# Panorama 2022/23

The Swiss Academy of Engineering Sciences: Review and Outlook









### **Review and Outlook**

Benoît Dubuis and Esther Koller

For how long have people been saying that the next ten years will be crucial in a world being transformed by the effects of technology?

Forever – and they will keep saying it forever because technological development has become autocatalytic, particularly because the applications of technology broke through sectoral boundaries a long time ago. Blockchain was developed for the world of finance, but is being used in medicine; drones were developed for surveillance, but are assisting farmers; AI for search engines, but we encounter it in everyday life, taking the place of the people we usually talk to in information services.

Should we be concerned at this surreptitious and insidious intrusion of technology into the very heart of our lives? While we prefer to see opportunities that will help us in our tasks and lives, these advances nevertheless deserve our attention so that we can ensure technology is integrated in a way that has been carefully thought through and shows concern and respect for humans, social cohesion and the Earth that is our shared home.

SATW is committed to investing in a new generation of professionals qualified to support technological development, to the social and economic advancement of our country by safeguarding the development and availability of technology and controlling its impact on our society and environment.

To do this, SATW operates an impressive network of experts, who share their expertise, vision, time and networks to further our studies and meetings. As a neutral, independent and global organisation, SATW is dedicated to the service of our society, economy and country, helping position Switzerland in a technological universe that is taking shape with us.



#### 2022

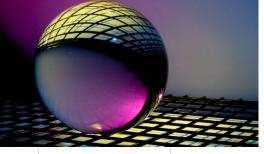
As the most important network of experts for the engineering sciences in Switzerland, SATW's goal is to further enhance Switzerland's leading position in this field, and to help ensure that findings are translated into technologies and innovations for the benefit of the economy and society.

28.04.2022

Statement: Half-and-half in **STEM professions** 

03.05.2022, Bern

**General Meeting elects** Benoît Dubuis as SATW's new



22.07.2022 Study: A technological panorama

Lausanne and Zurich **Swiss Food Week** 

14.11.22, Biel

**Event: SMEs and** digitalisation



25.01.-27.01.23, Tenero

**Sportech** 

**Newly elected Full Members** 

2023

01.01.2023

15.09.2023, Zurich

**Launch: Technology Outlook** 

Technology Outlook by SATW



23.09.2023, Lausanne Conference on encouraging young

engineering talent









**CAETS Energy** Report 2022





**Newly elected Full Members** of SATW in 2022

10.02.2022 **Publication: Autonomous driving** 



01.02.2022 New edition of **Innovativeness Analysis** 



28.03.-01.04.2022, Brugg and Lausanne **Swiss Space Week** 

**President** 



03.05.2022

**Consultation response: Mobility data** 

23.06.2022, Lucerne

**Launch of Swiss Artificial Intelligence Research Overview Platform** 



28.06.2022

White paper: Study on working from home and cyber security

28.09.2022

05.09.2022, Lausanne Launch of mentoring

programme Swiss TecLadies

**Statement: Further development of** the Matura secondary school diploma



29.09.2022, Dübendorf **Technology Days: Electromobility** 

01.12.2022, Dübendorf **Workshop: Autonomous systems** 

March

**February** 

**Online version: Timeline** satw.ch/timeline

## **Organisation**





#### **Executive Committee**

- 1 Prof. Benoît Dubuis (President)
- 2 Prof. Christofer Hierold (Vice-President)
- 3 Dr. Rita Hofmann (Vice-President)
- 4 Prof. Peter Seitz (Vice-President)
- 5 Dr. Ulrich Claessen
- 6 Prof. René Hüsler
- 7 Dr. Fabienne Marquis Weible
- 8 Dr. Hans-Peter Meyer



Would you like to contribute your expertise to our projects? Then we look forward to hearing from you.

#### **Head Office**

From left to right: Dr. Christian Holzner, Adriana Cantaluppi, Dr. Claudia Schärer, Elvira Affeltranger, Claude Naville, Sibylle Gerspacher, Esther Lombardini, Belinda Weidmann, Cyrielle Rubrichi, Christina Dall'Agnola, Ester Elices, Stefan Scheidegger, Dr. Esther Koller, Edith Schnapper, Sandra Weidmann, Manuel Kugler, Nicole Wettstein, Manuela Ingletto, Claudia Lambrigger, Beatrice Huber, Alexandre Luyet, Janine Hosp





#### **Scientific Advisory Board**

- 1 Dr. Hans-Peter Meyer (President)
- 2 Dr. Walter J. Ammann
- 3 Max Erick Busse-Grawitz
- 4 Dr. Djordje Filipovic
- 5 Prof. René Hüsler
- 6 Prof. Agathe Koller-Hodac
- 7 Dr. Urs Mäder
- 8 Dr. Christian Schaffner

#### **Heads of the Topical Platforms**

- 1 Prof. Wolfgang Kröger, Autonomous Driving
- 2 Dr. Hans-Peter Meyer, Biotechnology
- 3 Dr. Michael Altorfer, Biotechnology
- 4 Dr. Urs Mäder, Chemistry
- 5 Prof. Bernhard Tellenbach, Cybersecurity
- 6 Prof. Patricia Deflorin, Industry 4.0
- 7 Prof. Anna Valente, Intelligent Manufacturing
- 8 Dr. Alessandro Curioni, Artificial Intelligence
- 9 Prof. Erich Windhab, Food Technology
- 10 Dr. Xaver Edelmann, Sustainable Circular Economy
- 11 Prof. Giovanni Sansavini, Resilience and Risks
- 12 Prof. Daniel Gygax, Technologies for Precision Medicine



### **New Members 2023**



«I am looking forward to expanding my scientific network and exchanging ideas with other university institutions more intensively.»

> Prof. Tanja Zimmermann **Empa**



«I greatly appreciate SATW's excellent reputation and its values. My contribution to the interdisciplinary network will focus on knowledge transfer, outreach and inclusion.»

> **Prof. Robert Riener** ETH Zurich



«There are many technological ideas for solving problems, but society's acceptance of them must always be considered.»

> **Prof. Christian Franck** ETH Zurich



«I want to contribute to the analysis and dissemination – applying intellectual rigour and weighting of all information linked to scientific progress.»

> Prof. Luc Thévenaz FPFI





«Through SATW, I hope to contribute to enhancing the cyber security of Switzerland, Europe, and the entire world. It is an honor to be part of this prestigious academy.»

> Prof. Adrian Perrig ETH Zurich



Gion A. Caminada FTH Zurich



«SATW is a beacon of intellectual strength and positive societal values of Switzerland, and I especially hope to contribute to the visibility and impact of women in technological scientific disciplines in Switzerland and internationally.»

Prof. Olga Sorkine-Hornung ETH Zurich



Prof. Tobias J. Kippenberg **EPFL** 



«SATW plays an important role in representing the technological and scientific interests of Switzerland as a nation.»

> **Christoph Aeschlimann** Swisscom



«I would like to tackle global challenges in cooperation with SATW and other tech enthusiasts from various disciplines.»

Prof. Christian Rüegg Paul Scherrer Institute (PSI)



«I hope to promote engineering education and research through strengthening Sino-Swiss networking and international exchanges in the framework of SATW.»

Prof. Junguo Liu North China University of Water Resources and Electric Power



«Technology should serve people and not the other way around.»

> Prof. Roger Abächerli HSLU



