幾何形貌、破裂機制與錯動量，搭配水深地形測繪作為輔助，檢視地表在震後是否有地表錯動的證據，綜合評估因斷層錯動導致致災地震之潛勢與可能之嚴重程度，並根據這些分析結果繪製海域地質圖並劃設地質敏感區或災害潛勢區。

### 2. 海域再生能源開發與二氧化碳地質封存：

與筆者過往參加此研討會的經驗比較，本次研討會較不一樣之處為強烈感受到國際上對於減碳工作日益重視，本次研討會與綠能(如離岸風電、地熱能源)或二氧化碳地質封存相關的議程幾乎場場爆滿，與會者席地而坐或站立聽講人數甚多，甚至晚到的聽眾擠不進會議室、只能在走廊聽講的情況也時有所見，國際上對於淨零排碳之重視可見一斑。筆者有幸聆聽本次會議邀請目前任職於 **GEOPROVIDER** 公司之專家進行主題演講，分享其對於離岸風場地質調查規劃之實務經驗，雖因講者以其簡報具有機密性而禁止聽眾拍照而無法於此報告詳細呈現其精彩的分享內容，但其一再強調的核心理念即為地質與工程結合的重要性，講者認為離岸風場地質調查除常

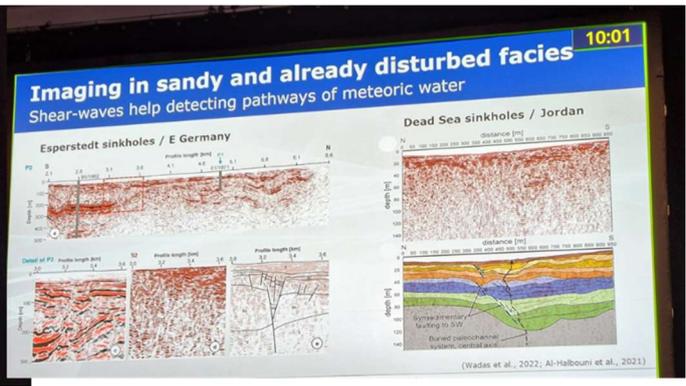
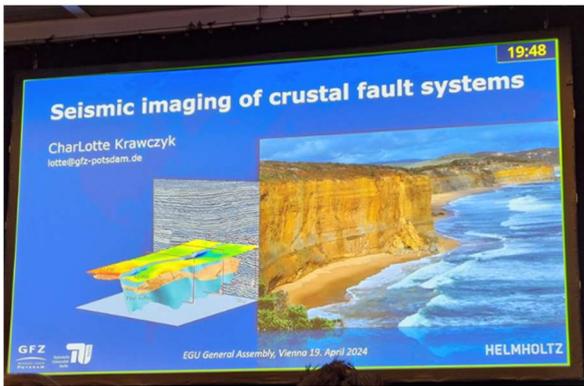
見的水深地形、地貌、底質剖面、震測、岩心與地工參數量測外，最重要的是如何整合這些調查資料建構最適化之三維地質與地工模型，並提到模型須經資料驗證，若與資料有矛盾之處則應檢視其原因並根據新收集之資料持續更新並改進地質與地工模型，以確保能夠採用最合乎現地環境狀況之工程設計與選址，以最經濟有效、最小化災害風險與致力環境永續的開發方式讓工程、人類與環境共存共榮。另一方面，海域二氧化碳地質封存議題亦有極高的關注度，特別是過往應用於石油與天然氣探勘與開發生產的技術，若能經適當的修正或調整，即可應用於二氧化碳地質封存之開發前地質調查、選址、工程設計及環境監測等面向，在所有調查與監測技術中，三維與四維震測因其可提供精細地三維地下構造及流體聚集及移棲資訊之特性，故而相關資料採集設備、資料處理與分析技術分展均備受重視。除三維震測技術外，其他如氣體地球化學及光纖微震等監測技術，亦是二氧化碳地質封存相當重要的發展趨勢。整體而言，在二氧化碳注儲地底前，由淺至深針對封存場址全面地質調查必不可少；在場址開發與運維階段則須透過各種定期監測(水深地形調查、四維震測)及連續監測(氣體、微震、地下水)，監測是否有發生 CO<sub>2</sub>洩漏之情形、並公開即時觀測數據幫助消除民眾疑慮，建立順暢的公眾溝通機制。



菲律賓海底山崩之調查分析研究

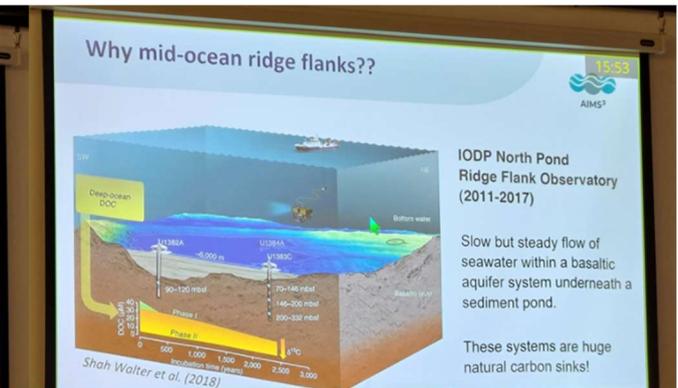


GEOPROVIDER 主題演講-海床調查對於離岸風電選址及開發至關重要!

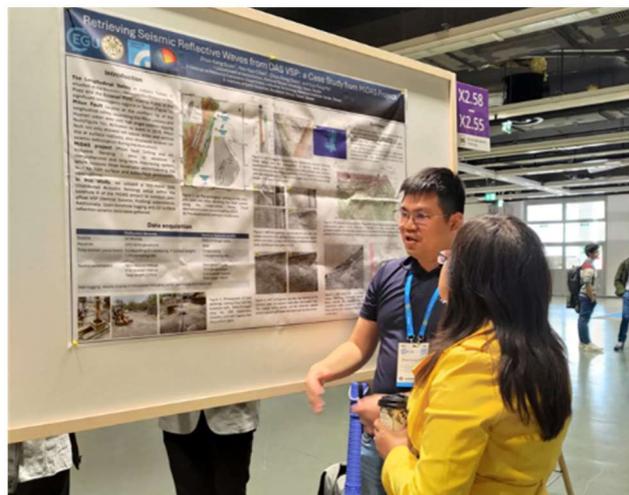


應用震測調查海底斷層系統與地震致災風險(德國團隊)

- Groundwater level change
- Induced seismicity
- Groundwater contamination
- Groundwater salinity change
- Safety around the storage tanks



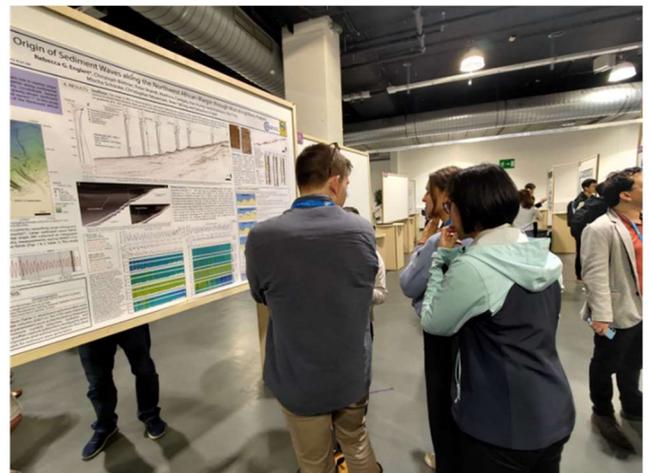
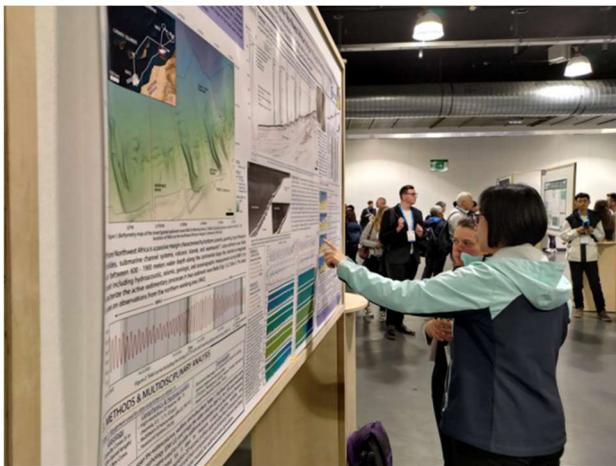
海洋地質 CO<sub>2</sub>封存(美國團隊)



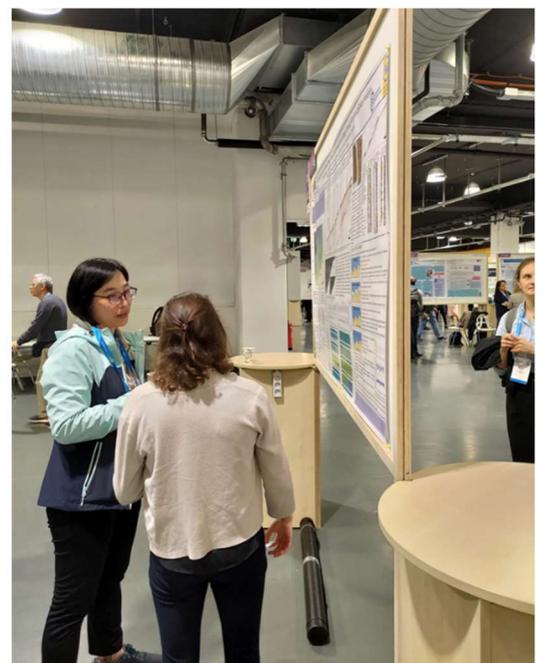
台灣學者於 EGU 發表花東海盆的沉積傳輸機制及東部地震監測結果

### 三、海報交流及評審

研討會除口頭發表(oral presentation)形式外亦提供海報發表(posters presentation)的方式，將較於口頭發表緊湊的時段安排，海報發表則可有更充裕的時間進行更深入的交流討論，除專家學者外亦有許多學生選擇以海報發表其研究成果，筆者於會議期間除參加專題演講外亦積極參與海報交流，特別是關於國外海域調查成果與資料分析與應用技術的發展均使我獲益良多，其中部分研究成果更相當值得我國借鏡，如透過震測、海底地形、岩心採樣等多種調查資料之整合分析探討海床沙波(seafloor sandwave)之遷移機制、速率與規模，對於離岸風機及海底電纜之選址、設計、工程施工與監測維護提供了至關重要的資訊，另一方面許多石油探勘領域發展之進階資料分析技術應用於海底地質災害與海洋工程監測可發揮極佳的成效，另也有相當多極區冰川與海洋之全球變遷之研究，筆者深深感受到透過不同領域學者與工程師的多元討論可拓展視野並激盪創新之研究或技術發展。



積極參與海報區交流研討-1



積極參與海報區交流研討-2

#### 四、 廠商展覽交流

本次參加攤位展覽的除儀器、軟體與專業服務廠商外，亦包含各大國際學會、科學研究觀測機構、國際期刊出版社、以及關心推廣願意參與貢獻地球科學的跨國企業。如美國地球物理學會(AGU)、歐洲地球科學學會(EGU)、亞太地球科學學會(AOGS)、日本地質學會(JPGU)、美國太空總署(NASA)、美國地質調查所(USGS)、美國大氣海洋總署(NOAA)、Elsevier 出版社、牛津大學出版社等近200個國際知名機構租用大大小小的攤位參與展示，可見本研討會中參與溝通交流之重要性。

除參訪上述單位之攤位外，筆者特別與海底地震儀、磁力儀、無人機及無人船廠商交流，了解國際最新海洋探測技術與未來發展趨勢，並與未來潛在技術供應商建立聯繫管道。發現近年來各項探測儀器皆逐漸達到人性化的介面處理系統，價位也因控制面板的省電高效普及化而下降，然而評估儀器於探測海域的耐限度報告仍是我們最關切的議題，惟現場服務解說人員往往是銷售推廣部門，無法明確回答關於抗浪抗流的現場實測相關問題，因此針對各項科儀對於我們肩負全海域探測的海科中心仍屬於觀看階段。

當中最引人注目的無非美國地球物理整合探測技術大廠 GEOMETRICS，推出最先進的輕薄(僅重3.7公斤)攜帶式磁力儀(MagEx)。整體有五大優勢：其輕量級設計除具有易於攜帶、操作介面更可兼容於 Android 平板電腦以消除笨重的數據記錄器、低功耗的紀錄系統可延長電池壽命連續執行探測達12小時以上、無線控制消除了電纜在現場可能造成的許多空間設置上的麻煩、最強大的還有即時查看磁場資料並提供現場網格化的創建彩色等高線圖的能力。然而，目前國內大多數使用的仍是英國 OCEANSCAN 牌的 MARINE MAGNETICS SEA SPY MAGNETOMETER 系列，將來可望能夠比對此兩儀器資料收集品質異同，以為本院設備建置做最適切的選擇。

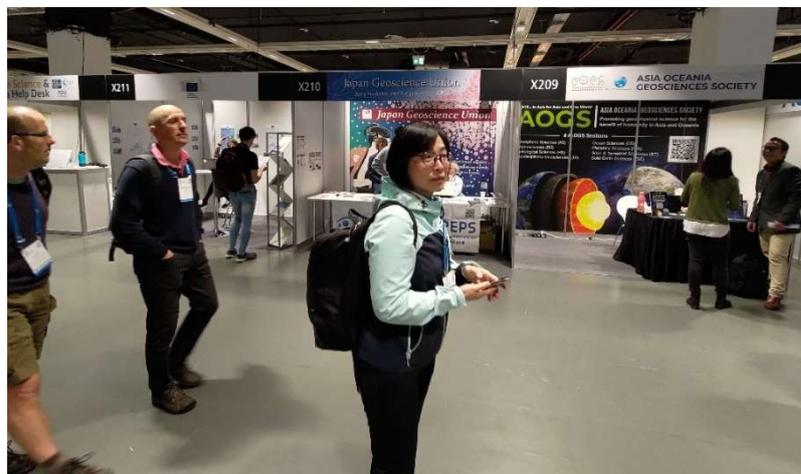
此外，關於輕型海底地震儀的部分，回國後與中研院海底地震儀(Yarbird-BB OBS)團隊討論，以廠商所提供 DM 與國內現有海底地震儀做對比。根據使用目的地的不同，過往地體構造研究多需要深水穩重長效的地震儀執行監測記錄，導致目前國內淺水及極淺水域的地震儀器空白帶，為了將來的離岸海床穩定性監測，我們的確需要輕型地震儀增加地震定位網絡的精準度，然而淺水域的漁業行為可能會是海床布料長時間紀錄的最大障礙，或許小心選定相對穩地的監測場域、並採用纜繩多加固與海床的連結，可以補足地震儀觀測點的空間分布。



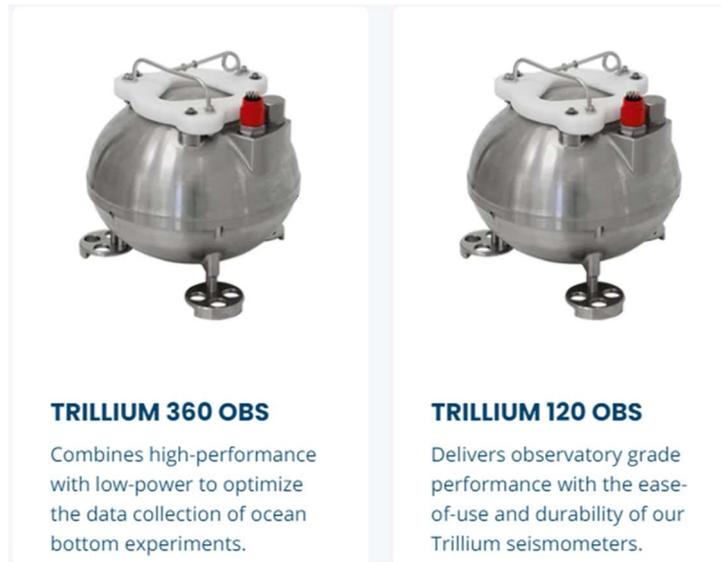
EGU 會場廠商參與攤位 logo 概觀



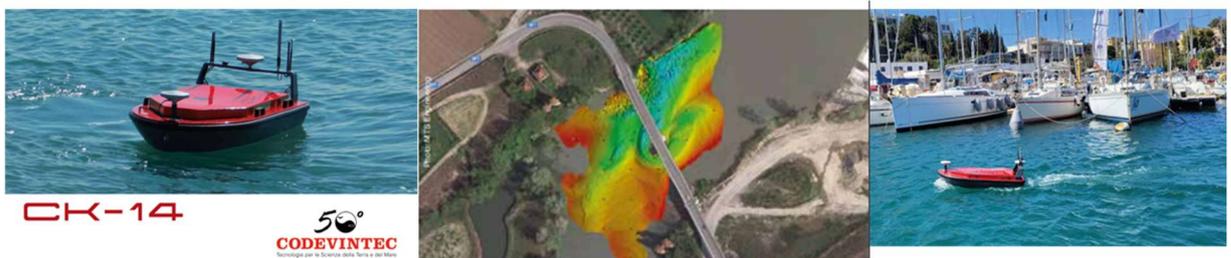
EGU 會場有各類無人機的實體及即時影像展覽



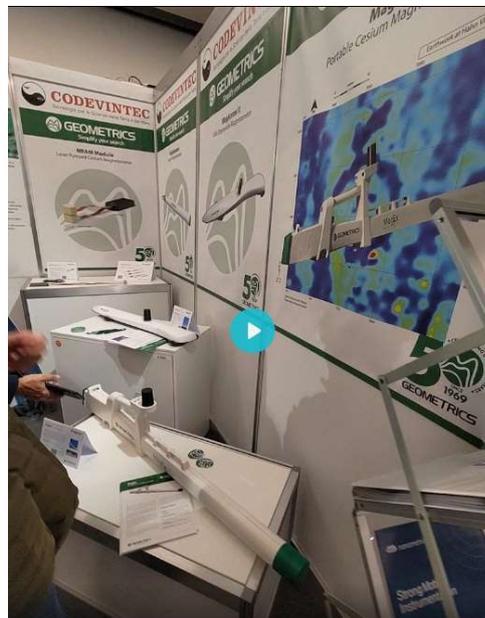
筆者於 EGU 會場參觀廠商攤位展覽



加拿大廠商推出之輕型海底地震儀(主適用於數百米水深區域)



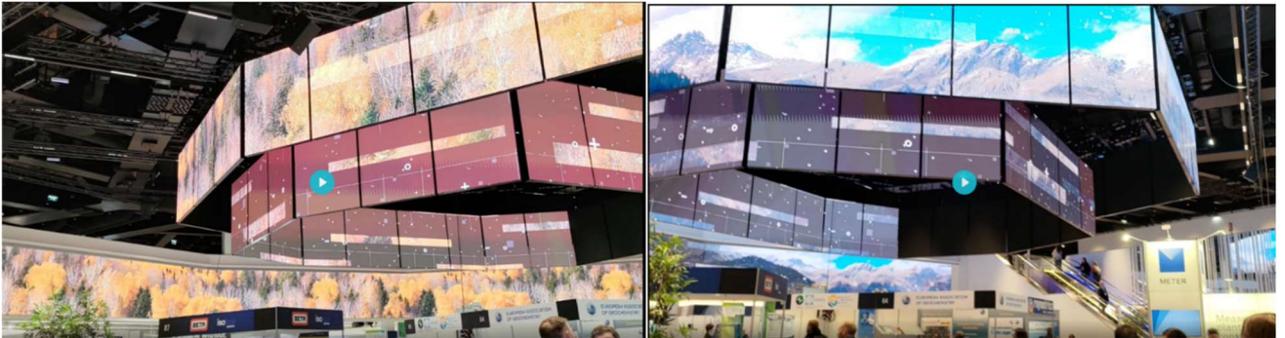
義大利廠商推出之無人船及海底地形探測應用示意



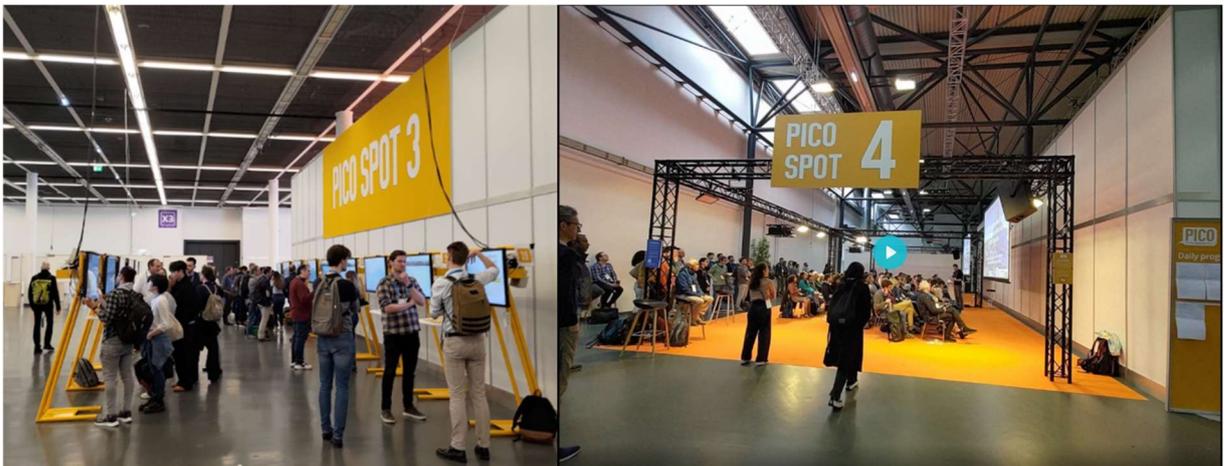
美國地球物理儀器廠 GEOMETRICS 推出僅3.7公斤可記錄12小時以上的超輕薄攜帶式磁力儀

## 參、心得與建議

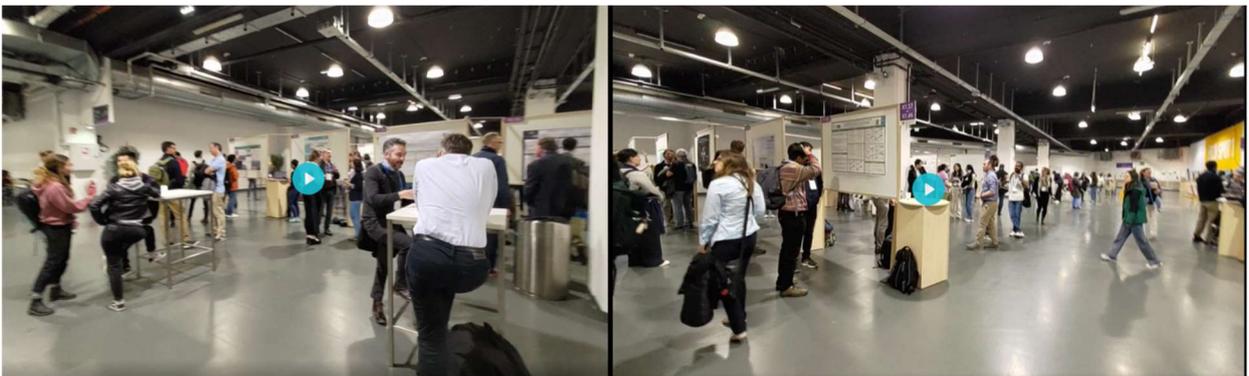
1. 在舉辦國際會議方面：推廣減少環境衝擊、採用多元方式增益討論交流。每年春天在奧地利維也納舉行的 EGU 大會約有 16,000 名現場參與者，將會對該區環境產生重大影響，因此 EGU 除了在會議中有許多保護地球的綠色倡議及布置之外，在註冊的同時便給與參加者市區大眾運輸工具的會議該週通行證、電子 APP 系統開發應用以避免紙本列印發送並提供足夠資訊協助、鼓勵現場攤位以 QR code 為連結溝通方式。此外，近年來 EGU 最大特色便是以互動報告 (Presenting Interactive Content, PICO)方式展現自己的研究成果，讓整場會議具有參與專題演講、具有舒適討論的海報發表空間、提供線上與會交流以及 PICO 快報的多元互動方式。



會場內運用許多貼近大自然設計展示推廣愛地球觀念

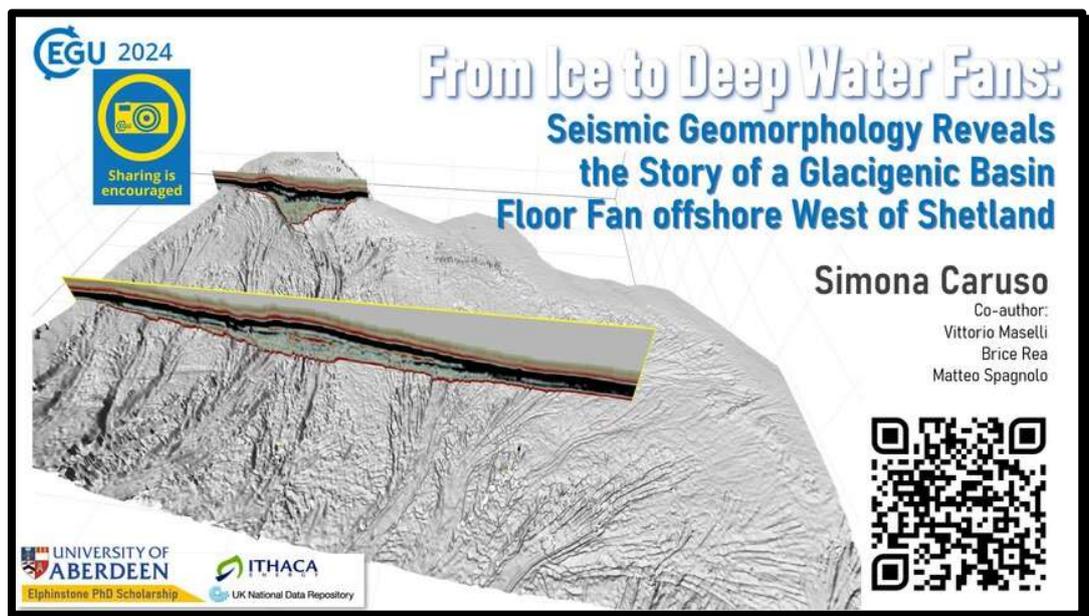


PICO 發表者會有2分鐘快閃報告後要到各自電腦前站崗並即時呈現給與會者重點解說



海報立柱間為可供置物充電的小圓立桌，兩側則有方形團體討論桌

2. 在參與國際會議方面：持續保持減化個人碳足跡的習慣。攜帶個人飲水瓶為基本應建立的習慣，飛機的部分在個人無法避免，但是在造訪該城市內的交通運輸，則全程以步行、火車、捷運為交通方式，善用會議安排的週通行證及接駁工具。
3. 在全海域探測方面：納入與永續資源相關的海床特徵基礎調查。先前的地球科學會議，不外乎是探討深海鑽探油氣、尖端技術開發應用議題，如今都轉化為”永續資源”與”地質碳封存”之國際炙手可熱的議題。反思我們臺灣海峽具備豐沛的風能資源及優良的地質碳封存潛能，若能妥適規劃利用海洋空間與資源、投入關鍵技術引進與研發、落實人才培育與經驗傳承，將可期待充分發揮台灣身為海洋國家的優勢。將海床本身具有的永續資源潛能(如離岸地下水、海床固碳特徵分析及離岸地質封存場址調查等)納入爾後探測規畫，以追趕得上國際上整合研究趨勢。
4. 在探測技術發展方面：以多維度探測為基礎發展整合性應用技術。在海底資源探勘及地質災害調查方面，高解析海床地形結合多重解析度地球物理與地質資料，如底質剖面、側掃聲納、反射震測、岩心採樣進行整合分析，可最大化海洋資料價值並有效降低分析成果不確定性，早已是國際趨勢。四維震測(不同時間多次三維震測施作)技術，乃為國際上針對海洋地質減碳必備之監測項目，除可有效偵測地下流體移棲與聚集之時空變化，亦可應用於海底地質災害、海底資源探勘與離岸風電場址調查與監測，然而，由於國內三維及四維資料的欠缺，多數以單一探測資料便著手分析的研究，容易存在許多片面資訊的盲點。因此本院規劃建造之研究船，已納入三維震測探測系統，倘若將來能夠落實相關資料採集處理與分析技術之發展，建立扎實的國內海洋探測能量，搭配妥善的政策與制度規劃、研究船建造及專業人才培養，將有助於台灣海域探測技術發展，成為亞洲淨零排放之領頭羊。



三維反射震測資料對得蘭群島西部的冰川盆地扇進行地質分析之範例

## 肆、附錄

### 一、論文發表資料

Submarine Geomorphology and Seafloor Instabilities Revealed from Geophysical Data Offshore Southeastern Taiwan

Liwen Chen<sup>1</sup>, Wei-Chung Han<sup>2</sup>

<sup>1</sup> *National Academy of Marine Research, Ocean Affairs Council, Taiwan*

<sup>2</sup> *Exploration and Development Research Institute, CPC Corporation, Taiwan*

#### Abstract

Taiwan has excellent natural conditions for marine energy development. However, due to the unstable seabed geological conditions, submarine geohazards must be carefully assessed before engineering development offshore SE Taiwan. Tectonically, the offshore southeastern Taiwan is situated in the oblique collision between the Eurasian Plate and the Philippine Sea Plate. Previous studies suggest that the Southern Longitudinal Trough (SLT) is characterized by a series of backthrusts and slumpings. Due to the rapid erosion and deposition led by extreme events, including typhoons and active tectonics, offshore SE Taiwan is an excellent site to study submarine geomorphology and seafloor instabilities.

First, we collect seafloor bathymetry, seismic data, and core samples to develop the regional geological database. Then, we conducted detailed structural and morphological analyses from seismic and bathymetry data. After that, several interesting geological features are presented, including submarine canyon systems, sliding scars, mass transport deposits, and faultings. Their distribution and connections are then discussed, which gives insights into the sediment transport mechanisms and geological hazards.

Since the study area is of high ocean energy potential, appropriate site selection and development planning based on geological analysis should be carried out before marine industry projects. Whether in marine scientific research, site selection, engineering design, or social and economic development, studying geological processes and seabed stability offshore SE of Taiwan is urgent. Our results could provide a basis for subsequent seabed monitoring and engineering development.

Keywords: Taiwan, Southern Longitudinal Trough, geomorphology, seafloor stability



EGU 2024, Austria

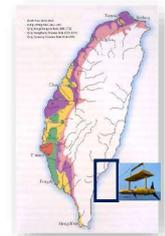
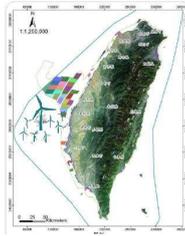
# Submarine Geomorphology and Seafloor Instabilities Revealed from Geophysical Data Offshore Southeastern Taiwan

Liwen Chen, Wei-Chung Han

Presenter : Liwen Chen

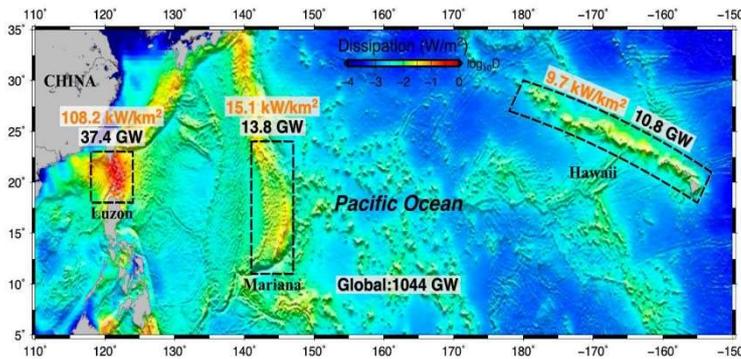
National Academy of Marine Research, Ocean Affairs Council, Taiwan

15th, April, 2024

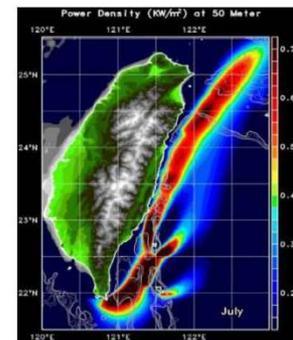


**Introduction**   **Background**   **Method**   **Result**   **Discussion**   **Conclusion**

## Why Study Geomorphology and Seafloor Instabilities Offshore Southeastern Taiwan?



(Tang et al., 2021)



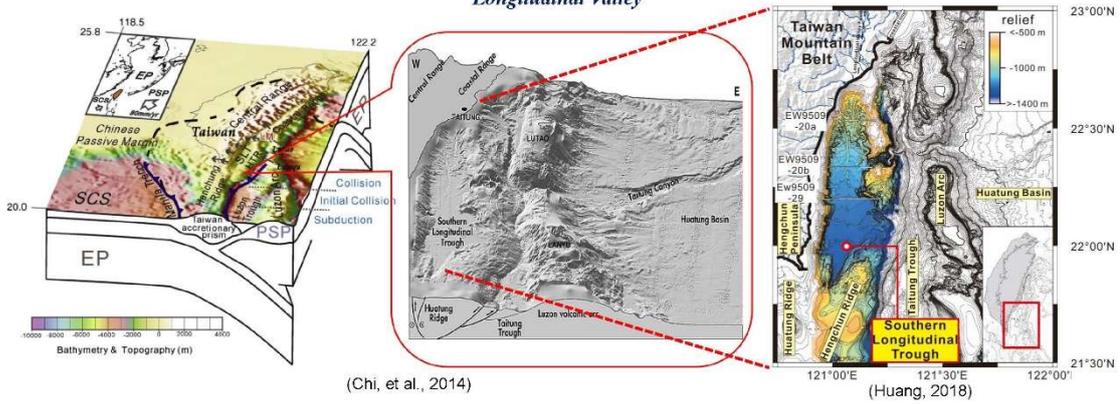
(Hsu et al. 2015)

*The modeled integral internal tide energy dissipation at Luzon Strait is up to 37.4 GW, and offshore SE Taiwan performs the best potential from simulation.*



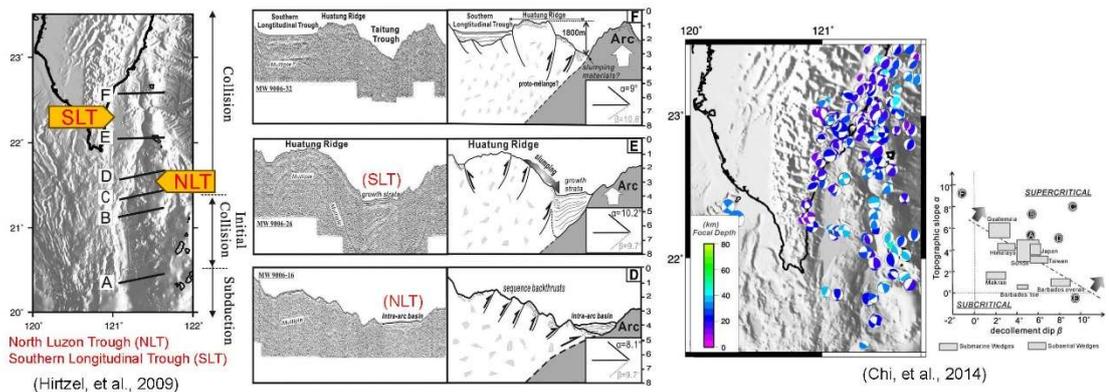
## Arc-Continental Collision developed Taiwan from SE to NW

Seafloor Geomorphology illustrates the Southern Longitudinal Trough is the southern underwater extension of the Longitudinal Valley



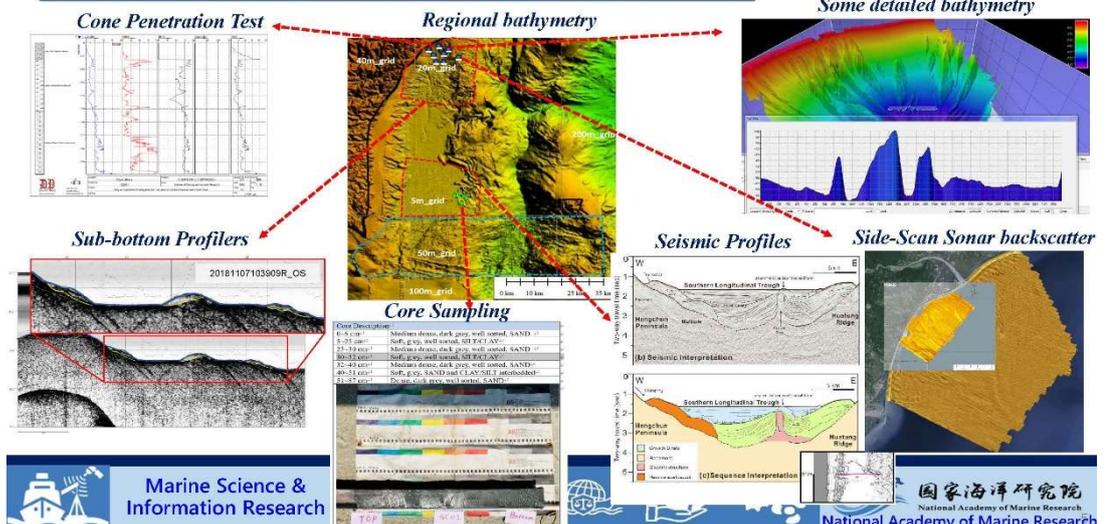
## Arc-Continental Collision developed Taiwan from SE to NW

Active backthrusting dominated the submarine geomorphology structures: Exhumation & Slumping

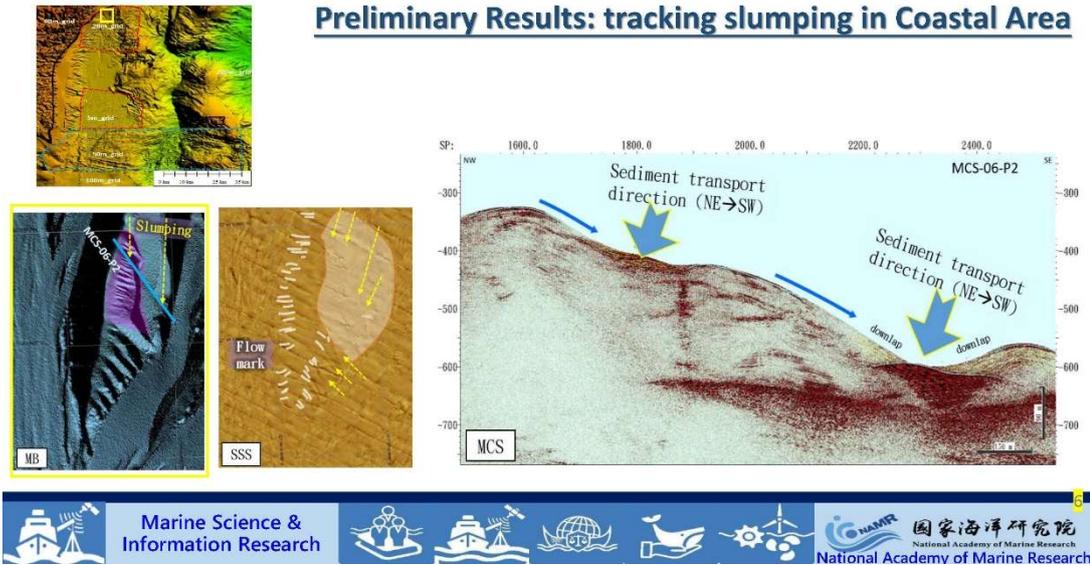


Therefore, the thrusting and slumping activities of the eastern and western SLT might be critical for marine construction.

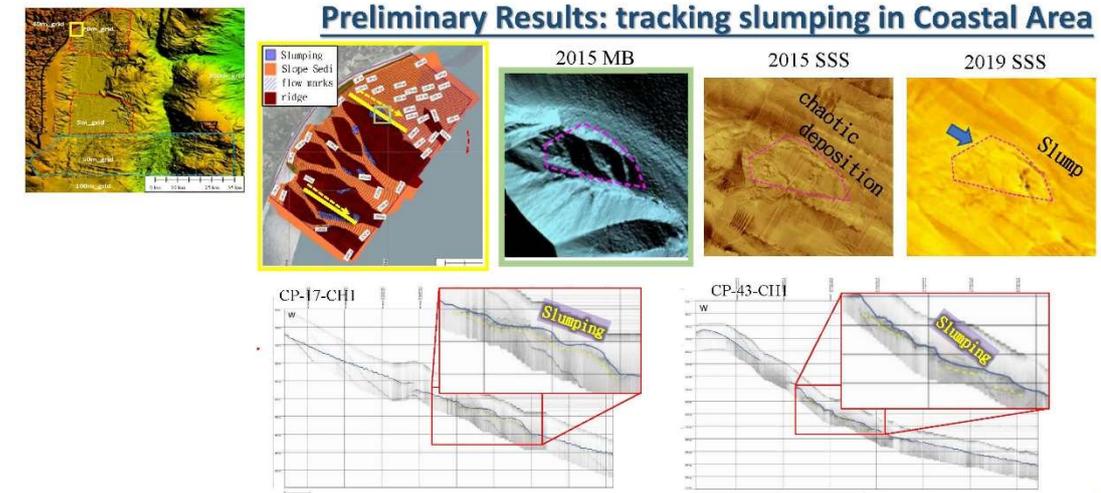
## Compile and joint-interpreted current Geospatial Data



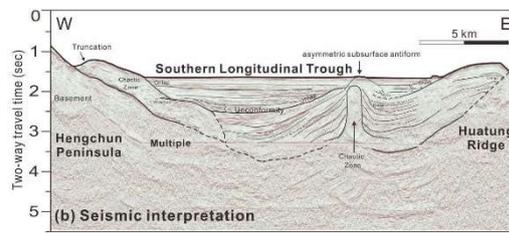
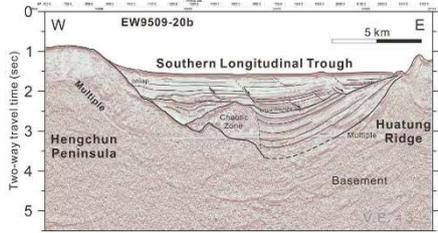
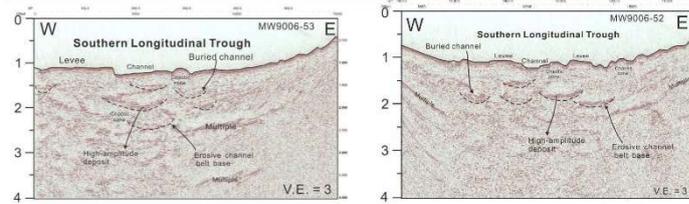
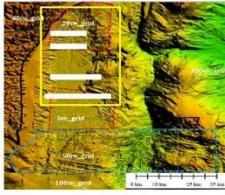
**Preliminary Results: tracking slumping in Coastal Area**



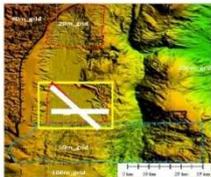
**Preliminary Results: tracking slumping in Coastal Area**



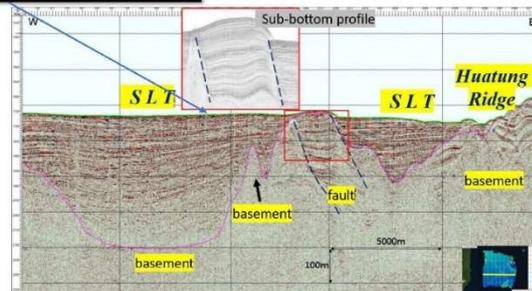
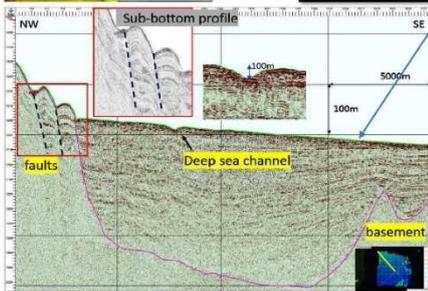
### Preliminary Results: tracking slumping in SLT basin



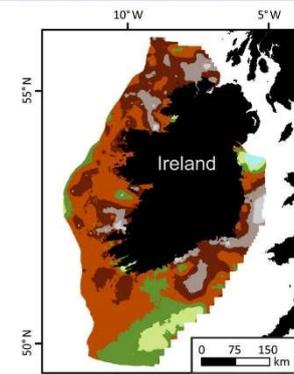
### Preliminary Results: tracking faulting in SLT basin



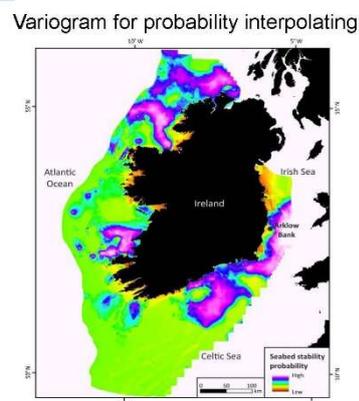
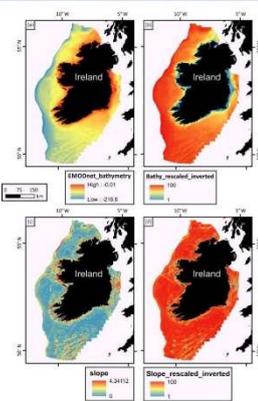
Core Description	
GC04	121°3.049' 22°4.132' 1254 m
0-16 cm	Very soft, grey, well sorted, SILT CLAY
16-23 cm	Soft, Grey, well sorted, SAND
23-38 cm	Soft, grey, well sorted, SILT CLAY
38-62 cm	Soft, Grey, well sorted, SAND
62-96 cm	Soft, grey, well sorted, SILT CLAY
96-106 cm	Dense, dark grey, well sorted, SAND



### Seafloor Instabilities Observation → Evaluation



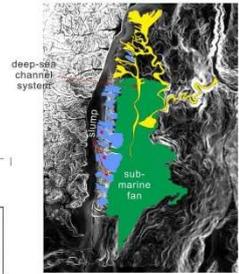
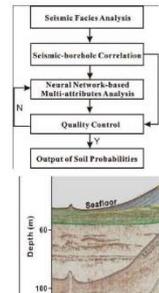
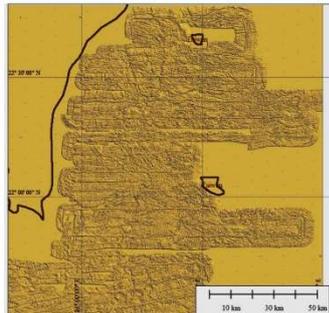
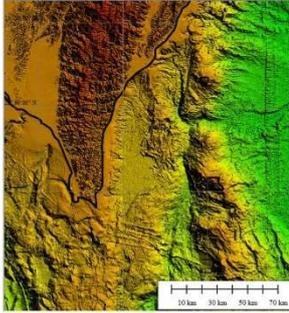
(Peter et al., 2020)



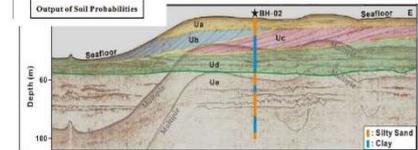
Seafloor sediment stability model derived from combining the seafloor sediment properties, bathymetry, and slope.

### Future Survey Plan

1. Full coverage of geomorphology survey to better identify the seafloor classification.
2. Some drilling data to joint our seismic interpretation to explore the soil properties.
3. Re-evaluate the seafloor stability map in SE offshore Taiwan.



Slope map+ seafloor features



→ To provide useful information to future planning activities and initial site selection assessments.

(Han et al. 2020)

## 二、本次參加之議程資訊

2024/5/18 上午9:19

Personal programme



### EGU24 Personal programme ★

Monday, 15 Apr 2024

ERE2.9 **EDI**

#### [Deep Geothermal Energy](#) ▶

Co-organized by EMRP1

Convener: Guido Blöcher

Co-conveners: Kalliopi Tzoufka Mauro Cacace Jean Schmittbuhl David Bruhn

▶ [Orals](#) ★ | Mon, 15 Apr, 08:30–11:55 (CEST) Room -2.16

▶ [Posters on site](#) ★ | Attendance Mon, 15 Apr, 16:15–18:00 (CEST) | Display Mon, 15 Apr, 14:00–18:00 Hall X4

GM9.6 **EDI**

#### [Submarine Geomorphology and Subseafloor Seismic Geomorphology](#) ▶

Co-organized by OS2/SSP3, co-sponsored by ILP and IAG

Convener: Alessandra Savini

Co-conveners: Jacob Geersen Luca Fallat Sebastian Krastel Aaron Micallef Andrew Newton

▶ [Orals](#) ★ | Mon, 15 Apr, 08:30–12:30 (CEST) Room -2.20

▶ [Posters on site](#) ★ | Attendance Mon, 15 Apr, 16:15–18:00 (CEST) | Display Mon, 15 Apr, 14:00–18:00 Hall X1

ERE1.9 **EDI**

#### [Applications of geo-electromagnetic methods in resource, engineering and environmental studies](#) ▶

Co-organized by EMRP2/GIS

Convener: Dikun Yang

Co-conveners: Chi Zhang Longying Xiao Pradip Maurya Paul McLachlan

▶ [Posters on site](#) ★ | Attendance Mon, 15 Apr, 16:15–18:00 (CEST) | Display Mon, 15 Apr, 14:00–18:00 Hall X4

▶ [Posters virtual](#) ★ | Mon, 15 Apr, 14:00–15:45 (CEST) | Display Mon, 15 Apr, 08:30–18:00 vHall X4

EGU24-5523 | Orals | [GM9.7](#) | **Highlight** ★

#### [The unique geomorphology of submarine venting features as revealed by dropping lake levels in the Dead Sea](#) ▶

Michael Lazar, Danny Ionescu, and Christian Siebert

Mon, 15 Apr, 14:20–14:30 (CEST) Room -2.20

EGU24-8298 | Orals | [GM9.7](#) | **Highlight** ★

#### [Fluid escape submarine geomorphological features in the NW Black Sea](#) ▶

Gabriel Ion, Adrian Popa, Constantin Lazăr, Vlad Apotrosaei Apotrosaei, and Florin Duțu

Mon, 15 Apr, 14:30–14:40 (CEST) Room -2.20

EGU24-10370 | Orals | [GM9.7](#) ★

#### [Discovery of a major seafloor methane release site in Europe: The Landsort deep, Baltic Sea.](#) ▶

Marcelo Ketzner, Christian Stranne, Cheng Chang, Satoko Owari, Changxun Yu, Sebastien Migeon, Matt O'Regan, and Martin Jakobsson

Mon, 15 Apr, 14:40–14:50 (CEST) Room -2.20

EGU24-15075 | Orals | [GM9.7](#) ★

#### [Are the foraminiferal assemblages useful proxy for detecting methane emissions in shallow water environments? the case of Scoglio d'Africa \(Tuscan Archipelago, Northern Tyrrhenian Sea\)?](#) ▶

Letizia Di Bella, Daniele Casalbere, Aida Maria Conte, Alessia Conti, Irene Cornacchia, Andrea D'Ambrosi, Giovanni Gaglianone, Michela Ingrassia, Daniele Spatola, Martina Pierdomenico, Claudio Provenzani, Tania Ruspandini, and Francesco Latino Chiocci

Mon, 15 Apr, 14:50–15:00 (CEST) Room -2.20

EGU24-16419 | Orals | [GM9.7](#) | **Highlight** ★

#### [Insights into Seabed Fluid flows: Pockmark dynamics mapping and monitoring in Patras Gulf, Greece. Unveil Correlations to local tectonics and Earthquakes. The BLUEL project.](#) ▶

George Papatheodorou, Maria Geraga, Dimitris Christodoulou, Elias Fakiris, Efthimos Sokos, Zafeiria Roumelioti, Giuseppe Etiope, Sotiris kokkalas, Nikos Giannopoulos, Xenophon Dimas, Nikos Georgiou, Vasileios Giannakopoulos, and George Ferentinos

Mon, 15 Apr, 15:00–15:10 (CEST) Room -2.20

EGU24-17022 | Orals | [GM9.7](#) ★

#### [Discovery of a unique submarine hydrothermal system between shallow photic and deep dark sites around the Greek island of Milos \(Aegean Sea, Greece\)](#) ▶

Solveig Bühring, Andrea Koschinsky, Wolfgang Bach, Marcus Elvert, Charlotte Kleint, Palash Kumawat, Joely Maak, Eva-Maria Meckel, Paraskevi Nomikou, Clemens Röttgen, and Enno Scheuß

Mon, 15 Apr, 15:10–15:20 (CEST) Room -2.20

EGU24-21390 | Orals | [GM9.7](#) | **Highlight** ★

#### [Submarine Morphology Offshore Crotona \(Calabrian Accretionary Prism, Central Mediterranean\): Pockmark Fields and a Mud Diapir in a Mobile Shale Domain](#) ▶

Andrea Argnani and Marzia Rovere

Mon, 15 Apr, 15:20–15:30 (CEST) Room -2.20

[https://meetingorganizer.copernicus.org/EGU24/personal\\_programme](https://meetingorganizer.copernicus.org/EGU24/personal_programme)

1/6

GM9.7

[Fluid venting as a submarine geological process controlling seafloor morphology and biology](#) ▶

Co-organized by OS4

Convener: Daniele Spatola <sup>ECS</sup> Co-conveners: Daniele Casalbore  Marzia Rovere  Martina Pierdomenico  Daniel Praeg ▶ **Orals**  | Mon, 15 Apr, 14:00–15:30 (CEST) Room -2.20▶ **Posters on site**  | Attendance Mon, 15 Apr, 16:15–18:00 (CEST) | Display Mon, 15 Apr, 14:00–18:00 Hall X1ERE1.9 **EDI** [Applications of geo-electromagnetic methods in resource, engineering and environmental studies](#) ▶

Co-organized by EMRP2/GIS

Convener: Dikun Yang Co-conveners: Chi Zhang  Longying Xiao <sup>ECS</sup>  Pradip Maurya <sup>ECS</sup>  Paul McLachlan <sup>ECS</sup> ▶ **Posters on site**  | Attendance Mon, 15 Apr, 16:15–18:00 (CEST) | Display Mon, 15 Apr, 14:00–18:00 Hall X4▶ **Posters virtual**  | Mon, 15 Apr, 14:00–15:45 (CEST) | Display Mon, 15 Apr, 08:30–18:00 vHall X4ERE2.9 **EDI** [Deep Geothermal Energy](#) ▶

Co-organized by EMRP1

Convener: Guido Blöcher Co-conveners: Kalliopi Tzoufka <sup>ECS</sup>  Mauro Catate  Jean Schmittbuhl  David Bruhn ▶ **Orals**  | Mon, 15 Apr, 08:30–11:55 (CEST) Room -2.16▶ **Posters on site**  | Attendance Mon, 15 Apr, 16:15–18:00 (CEST) | Display Mon, 15 Apr, 14:00–18:00 Hall X4GM9.6 **EDI** [Submarine Geomorphology and Subseafloor Seismic Geomorphology](#) ▶

Co-organized by OS2/SSP3, co-sponsored by ILP and IAG

Convener: Alessandra Savini Co-conveners: Jacob Geersen <sup>ECS</sup>  Luca Fallati <sup>ECS</sup>  Sebastian Krastel  Aaron Micallef  Andrew Newton <sup>ECS</sup> ▶ **Orals**  | Mon, 15 Apr, 08:30–12:30 (CEST) Room -2.20▶ **Posters on site**  | Attendance Mon, 15 Apr, 16:15–18:00 (CEST) | Display Mon, 15 Apr, 14:00–18:00 Hall X1

GM9.7

[Fluid venting as a submarine geological process controlling seafloor morphology and biology](#) ▶

Co-organized by OS4

Convener: Daniele Spatola <sup>ECS</sup> Co-conveners: Daniele Casalbore  Marzia Rovere  Martina Pierdomenico  Daniel Praeg ▶ **Orals**  | Mon, 15 Apr, 14:00–15:30 (CEST) Room -2.20▶ **Posters on site**  | Attendance Mon, 15 Apr, 16:15–18:00 (CEST) | Display Mon, 15 Apr, 14:00–18:00 Hall X1

US1

[Advancing Measurements and Observations in the Geosciences](#) ▶Convener: Nick Everard Co-conveners: Bertrand Le Saux  Kirk Martinez ▶ **Orals**  | Mon, 15 Apr, 16:15–18:00 (CEST) Room E1

Tuesday, 16 Apr 2024

GDB5 **EDI** [How can geoscience unions and societies effectively integrate science into global policy decisions?](#) ▶

Co-sponsored by IUGG and GSL

Convener: Megan O'Donnel <sup>ECS</sup> Co-conveners: John Ludden  Alex/ander Rudloff  Elena Robinson ▶ **Programme**  | Tue, 16 Apr, 08:30–10:15 (CEST) Room E1EGU24-3610 | Posters on site | [ITS3.14/BG8.36](#) [Identification of long-term irrigation effect on plant water use from geophysical and proximal sensing observations: example of a vineyard](#) ▶

Luca Peruzzo, Benjamin Mary, Vicente Burchard Levine, Jose Guerra, Miguel Herrezuelo, Raul Lovera, Albert Casas, Giorgio Cassiani, Hector Nieto, and José Pena

Tue, 16 Apr, 16:15–18:00 (CEST) Hall X1 | X1.68

EGU24-11986 | **ECS** | Posters on site | [ITS3.14/BG8.36](#) [Geophysical investigation of the Soda Lakes at the Seewinkel National Park \(Austria\) through electromagnetic and electrical methods](#) ▶

Anna Hettegger, Adrián Flores Orozco, Nathalie Roser, and Arno Cimadom

Tue, 16 Apr, 16:15–18:00 (CEST) Hall X1 | X1.73

ERE1.8 **EDI** [Redeploying existing oil and gas technology to benefit the development of sustainable energy resources](#) ▶

Co-organized by EMRP1/ESSI4/GI5/SSP1

Convener: Paul Glover 

Co-conveners: Thomas Kempka , Anne Pluymakers , Marina Facci 

► [Orals](#)  | Tue, 16 Apr, 14:00–15:45 (CEST), 16:15–18:00 (CEST) Room 0.96/97

► [Posters on site](#)  | Attendance Wed, 17 Apr, 10:45–12:30 (CEST) | Display Wed, 17 Apr, 08:30–12:30 Hall X4

► [Posters virtual](#)  | Wed, 17 Apr, 14:00–15:45 (CEST) | Display Wed, 17 Apr, 08:30–18:00 vHall X4  
SC4.4

[European Research Council \(ERC\) Funding Opportunities in Geosciences](#) ▶

Co-organized by GM13/NH12

Convener: Julie Oppenheimer 

Co-conveners: Claudia Jesus-Rydin , David Gallego-Torres , Eystein Jansen 

► [Tue, 16 Apr, 19:00–20:00 \(CEST\) Room N1](#)

Wednesday, 17 Apr 2024

EGU24-11475 | [ECS](#) | Orals | [GI6.8](#) | [Highlight](#) 

[Enhancing Tree Management Practices by Extracting GPR Attributes for the Evaluation of Tree Trunk Internal Structures](#) ▶

Saeed Parnow, Livia Lantini, Stephen Uzor, and Fabio Tosti

Wed, 17 Apr, 08:55–09:05 (CEST) Room -2.16

EGU24-7634 | [ECS](#) | Orals | [GI6.8](#) 

Real-time assessment of asphalt pavement internal conditions based on automatic signal processing using ground-penetrating radar (**withdrawn**)

Siqi Wang, Tao Ma, and Xiaoming Huang

Wed, 17 Apr, 09:05–09:15 (CEST) Room -2.16

EGU24-13911 | Orals | [GI6.8](#) 

[Buried pipe leak detection and localization via ground microphone and GPR](#) ▶

Xin Deng, Hai Liu, Yao Wang, and Xu Meng

Wed, 17 Apr, 09:15–09:25 (CEST) Room -2.16

EGU24-15482 | [ECS](#) | Orals | [GI6.8](#) | [Highlight](#) 

[Non-destructive moisture monitoring of historical load-bearing structures with Thermography, Ultrasound and Ground Penetrating Radar](#) ▶

Yunus Esel, Detlef Schulte-Kortnack, Ercan Erkul, and Thomas Meier

Wed, 17 Apr, 09:35–09:45 (CEST) Room -2.16

EGU24-5339 | [ECS](#) | Orals | [GI6.8](#) 

[NDT methods \(GPR and UPV\) for steel rebar corrosion monitoring](#) ▶

Enzo Rizzo, Giacomo Fornasari, Nicola Polastri, and Tommaso Mariacci

Wed, 17 Apr, 09:45–09:55 (CEST) Room -2.16

EGU24-4142 | [ECS](#) | Orals | [GI6.8](#) 

[Efficiency and Accuracy in GPR-Based Tree Root Assessment: A Comparative Analysis of Scanning Patterns](#) ▶

Livia Lantini and Fabio Tosti

Wed, 17 Apr, 09:55–10:05 (CEST) Room -2.16

ERE1.8 [EDI](#) 

[Redeploying existing oil and gas technology to benefit the development of sustainable energy resources](#) ▶

Co-organized by EMRP1/ESSI4/GI5/SSP1

Convener: Paul Glover 

Co-conveners: Thomas Kempka , Anne Pluymakers , Marina Facci 

► [Orals](#)  | Tue, 16 Apr, 14:00–15:45 (CEST), 16:15–18:00 (CEST) Room 0.96/97

► [Posters on site](#)  | Attendance Wed, 17 Apr, 10:45–12:30 (CEST) | Display Wed, 17 Apr, 08:30–12:30 Hall X4

► [Posters virtual](#)  | Wed, 17 Apr, 14:00–15:45 (CEST) | Display Wed, 17 Apr, 08:30–18:00 vHall X4

EGU24-12383 | Orals | [ERE3.7](#) 

[Characterizing lava flows in offshore North Atlantic boreholes: a review with implications for basalt carbon storage](#) ▶

John Millett, Sverre Planke, David Jolley, Christian Berndt, Peter Betlem, Marija Rosenqvist, Dmitrii Zastrozhnov, Simona Pierdominici, and Reidun Myklebust

Wed, 17 Apr, 11:20–11:30 (CEST) Room 0.16

SM6.4 [EDI](#) 

[Geophysical imaging of near-surface structures and processes](#) ▶

Convener: Florian Wagner 

Co-conveners: Ellen Van De Vijver , James Irving , Frédéric Nguyen , Anja Klotzsche 

► [Orals](#)  | Thu, 18 Apr, 14:00–15:45 (CEST) Room -2.47/48

► [Posters on site](#)  | Attendance Wed, 17 Apr, 10:45–12:30 (CEST) | Display Wed, 17 Apr, 08:30–12:30 Hall X1

► [Posters virtual](#)  | Wed, 17 Apr, 14:00–15:45 (CEST) | Display Wed, 17 Apr, 08:30–18:00 vHall X1

EGU24-12500 | [ECS](#) | Posters on site | [SM6.4](#)  

[High-resolution 4D GPR data acquisition strategy to monitor fast and small-scale subsurface flow processes](#) ▶

Sophie Stephan, Conrad Jackisch, Jens Tronick, and Niklas Allroggen

Wed, 17 Apr, 10:45–12:30 (CEST) Hall X1 | X1.96

EGU24-9449 | [ECS](#) | Posters on site | [SM6.5](#) | [Highlight](#) 

[Seismic Imaging of Submarine Volcanoes and Volcanic Ridges at the Southeastern Azores Plateau](#) ▶

Annalena Friedrich, Christian Hübscher, Jonas Preine, Christoph Beier, Anthony Hildenbrand, Paraskevi Nomikou, and Pedro Terinha  
Wed, 17 Apr, 10:45–12:30 (CEST) Hall X1 | X1.115

ERE3.7 **EDI**★

[Carbon capture and storage in mafic and ultramafic rocks](#) ▶

Convener: Marthe Grønlie Guren **ECS** **Q**

Co-conveners: Deirdre E. Clark **ECS** **Q**, Oliver Plümper **Q**, Christophe Galerne **Q**

▶ **Orals** ★ | Wed, 17 Apr, 10:45–12:30 (CEST) Room 0.16

▶ **Posters on site** ★ | Attendance Wed, 17 Apr, 16:15–18:00 (CEST) | Display Wed, 17 Apr, 14:00–18:00 Hall X4

▶ **Posters virtual** ★ | Wed, 17 Apr, 14:00–15:45 (CEST) | Display Wed, 17 Apr, 08:30–18:00 vHall X4

EGU24-20439 | Orals | [CL3.2.2](#) ★

[Change detection monitoring of archaeological sites submerged in shallow waters using remote sensing data: the case study of the port of the Ancient Amathous in Cyprus](#) ▶

Dante Abate, Eleftheria Kalogeriou, Kyriakos Themistocleous, and Diofantos Hadjimitsis

Wed, 17 Apr, 14:45–14:55 (CEST) Room 0.31/32

EGU24-3000 | Orals | [CL3.2.2](#) ★

[Monitoring an Arctic cultural heritage site with state-of-the-art remote sensing techniques – Lessons from the THETIDA project](#) ▶

Ionut Cristi Nicu, Kleonthis Karamvassil, Vassilia Karathanassi, and Paloma Guzman

Wed, 17 Apr, 14:55–15:05 (CEST) Room 0.31/32

ERE1.8 **EDI**★

[Redeploying existing oil and gas technology to benefit the development of sustainable energy resources](#) ▶

Co-organized by EMRP1/ESS14/G15/SSP1

Convener: Paul Glover **Q**

Co-conveners: Thomas Kempka **Q**, Anne Pluymakers **Q**, Marina Facci **ECS** **Q**

▶ **Orals** ★ | Tue, 16 Apr, 14:00–15:45 (CEST), 16:15–18:00 (CEST) Room 0.96/97

▶ **Posters on site** ★ | Attendance Wed, 17 Apr, 10:45–12:30 (CEST) | Display Wed, 17 Apr, 08:30–12:30 Hall X4

▶ **Posters virtual** ★ | Wed, 17 Apr, 14:00–15:45 (CEST) | Display Wed, 17 Apr, 08:30–18:00 vHall X4

ERE3.7 **EDI**★

[Carbon capture and storage in mafic and ultramafic rocks](#) ▶

Convener: Marthe Grønlie Guren **ECS** **Q**

Co-conveners: Deirdre E. Clark **ECS** **Q**, Oliver Plümper **Q**, Christophe Galerne **Q**

▶ **Orals** ★ | Wed, 17 Apr, 10:45–12:30 (CEST) Room 0.16

▶ **Posters on site** ★ | Attendance Wed, 17 Apr, 16:15–18:00 (CEST) | Display Wed, 17 Apr, 14:00–18:00 Hall X4

▶ **Posters virtual** ★ | Wed, 17 Apr, 14:00–15:45 (CEST) | Display Wed, 17 Apr, 08:30–18:00 vHall X4

SM6.4 **EDI**★

[Geophysical imaging of near-surface structures and processes](#) ▶

Convener: Florian Wagner **ECS** **Q**

Co-conveners: Ellen Van De Vijver **ECS** **Q**, James Irving **Q**, Frédéric Nguyen **Q**, Anja Klotzsche **Q**

▶ **Orals** ★ | Thu, 18 Apr, 14:00–15:45 (CEST) Room -2.47/48

▶ **Posters on site** ★ | Attendance Wed, 17 Apr, 10:45–12:30 (CEST) | Display Wed, 17 Apr, 08:30–12:30 Hall X1

▶ **Posters virtual** ★ | Wed, 17 Apr, 14:00–15:45 (CEST) | Display Wed, 17 Apr, 08:30–18:00 vHall X1

ERE3.7 **EDI**★

[Carbon capture and storage in mafic and ultramafic rocks](#) ▶

Convener: Marthe Grønlie Guren **ECS** **Q**

Co-conveners: Deirdre E. Clark **ECS** **Q**, Oliver Plümper **Q**, Christophe Galerne **Q**

▶ **Orals** ★ | Wed, 17 Apr, 10:45–12:30 (CEST) Room 0.16

▶ **Posters on site** ★ | Attendance Wed, 17 Apr, 16:15–18:00 (CEST) | Display Wed, 17 Apr, 14:00–18:00 Hall X4

▶ **Posters virtual** ★ | Wed, 17 Apr, 14:00–15:45 (CEST) | Display Wed, 17 Apr, 08:30–18:00 vHall X4

EGU24-19368 | Posters on site | [G4.3](#) ★

Detecting the magnetic characteristics of submarine volcanic area off the coast of northern Taiwan **(withdrawn)**

Chung-Liang Lo, Shu-Kun Hsu, Shiao-Shan Lin, Ching-Hui Tsai, Song-Chun Chen, and Pin-Ju Su

Wed, 17 Apr, 16:15–18:00 (CEST) Hall X2 | X2.14

EGU24-12917 | **ECS** | Posters on site | [G16.8](#) ★

[Application of Ground Penetrating Radar \(GPR\) analysis on San Giovanni's Baptistery in Florence.](#) ▶

Alessia Francesca Napoli, Emanuele Marchetti, Massimo Coli, Anna Livia Ciuffreda, Davide Morandi, Paolo Papeschi, and Beatrice Agostini

Wed, 17 Apr, 16:15–18:00 (CEST) Hall X4 | X4.181

EGU24-20165 | Posters on site | [G16.8](#) ★

[Non-destructive surveys via microwave tomography enhanced multichannel GPR](#) ▶

Francesco Soldovieri, Gianluca Gennarelli, Giuseppe Esposito, Giovanni Ludeno, and Ilaria Catapano

Wed, 17 Apr, 16:15–18:00 (CEST) Hall X4 | X4.183

EGU24-19050 | Posters on site | [G16.8](#) | **Highlight** ★ **EN**

[GPR prospecting on masonry walls in a high seismic hazard region: the resilient Castellina Museum of Norcia \(Central Italy\).](#) ▶

Maurizio Ercoli, Nicola Cavalagli, Massimiliano Rinaldo Barchi, Cristina Pauselli, Massimiliano Porreca, Mirko Santanicchia, and Regina Lupi

Wed, 17 Apr, 16:15–18:00 (CEST) Hall X4 | X4.185

EGU24-13569 | Orals | [GM2.1](#) ★

[Validation of seismic bedload saltation model: From laboratory flume to field-scale experiments](#) ▶

Wei-An Chao, Chi-Yao Hung, and Yu-Shiu Chen  
Wed, 17 Apr, 16:35–16:45 (CEST) Room D3

EGU24-11873 | Posters on site | [TS2.1](#) ★

[Palaeobathymetry of the Mid-Norwegian volcanic margin during continental breakup and paleoclimate implications](#) ▶

Julie Tugend, Geoffroy Mohn, Nick Kuszniir, Sverre Planke, Christian Berndt, Ben Manton, Dmitrii Zastrozhnov, and John, M. Millet  
Wed, 17 Apr, 16:15–18:00 (CEST) Hall X2 | X2.74

GMPV7.2 [EDI](#)✳️

[Volcanic & Igneous Plumbing System processes and kinetics: from magma to mush to pluton](#) ▶

Co-organized by T55

Convener: Lydéric France [Q](#)

Co-conveners: Uddalak Biswas [ECS](#) [Q](#), Elena Melekhova [Q](#), Stefano Urbani [Q](#), Pierre Bouilhol [Q](#), Nibir Mandal [Q](#), Daniele Maestrelli [Q](#)

▶ [Orals](#) ★ | Wed, 17 Apr, 14:00–18:00 (CEST) Room -2.91

▶ [Posters on site](#) ★ | Attendance Thu, 18 Apr, 10:45–12:30 (CEST) | Display Thu, 18 Apr, 08:30–12:30 Hall X1

▶ [Posters virtual](#) ★ | Thu, 18 Apr, 14:00–15:45 (CEST) | Display Thu, 18 Apr, 08:30–18:00 vHall X1

Thursday, 18 Apr 2024

GMPV7.2 [EDI](#)✳️

[Volcanic & Igneous Plumbing System processes and kinetics: from magma to mush to pluton](#) ▶

Co-organized by T55

Convener: Lydéric France [Q](#)

Co-conveners: Uddalak Biswas [ECS](#) [Q](#), Elena Melekhova [Q](#), Stefano Urbani [Q](#), Pierre Bouilhol [Q](#), Nibir Mandal [Q](#), Daniele Maestrelli [Q](#)

▶ [Orals](#) ★ | Wed, 17 Apr, 14:00–18:00 (CEST) Room -2.91

▶ [Posters on site](#) ★ | Attendance Thu, 18 Apr, 10:45–12:30 (CEST) | Display Thu, 18 Apr, 08:30–12:30 Hall X1

▶ [Posters virtual](#) ★ | Thu, 18 Apr, 14:00–15:45 (CEST) | Display Thu, 18 Apr, 08:30–18:00 vHall X1

CR5.1 [EDI](#)✳️ | PICO

[Geophysical and in situ methods in the Cryosphere](#) ▶

Co-organized by EMRP2/GI3/SM6

Convener: Jonas K. Limbrock [ECS](#) [Q](#)

Co-conveners: Franziska Koch [ECS](#) [Q](#), Saskia Eppinger [ECS](#) [Q](#), Polona Itkin [Q](#), Winnie Chu [Q](#)

▶ [PICO](#) ★ | Thu, 18 Apr, 08:30–12:30 (CEST) PICO spot 4

GM1.1 [EDI](#)✳️

[Frontiers in Geomorphology](#) ▶

Including GM Division Outstanding ECS Award Lecture

Convener: Kristen Cook [Q](#)

Co-conveners: Laure Guerit [Q](#), Aayush Srivastava [ECS](#) [Q](#), Philippe Steer [Q](#)

▶ [Orals](#) ★ | Thu, 18 Apr, 10:45–12:30 (CEST) Room D3

EGU24-1753 | [ECS](#) | Posters virtual | [CL3.2.2](#) ★

[Advanced sensing and IoT for monitoring climatic risks and natural hazards at underwater and coastal cultural heritage](#) ▶

Lampros Pavlopoulos, Panagiotis Michalis, Marios Vlachos, Anastasios Georgakopoulos, and Angelos Amditis  
Thu, 18 Apr, 14:00–15:45 (CEST) vHall X5 | vX5.27

GMPV7.2 [EDI](#)✳️

[Volcanic & Igneous Plumbing System processes and kinetics: from magma to mush to pluton](#) ▶

Co-organized by T55

Convener: Lydéric France [Q](#)

Co-conveners: Uddalak Biswas [ECS](#) [Q](#), Elena Melekhova [Q](#), Stefano Urbani [Q](#), Pierre Bouilhol [Q](#), Nibir Mandal [Q](#), Daniele Maestrelli [Q](#)

▶ [Orals](#) ★ | Wed, 17 Apr, 14:00–18:00 (CEST) Room -2.91

▶ [Posters on site](#) ★ | Attendance Thu, 18 Apr, 10:45–12:30 (CEST) | Display Thu, 18 Apr, 08:30–12:30 Hall X1

▶ [Posters virtual](#) ★ | Thu, 18 Apr, 14:00–15:45 (CEST) | Display Thu, 18 Apr, 08:30–18:00 vHall X1

SM6.4 [EDI](#)✳️

[Geophysical imaging of near-surface structures and processes](#) ▶

Convener: Florian Wagner [ECS](#) [Q](#)

Co-conveners: Ellen Van De Vijver [ECS](#) [Q](#), James Irving [Q](#), Frédéric Nguyen [Q](#), Anja Klotsche [Q](#)

▶ [Orals](#) ★ | Thu, 18 Apr, 14:00–15:45 (CEST) Room -2.47/48

▶ [Posters on site](#) ★ | Attendance Wed, 17 Apr, 10:45–12:30 (CEST) | Display Wed, 17 Apr, 08:30–12:30 Hall X1

▶ [Posters virtual](#) ★ | Wed, 17 Apr, 14:00–15:45 (CEST) | Display Wed, 17 Apr, 08:30–18:00 vHall X1

EGU24-3588 | [ECS](#) | Orals | [EMRP2.4](#) | [Highlight](#) ★

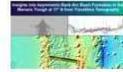
[3D ground-penetrating radar to characterize near-surface environments: Advances in data analysis and integrated geophysical interpretation](#) ▶

Philipp Koyan, Julien Guillemoteau, Tim Klose, and Jens Tronicke  
Thu, 18 Apr, 16:30–16:40 (CEST) Room -2.20

EGU24-8155 | [ECS](#) | Posters on site | [GD4.1](#) ★ [📄](#)

[Insights Into Asymmetric Back-Arc Basin Formation in the Mariana Trough at 17°N from Traveltime Tomography](#) ▶

Helene-Sophie Hilbert, Anke Dannowski, Ingo Grevenmeyer, Christian Berndt, Shuichi Kodaira, Gou Fujie, and Narumi Takahashi  
Thu, 18 Apr, 16:15–18:00 (CEST) Hall X2 | X2.71



Friday, 19 Apr 2024

TSS.1

[Imaging of fault systems and geological structures through active and passive seismic methods](#) ▶

Co-organized by SM6

Convener: Leonardo Colavitti [ES](#) [Q](#)

Co-conveners: Simona Gabrielli [ES](#) [Q](#), Sonja Halina Wadas [ES](#) [Q](#), Sergio Gammaldi [ES](#) [Q](#), Ferdinando Napolitano [ES](#) [Q](#)

▶ [Orals](#) ★ | Fri, 19 Apr, 08:30–10:15 (CEST) Room -2.20

▶ [Posters on site](#) ★ | Attendance Fri, 19 Apr, 16:15–18:00 (CEST) | Display Fri, 19 Apr, 14:00–18:00 Hall X2

▶ [Posters virtual](#) ★ | Fri, 19 Apr, 14:00–15:45 (CEST) | Display Fri, 19 Apr, 08:30–18:00 vHall X2

GDB9 [EDI](#) [F](#)

[Artificial Intelligence in scientific publishing: blessing or bane?](#) ▶

Convener: Barbara Ervens [Q](#)

Co-conveners: Eduardo Queiroz Alves [ES](#) [Q](#)

★ Fri, 19 Apr, 10:45–12:30 (CEST) Room E1



EGU24-4895 | Orals | [SM1.1](#) ★

[Dynamic responses of a building derived from microtremor and seismic signals](#) ▶

Ruey-Juin Rau, Cheng-Feng Wu, Ying-Chi Chen, Hung-Yu Wu, and Chin-Jen Lin

Fri, 19 Apr, 11:55–12:05 (CEST) Room -2.47/48

EGU24-14931 | Orals | [SSP3.2](#) ★

[Distribution of clay minerals offshore eastern Taiwan: New evidence of volcanic material sources and transportation processes](#) ▶

Chih-Chieh Su, Jheng-Kuan Lin, Ta-Wei Hsu, Yu-Huang Chen, and Sheng-Ting Hsu

Fri, 19 Apr, 12:05–12:15 (CEST) Room -2.91

TSS.1

[Imaging of fault systems and geological structures through active and passive seismic methods](#) ▶

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▶ [Posters on site](#) ★ | Attendance Fri, 19 Apr, 16:15–18:00 (CEST) | Display Fri, 19 Apr, 14:00–18:00 Hall X2

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