



Biotech Biotope

Scientists at Campus Biotech in Geneva have been developing new health products and techniques for three years thanks to cooperation with universities and businesses. UBS Social Innovators Ambassador Caroline Kant also works at the campus. She is the Director of the EspeRare Foundation, which researches medicines for children with rare diseases.

detail is apparent on every corner of the city and every square where young people congregate.

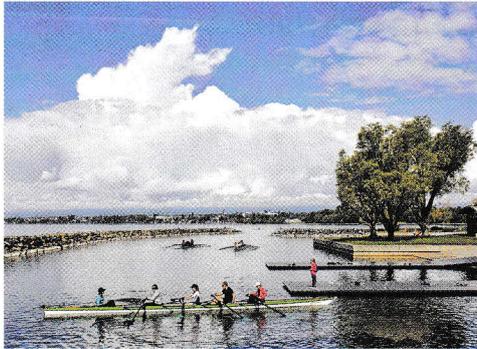
Take Marek Jancik, an engineer at the Swiss Federal Institute of Technology, the EPFL. Why Lausanne? "Because there are so many cool research projects and intelligent people here in one place," he answers. Marek works on a small team of scientists that is hoping to shape the future. Their goal is to help paralyzed people walk again.

Robotic legs for paraplegics

They took part in the 2016 international Cybathlon in Zurich with the Twice exoskeleton, a walking robot for paraplegics, and were ranked the best Swiss team and the fourth-best team globally. Test pilot Silke Pan is a former circus artist who has been wheelchair-bound since an accident in 2007. "It was an extremely emotional moment when I stood up for the first time. Suddenly my legs were moving. It was crazy!"

It's not yet possible to simply walk around with the exoskeleton, which is operated by buttons mounted on crutches. Going hands-free requires a reliable sense of balance. Twice engineer Romain Baud explains: "The biggest problem is the interaction between human and machine. How can we make sure that the machine knows what the human wants?" One answer might come from another EPFL project: a brain-computer interface, which lets humans control machines with their thoughts. "Such interfaces already work, but the concentration required is still too high," Baud says.

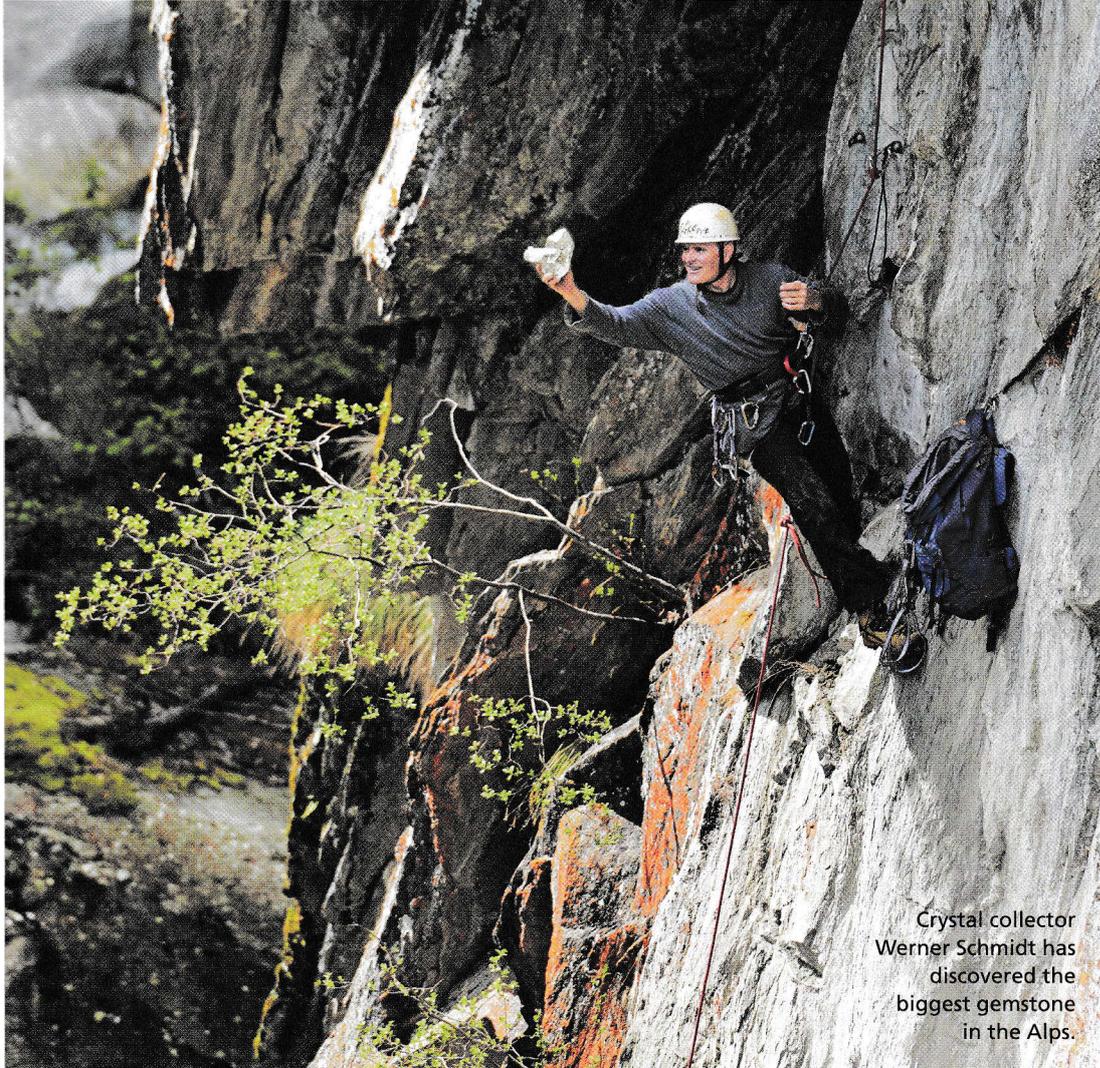
After many long nights of work, the researchers relax with a game of soccer by the lake. Wheelchair athlete and Para-Cycling Road World Cup winner Silke Pan rides home on her handbike, from Lausanne through the vineyards of the Lavaux to Aigle – back from the future past a world of tradition. ●



Silke Pan is rooting for the inventors from Lausanne. Will the Twice ultralight exoskeleton soon make her everyday life easier?



UBS magazine



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