SAES & ESTATES

Bringing new knowledge to market PAGE 12

Intelligent positioning for nanosatellites PAGE 8

Zurich

Fields Medal for ETH mathematician PAGE 30 Creative idea incubator for students PAGE 36

NO. 3/201

5 QUESTIONS

Ursula Keller believes that a passion for the unknown and the ability to tolerate frustration are essential: "Research is never a straightforward process."

You recently won the European Inventor Award for your life's work. Yes, the award recognises my achievements in the field of ultrafast laser physics, which include fundamental and applied research. In addition to the science, it was the commercial impact of my work that particularly impressed the jury. I spent time in

the US studying for my doctorate at Stanford and then working at AT&T Bell Labs, and I saw how much people there value commercial thinking. I brought that mindset back with me to ETH, where I've worked with an excellent research team for the past 25 years.

What led you to pursue this area of research?

I have a very wide range of interests and I think the decisions we make in life often stem from the situations we find ourselves in. After completing my physics degree at ETH, for example, I was adamant that I wanted to go abroad - that's how I ended up doing my doctorate at Stanford. Then, to increase my chances of getting a paid job, I decided to pursue experimental physics rather than taking the theoretical route. I've always been fascinated by lasers and I'm convinced that laser



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physics and photonics in general will continue to have a huge impact.

3 Who has been your greatest influence in life?

My husband. We're a multicultural couple and have been married for 30 years. He's a very positive influence, always challenging me to move beyond stereotypical notions and attitudes. Living equality is something close to both our hearts. We've always kept it alive even when pushed to our limits - when we were both working full time and taking care of two young children.

4 What do you strive to pass on to your students?

If they want to go on to do a doctorate, their performance has to be above average. Anyone looking to go into research needs to be passionate about the unknown and able to deal with frustration. Research is never a straightforward process. If an experiment doesn't go as planned, it could be due to a wrong connection or any number of other reasons - or it could even herald a wonderful new discovery! My aim is to create a supportive environment where people can achieve greater things than they could ever have imagined. My motto is: nobody said it's easy, just try harder.

What about your own children? Ideally, they would follow a route

that combines their interests with their natural talents - doing something that makes them happy, not just successful. I hope they can see from their parents that earning your living from your dream job is the ultimate privilege. But it's also important for them to know that your dream job isn't just handed to you on a plate - you have to work hard to get there.

Interview: Isabelle Herold