Successful former Pioneer Fellows

18 September 2021

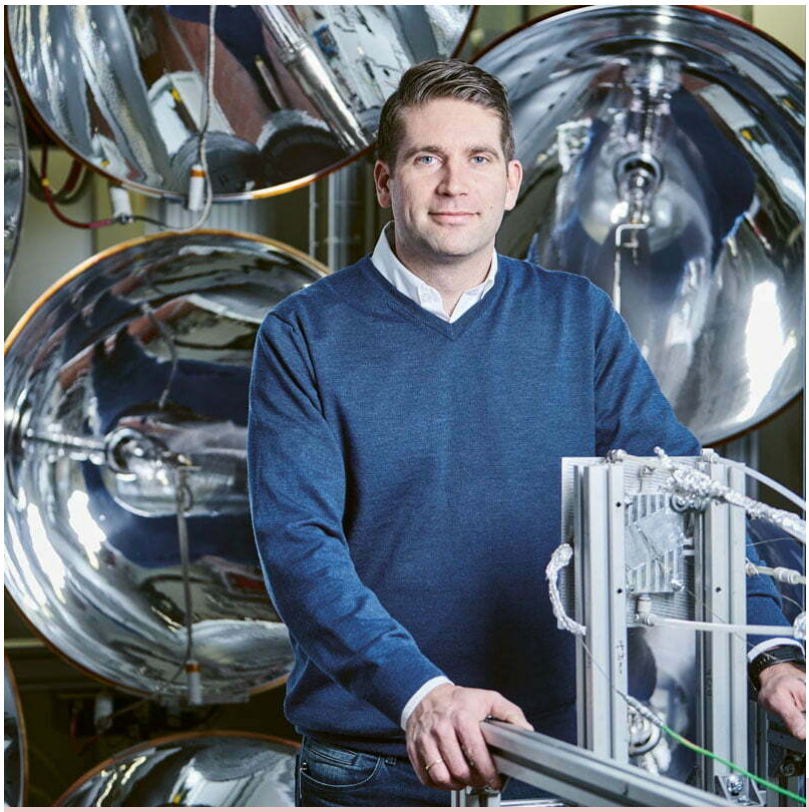
Many Pioneer Fellows from earlier years have founded companies that are now successful. In the following, we present five examples.

A clean alternative to fossil fuels

Dr Philipp Furler
Pioneer Fellow 2016

Synhelion's technology produces synthesis gas from air and sunlight, and converts it into fuel for combustion in

conventional engines. As CO_2 is captured from the air during the production process, the fuel is CO_2-neutral. Zurich Airport AG has agreed to purchase the entire annual volume of sustainable fuel produced at the first industrial plant from 2023 on. Synhelion is based in Lugano, Switzerland and employs 12 people. Philipp Furler serves as CTO.



“Many excellent lab inventions don’t make it onto the market because resources for developing prototypes are lacking, especially at the beginning. Fortunately, my project was supported by a Pioneer Fellowship and the Swiss Federal Office of Energy. This meant I was able to develop the prototype located on the roof of ETH – and prove the feasibility of the ‘fuel from air and sunlight’ concept! I’m really grateful that I was able to achieve this turning point.”

Philipp Furler

Detecting preterm births early

Dr Sabrina Badir
Pioneer Fellow 2014

Pregnolia has developed a device that enhances medical care during pregnancy: the Pregnolia System precisely measures the stiffness of the cervix, which is considered an important indicator of the risk of premature birth. Up until now, cervical stiffness could only be estimated by palpation. The device is already being used in clinical trials in Switzerland and the USA. Pregnolia, based in Schlieren near Zurich, employs ten people. Sabrina Badir is CEO and Chairman of the Board of Directors.

"As a scientist, I was concentrating on the technological development of my product; I had neither the expertise nor confidence to set up a company. The Pioneer Fellowship equipped me with the support and resources I needed to found a medical technology startup based on my scientific work."

Sabrina Badir

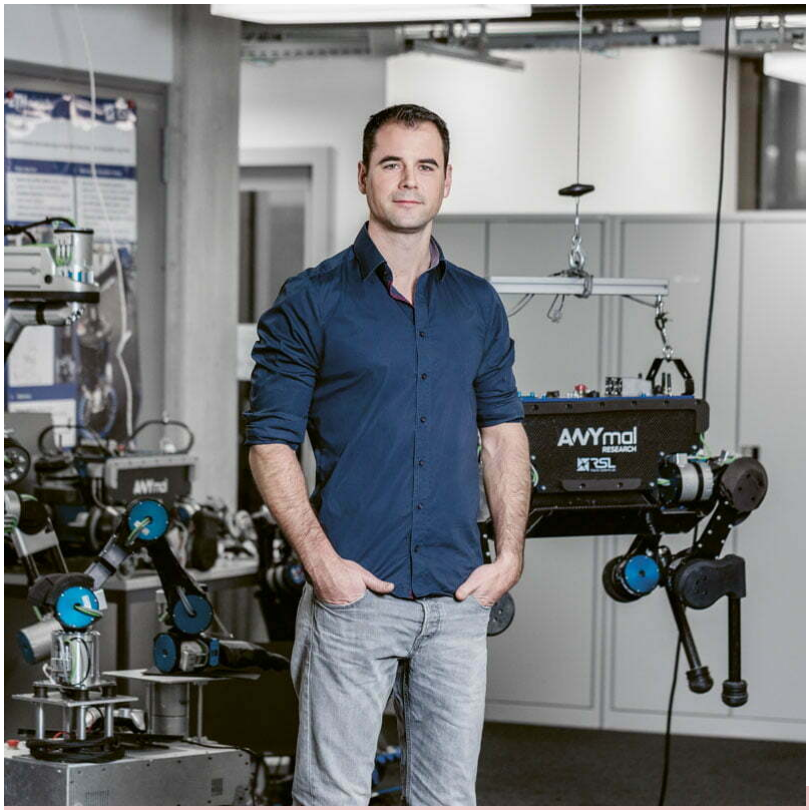
Robotic quadrupeds as helpers for humans

Professor Marco Hutter
Pioneer Fellow 2014

ANYbotics designs autonomous, four-legged robots that can be deployed in challenging environments, for example, to inspect industrial facilities or collect data in remote or dangerous locations.

The latest generation of the robotic quadruped, ANYmal, was recently launched as a certified product and is already in use around the world for the autonomous inspection of power plants and industrial facilities. The up-and-coming company
is based in Zurich and employs more than 50 people.

Marco Hutter has been Assistant Professor at the Institute of Robotics and Intelligent Systems and Head of the Robotic Systems Laboratory since 2015. In 2019, he received one of the coveted and prestigious ERC research grants. He is now a board member of ANYbotics.



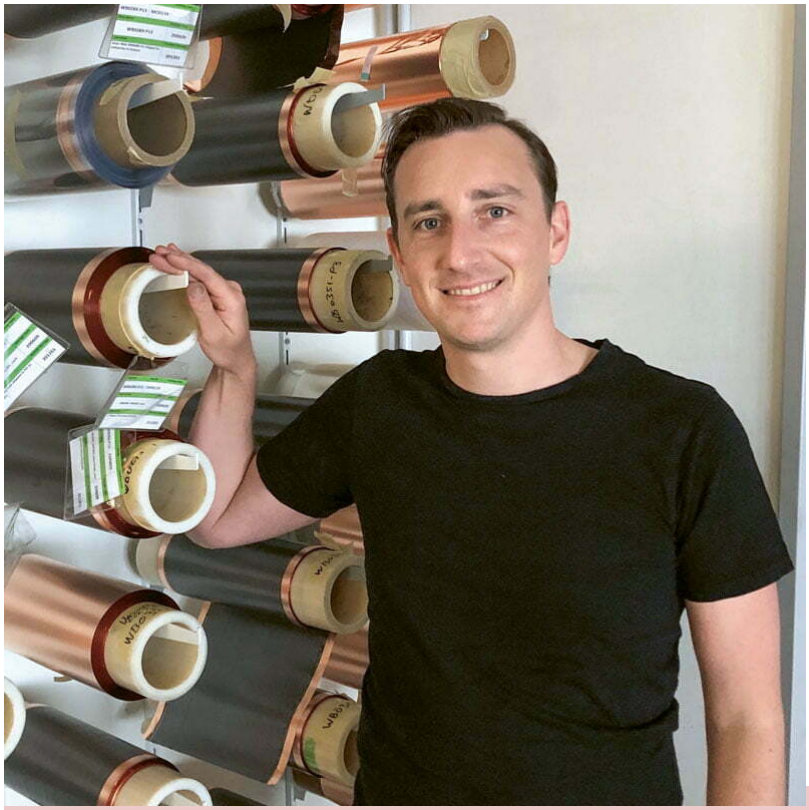
“The Pioneer Fellowship propelled us from research on walking robot technology to its commercial application. It provided immediate financial support at a very early stage, a valuable network, and a quality label that helped us attract funding for setting up a successful company.”

Marco Hutter

From zero to a hundred percent – in half the time

Dr Martin Ebner
Pioneer Fellow 2014

The Aligned Graphite Technology (AGT) developed and marketed by Battrion promises more cost-effective and environmentally friendly batteries, with a far shorter charging time. At the heart of Battrion’s patented technology are platelet-shaped graphite materials, which improve the microstructure of the negative electrode – the bottleneck that impedes rapid charging. This simultaneously reduces costs, improves the CO_2 balance of the battery cell, and meets growing performance and safety requirements. The company operates in Dübendorf near Zurich and licenses its technology for worldwide markets. Martin Ebner was CEO at Battrion from 2015 to 2020; since the beginning of 2021, industry expert Markus Vollstedt has headed the business, while Ebner takes care of technical challenges as CTO. Battrion currently employs 14 people.



“Thanks to the Pioneer Fellowship, my career has forged ahead – there could have been no startup without it!”

Martin Ebner

Reaching new heights with spectrometers – Sensirion acquires IRsweep

Dr Markus Mangold,
Dr Andreas Hugi
and Dr Markus Geiser
Pioneer Fellows 2014

Founded in 2014 by Pioneer Fellows Andreas Hugi and Markus Geiser and their colleague Markus Mangold, IRsweep designs, produces and sells optical sensor solutions. Their compact spectrometers are based on QCL infrared frequency comb technology, developed by Andreas Hugi during his doctoral studies in physics at ETH. A core application of IRsweep’s technology is the analysis of fast reactions in research and industry.

In May 2021, it was announced that Sensirion Holding AG, a leading provider of environmental and flow sensor solutions and originally an ETH spin-off, would acquire IRsweep.

Sensirion and IRsweep are fine examples of how ETH spin-offs create fresh jobs and put Switzerland firmly on the map as a hub for innovation.

“Support from the Pioneer Fellowship right at the outset was key in helping us turn our research ideas into a product. It meant we were able stand on our own two feet early on and approach customers as an independent company.”

Andreas Hugi

learn more about Pioneer Fellowships

https://ethz-foundation.ch/en/spotlight/news-2021-wb-pf/