



Swiss Society of Mineralogy and Petrology

<http://ssmp.scnatweb.ch>

NEWS FROM THE PAUL NIGGLI FOUNDATION

The Swiss Society of Mineralogy and Petrology is the “home organisation” of the **Paul Niggli Foundation**, which was created shortly after World War II with the help of a donation from the primary resource industries in Switzerland. This industry was, and still is, dominated by the extraction and production of building materials, notably for ceramics and cement; these materials are the subject of major research in industrial minerals technology. Paul Niggli, a Swiss pioneer in mineralogy and geochemistry and professor at ETH Zürich from 1920 to 1953, facilitated this initiative, with the intention of helping Swiss mineralogy students to travel internationally for fieldwork and further education. Paul Niggli was one of the few Swiss geoscientists who had spent a postdoctoral period in the USA. In 1943 he became the first European, and one of the few ever, to receive the Roebling Medal, the highest award of the Mineralogical Society of America.

The **Paul Niggli Medal** was conceived much later, and only became possible thanks to bequests by the children of Paul Niggli in 1988. Ernst Niggli was a professor in Bern, and Hedi Fritz-Niggli was one of the first female professors at the University of Zürich, where she worked as a biologist in the Medical Faculty. More recently, a welcome donation by the family of Francis de Quervain increased the capital of the foundation, from which the annual award is derived.

Today, the Paul Niggli Medal is the most important young investigator award in the Earth sciences in Switzerland. It has developed a truly international impact, much in the spirit and initial intentions of the original founders to assist young Swiss scientists to learn and contribute globally. Medallists are young international ambassadors of Swiss geoscience, having received their academic training in Swiss universities and then having made an outstanding contribution of international significance in the fields of mineralogy, geochemistry and geophysics or in related technical applications.

The Board of the Paul Niggli Foundation has awarded the 2012 Paul Niggli Medal to **Boris Kaus**, an eminent young geophysicist whose research links the fields of geodynamics, magmatism and petrology using advanced numerical modelling. Boris was born in the Netherlands. He fell in love with the Swiss Alps as a child, long before coming to ETH Zürich for his studies in Earth sciences. There, he concluded his PhD under the guidance of Jean-Pierre Burg (tectonics) and Yuri Podladchikov (computational geodynamics). After occupying a postdoctoral position at the University of Southern California in Los Angeles, he returned to ETH as a senior scientist in Paul Tackley's group (geophysical fluid dynamics) in 2007. In 2010, he received a Starting Grant from the European Research Council and was promoted to assistant professor in computational geodynamics. A year later he received the Arne Richter Award for Outstanding Young Scientists from the European Geosciences Union. In 2011 he was appointed professor of geophysics at the Johannes Gutenberg University Mainz in Germany, where he is now building a new research group while continuing numerous collaborative projects with colleagues and graduate students at Swiss universities.

Boris Kaus has published well over thirty papers, in which he and his collaborators have modelled the dynamics of rifting, subduction and orogeny relative to the lithosphere and the localisation of shear zones, including the petrological consequences of rock deformation and heat and mass transport in the Earth's crust and mantle. For these high-end 2-D and 3-D computations, he introduced original visco-elastic-plastic material rheologies and developed new thermo-mechanical modelling techniques that are crucial for linking geological field observations



Boris Kaus, the 2012 Paul Niggli Medallist, with the granite peaks of Cerro Torre and Fitz Roy, near the Argentina–Chile border, in the background

with physical models of how the Earth deforms on geological timescales. Although Boris is a numerical modeller, he is actively involved in geological field expeditions, for example, to the southern Andes, as shown in the photograph. The Swiss Society of Mineralogy and Petrology and all his friends and colleagues in Switzerland congratulate Boris Kaus for being awarded the Paul Niggli Medal!

Please consult http://ssmp.scnatweb.ch/paul_niggli_medal/ for eligibility and nomination requirements.

SwissSIMS NATIONAL ION PROBE LABORATORY



Left to right: Guillaume Siron (PhD student), Florent Plane (engineer), Dr. Anne-Sophie Bouvier (laboratory manager), and Dr. Lukas Baumgartner (director)

A new CAMECA 1280HR instrument was installed over the last 6 months at the Institute of Earth Sciences at the University of Lausanne. The instrument was acquired with the aid of the Swiss National Science foundation, in a joint effort by the universities of Bern, Geneva, and Lausanne, and ETH Zürich. The SwissSIMS facility will open to the geoscience community in mid April after a period of intense development.

11TH SWISS GEOSCIENCE MEETING

11th SWISS
GEOSCIENCE
MEETING
2013 LAUSANNE

November 15–16, 2013

University of Lausanne

Theme: “Cycles and Events in Earth's History”