

Route of the Taiwan field excursion with the days given as month/day.

Itinerary

February 3rd (Monday: Day 1) Local expert: Dr. Steven Jyh-Jaan Huang, University of Innsbruck

Arrival day and visit Taipei City

- 10:30** Meet at the lobby of the hotel, and take the MRT to NTU.
- 11:00** Visit the **Department of Geosciences, NTU**, for Geo-rock park, Earthquake early warning system.
- 12:00** Lunch with students of NTU Geosciences.
- 14:15** **Taipei 101** – Evolution of Taipei Basin, Urban disaster prevention.
- 17:00** **Yanping Evacuation Gate** – Flood prevention of Taipei.
Water resource of Taiwan (Tim Philipp)
- 18:15** Dinner at a hotpot place.
- 20:00** **Long-Shan Temple**/Bopiliao Historic Block/Night market – The old Taipei
Ximending – The young Taipei- welcome dinner.
- Hotel New California Hotel (新加州景觀旅館 02-2916-1717, +886-2-2916-1717) No. 1, Section 1, Beixin Road, Xindian District, New Taipei City.

February 4th (Tuesday: Day 2) Local expert: Prof. Dr. Ludvig Löwemark, NTU

Volcanic activities, Sedimentary strata, Coastal uplift and erosion

- Morning **Departure at 08:00 in front of the hotel.**
Yangmingshan National Park - Da Youkeng and Tienlai River: Volcanic topography, hot springs, fumaroles, geohazards, amphibole picking.
Volcanic hazards of Taiwan, occurrences, potential, and impacts (Jonas Fuhrmann)
- Afternoon **Yehliu Geo Park**: Coastal erosion, sedimentary structures, body and trace fossils.
- Dinner Explore Taipei by yourself.
- Hotel New California Hotel (新加州景觀旅館 02-2916-1717) No. 1, Section 1, Beixin Road, Xindian District, New Taipei City.

February 5th (Wednesday: Day 3) Dr. Ling-Ho Chung (NMNS) and Prof. Dr. Liang-Chi Wang (NCCU)

Active faults in western Taiwan – geology and geo-hazards

- Morning **Shihkang Dam**: surface rupture of Chelungpu Fault.
Pifeng Bridge: 20 years after the 1999 Chichi earthquake.
Co-seismic uplift/human damming/erosion, how rivers react to large earthquakes? (Paul Waibl)
- Afternoon **921 Earthquake Museum** of Taiwan: Chelungpu fault, disaster prevention.
The 1999 Chichi earthquake (Adrian Netzer, Markus Niederstaetter)
Student activities: explore the museum with the guidebook
Freeway No. 6: fold and thrust belt of the western foothills.
Fold and thrust belt (Nicole Dörr)
- Hotel Ching Sheng Hotel (景聖樓 049-285-5366) No. 58, Zhongzheng Road, Yuchi Township, Nantou County.

February 6th (Thursday: Day 4) Dr. Ling-Ho Chung (NMNS) and Prof. Dr. Liang-Chi Wang (NCCU)

Active faults in western Taiwan – geology, and geo-hazards

- Morning **Toushe Basin/Swamp:** environmental changes of the past 400 ka of central Taiwan.
Chichi Dam: tectonic geomorphology, sedimentary structure, active fault, uplifted and erosion, deformation structure.
Student activities: explore the outcrop with the guidebook
- Afternoon **Wuchang Temple:** earthquake disasters.
Chelungpu Fault Preservation Park-Zhushan: Trench museum of Chelungpu Fault.
Fault related folds- surface deformation in Zhushan museum (Patrick Oswald, Tobias Schwesternmann)
- Hotel Tsou Ma Lai Farm (走馬瀨農場 06-576-0121) No. 60, Qiziwa, Danei Dist., Tainan City.

February 7th (Friday: Day 5) Local expert: Prof. Dr. Meng-Long Hsieh (NCCU)

Geo-hazards of 2009 Typhoon Morakot – the source to sink perspective

- Morning Importance and impact of typhoon (Leonie Kommerell)
Chai-Hsien: Overlooking Chai-hsien weir.
Hsiao-Lin: Landslide site and the memorial park of the 2009 disasters.
Mass movement (Roberto Antonio Garcia Gonzalez)
- Afternoon **Tao-Yuan:** >100 m-thick, ~18 ka debris-flow gravel constituting a hillslope.
Chin-Ho: Holocene alluvial-fan terraces and the site of the engineering “Tseng-Wen Reservoir. Transbasin Diversion Project” which has been buried by >20 m-thick gravel since the 2009 Typhoon Morakot.
Pu-tun-pu-nas tributary: Looking at the Pu-tun-pu-nas fan.
Heavy rainfall events and related discharge, source to sink (Melanie Mauracher, Raphael Neuner)
- Hotel Fun-Chen Hot Spring Resort Hotel (寶來芳晨溫泉渡假村 07-688-2311), No. 132, Zhongzheng Rd., Liugui Dist., Kaohsiung City.

February 8th (Saturday: Day 6) Local expert: Prof. Dr. Andrew Tien-Shun Lin (NCU)

Geology of SW Taiwan

- Morning **Wushanding Mud Volcano:** Mud volcano and moon world (badlands).
Mud volcano (Franziska Holzer, Johanna Pöll)
Fo Guang Shan: Bunda temple and Taiwanese religion culture.
- Afternoon **Shimen Historic Battlefield:** channel conglomerates in the lower slope.
Lilongshan: deep-marine turbidites.
Baoli River: sheared deep-marine deposits along a mega-splay fault in the Manila accretionary wedge.
Wanlitong: living and uplifted corals.
Coral reefs – endangered natural coastal protection? (Stephanie Benischke, Tobias Hartl)
- Dinner Explore the local town by yourself.
- Hotel The Fullerton Hotel Kenting(恆春富麗敦 08-889-8989) No. 18, Lane 117, Hengnan Road, Hengchun Township, Pingtung County.

February 9th (Sunday: Day 7) Prof. Andrew Tien-Shun Lin (NCU) and Prof. Yuan-Pin Chang (NSYSU)

Geology of SW Taiwan

- Morning **Sigou:** fossil hunting in tropical jungle.
 Snorkeling in Nanwan: living corals, marine life before uplifted.
 Nuclear power plants on dynamic Taiwan (Sarah Clarissa Schulte-Mattler)
 Energy selection on dynamic Taiwan under the context of global warming (J. Tischler, T. Unterluggauer)
- Afternoon **Fengchuisha:** coastal sand dunes.
 Jialeshuei park: sedimentary structures of deep-marine fan.
 Taimali fan delta: disasters of 2009 Typhoon Morakot.
- Hotel Toyugi Hot Spring Resort & Spa (知本東遊季 08-951-6111) No. 18, Lane 376, Wenquan Road, Beinan Township, Taitung County.

February 10th (Monday: Day 8) Local expert: Prof. Dr. J. Bruce H. Shyu (NTU)

Neotectonics along the Huadong Longitudinal Valley

- Morning **Lichi:** Lichi Mélange.
 Luye Terrace: neotectonics of the Longitudinal Valley Fault.
 Dapo Elementary School: Longitudinal Valley Fault.
- Afternoon **Chishang Story House:** memorial hall of Prof. Dr. Jacques Angelier.
 Probabilistic seismic hazard assessments, Taiwan and Austria (Christoph Daxer, Ariana Molenaar)
 Yuli Old Railway Bridge: Plate boundary of the Eurasian and Philippine Sea Plate?
 Fuyuan Tea House: Taiwanese tea testing.
 Wuhe Terrace: neotectonics of the Longitudinal Valley Fault.
- Hotel Rueisuei Hu-Yen hot spring Hostel (瑞穗虎爺 03-8875505) No. 101, Sec. 2, Xiangbei Rd., Ruisui Township, Hualien County.

February 11th (Tuesday: Day 9) Local expert: Prof. Dr. J. Bruce H. Shyu (NTU)

Geology of the eastern coast of Taiwan

- Morning **Rafting in Xiuguluan River:** geology of the Coastal Range.
 Chimei Village: Chimei igneous Complex, Chimei Fault.
 Rafting in Xiuguluan River: geology of the Coastal Range.
- Afternoon **Shihtiping:** tuff formation.
 Shihmendong: volcanic pyroclastic flow, co-seismic uplift.
 Jiqi sky trail: coastal erosion.
 Suilien: Suilien Conglomerate.
- Dinner Explore Hualien
- Hotel East Coast Hotel (東岸商務旅館 03-8332889) No. 128, Jianguo Rd., Hualien City, Hualien County.

February 12th (Wednesday: Day 10) Prof. Dr. Jiun-Yee Yen (NDHU), Prof. Dr. Yu Wang (NTU)

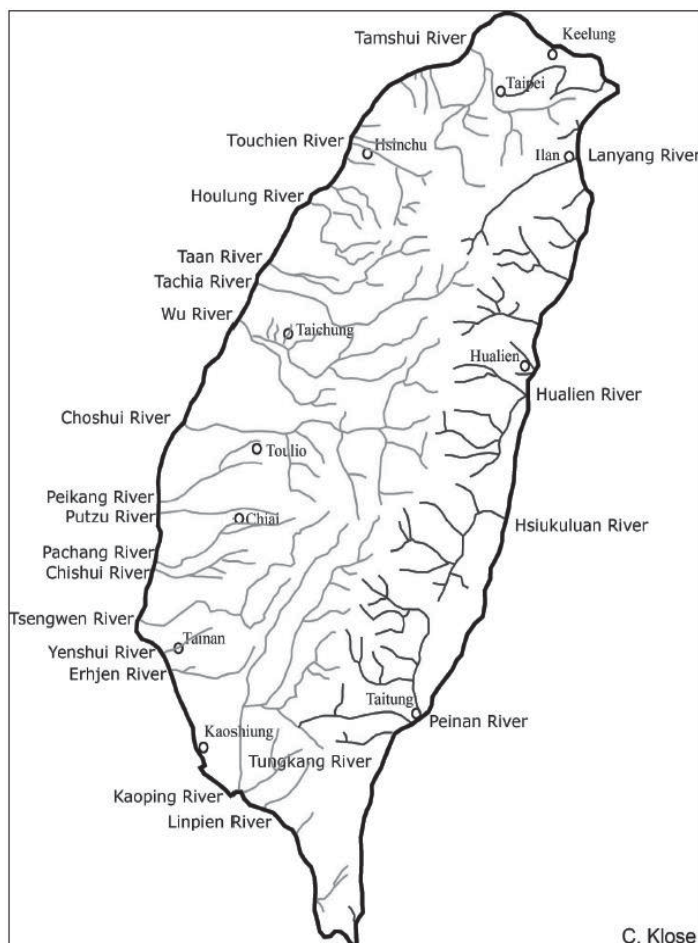
Geology of eastern Taiwan

- Morning **Qixingtan:** surface rupture of the 2018 Hualien earthquake
Tsunamis as coastal hazards (Alessandro Venturi)
- Afternoon **Taroko National Park:** Yanzikou (Swallow Grotto) Trail, Tienhsiang, Shakadang River, Changchun Shrine: River terrace, metamorphic rock and cliff, transposition structure
- Hotel Tienhsiang Youth Activity Center (天祥青年活動中心 03-869-1111) No. 30, Tianxiang, Xiulin Township, Hualien County.

February 13th (Thursday: Day 11) Local expert: Prof. Dr. Yu Wang (NTU)

Geology of eastern Taiwan

- Morning **Taroko National Park:** metamorphic structures
How the mountain is built? (Theresa Klaus, Leonie Leitgeb)
Cingshuei Cliff: Sea Cliff, coastal erosion
Coastal erosion vs. coastal protection (Giulia Bertolotti, Lukas Prosser)
- Afternoon **Fenniaolin Harbor:** Amphibolite
Turtle Island (Guishan Island, look over on the freeway): Back-arc rifting
Dinner: farewell party in a Taiwan/Japanese style BBQ place
- Hotel New California Hotel (新加州景觀旅館 02-2916-1717) No. 1, Section 1, Beixin Road, Xindian District, New Taipei City.



Hydrology map and Administrative divisions of Taiwan