

Prof. Troll gives prestigious Koesmono lecture at UNPAD, Indonesia

During a recent lecture tour of Java Island (Indonesia), Prof. Troll's contribution to the field of volcanology and geochemistry of Indonesian volcanoes was recognized by an invitation to give the highly reputed Koesmono guest lecture at Padjadjaran University (UNPAD) in Bandung, Java. The lecture is named in honour of the founder of the faculty of Technical Geology at UNPAD, Dr. M Koesmono, and today the UNPAD faculty represents the largest academic Earth Science section in Indonesia (ca. 1000 undergraduate students). The lecture was held on the University's foundation day, which is marked by its 60th anniversary this year. Following the ceremonial lecture, Troll was presented with the seal of the University as well as a selection of scientific books on the famous Indonesian volcanoes Tambora and Krakatoa authored by Prof. Adjat Sudradjat, the now retired director of the Volcanological Survey of Indonesia and Emeritus Professor of Volcanology at UNPAD.

Troll's lecture tour started a week earlier, however, with lectures at the Merapi Observatory and Hazard Mitigation Centre (BPPTKG) and at Gadjad Mada University (UGM) in Yogyakarta, Central Java. Troll visited the Merapi Observatory and Hazard Mitigation Centre on Sept. 7th (**Fig. 1a,b**) and presented an invited lecture on the hazards associated with subduction zone dome volcanoes. The occasion was furthermore marked by the recent signing of a contract with Springer Publishing Company to produce a book on Merapi volcano, where Troll and I Gusti Made Agung Nandaka, the Head of the Merapi Observatory and Hazard Centre, will be co-editors together with colleagues from the UK, Germany and Indonesia. The visit to BPPTKG was followed by an invited lecture at Gadjad Mada University on Sept. 8th, at the Department for Geological Engineering, which is amongst the most highly regarded Earth Science departments in all of Indonesia. The Department of Earth Sciences at Uppsala University and UGM's Department for Engineering Geology have an academic cooperation agreement since 2014, and Troll was instrumental in preparing this cooperation. After a two hour lecture by Troll on Krakatau volcano and a subsequent discussion session to a brimming audience in an overflowing lecture theatre (**Fig 1c-f**), Troll was presented with a certificate and the medal of the department of Engineering Geology in recognition to his contribution to education at UGM

Troll's visit to Yogyakarta was followed by the prestigious Koesmono lecture on volcanology and volcanic hazards at Padjadjaran University (UNPAD) in Bandung, in West Java, on Sept. 11th (**Fig. 2**). Troll was praised for his contributions to the volcanology of Indonesia over the last 15 years, a time during which he published over 20 scientific articles on the volcanology, geochemistry and various hazards of high-risk volcanic systems such as Krakatau, Merapi, Kelut and most recently on Earth's largest supervolcano Toba, on Sumatra Island in the westernmost part of Indonesia (<https://www.nature.com/articles/srep40624>). Troll presented the Koesmono lecture to an audience of over 200 listeners and following a three hour lecture and discussion session, the ceremony closed with handing the lecture certificate and the seal of UNPAD to Troll, in addition to a series of book presents on Indonesian volcanoes and the history of volcanology in the region (**Fig 2d-f**). The day continued with a lunch at the Geological Faculty and a celebration dinner in the evening of that day on the balcony of the UNPAD Geology Department. A cooperation agreement between Uppsala University and UNPAD in Bandung was discussed on this occasion, for which the paperwork will advance in the next few months.

Finally, Troll met with Nadhirah Seraphine, a current MSc student at UU who is on work placement at the Merapi Observatory and with Herlan Darmawan, an Indonesian PhD student for whom Troll is a co-supervisor and who is based at GFZ Potsdam in Germany, but was in Indonesia for fieldwork at the time. Herlan's work focuses on Merapi dome stability

and dome alteration and he is scheduled to visit Uppsala later this year to work with Prof. Troll and Dr. Frances Deegan in an collaboration effort between GFZ, BPPTKG and Uppsala's Department of Earth Sciences.

For more information, visit Prof. Troll's personal webpage at: www.vrtroll.com or contact him directly at: valentin.troll@geo.uu.se.



Fig1. (a) Prof. Troll and I Gusti Made Agung Nandaka, Director of the Merapi Observatory and Hazard Centre, discuss the current activity level of Merapi volcano at the Merapi Observatory and Hazard Centre in Yogyakarta (BPPTKG), Central Java. (b) Seismic monitoring at BPPTKG, where Java's most active volcano, Merapi, is monitored in real-time. (c-f) Troll lectures at Gadjah Mada University in Yogyakarta and is presented with a certificate and the medal of the Department of Geological Engineering by Dr. Wawan Budianta, who has previously been an Erasmus Lotus research fellow at Uppsala University.



Fig 2. (a) Troll is greeted in Bandung, West Java by Prof. Adjat Sudradjat, former Head of the Volcanological Survey of Indonesia (left) and Dr. Dicky Muslim, Head of the Department of Applied Geology at UNPAD (right). (b, c) Troll gives the highly prestigious Koesmono lecture at UNPAD to a packed lecture hall and is awarded the official lecture certificate (d) and seal of the University (e) by Dr. Emi Sukiyah, Director of Research and Cooperation at UNPAD. Troll was also given a series of book presents by Prof. Adjat Sudradjat, the now retired Director of the Volcanological Survey of Indonesia and Emeritus Professor of Volcanology at UNPAD (f).