

# Annual Report 2020



Royal Swedish Academy of  
Engineering Sciences



»The Academy's mission is to  
promote the engineering and  
economic sciences and the  
development of industry for  
the benefit of society«

IVA's statutes, §1

# Fast adaptation will shape the way we work post-Covid

**As I write this** at the beginning of 2021, the pandemic still dominates our everyday lives. Many have been severely impacted. *Businesses and organisations* throughout society have had to adapt and start working in new ways – including IVA.

From IVA's perspective, 2020 is in sharp contrast with the previous year when we celebrated the Academy's 100-year journey as the world's first academy of engineering sciences. Our Jubilee was celebrated by an explosion of activity, face-to-face meetings of people from all around the country, and visitors from many parts of the world coming to Sweden to participate in our programmes.

We have an exact date for when we had adapt to the new situation for the first time. On 1 April IVA's *Resource Effectiveness and the Circular Economy* project was set to be presented and discussed at a seminar in the building of the Riksdag in cooperation with the Swedish Society for Members of Parliament and Researchers (Rifo). Due to restrictions the event had to be quickly switched to the Wallenberg Auditorium. It was our first webinar and would be followed by 47 more digital events during the course of the year. We also had to replace the festive gathering that is our Annual General Meeting in City Hall with a livestream from Wallenberg Auditorium.

We were able to quickly adapt thanks to the investments we had made in digital technology at IVA's Conference Centre in connection with our Jubilee. In 2020 we continued to fine-tune the technology and develop a structure for our video conferencing and streaming. Virtual event participants can now take an active part by asking questions and commenting in the chat functions. It's not the same as meeting in person – we're all missing that – but the digital format has actually allowed us to reach three or four times as many participants as at our past in-person events.

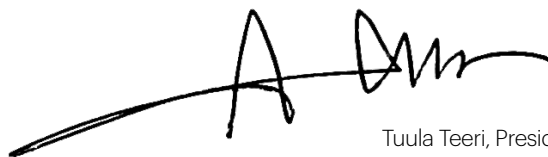
As vaccinated gets under way we are seeing glimpses of the new normal. A lot of what we have learnt during the pandemic will be woven into future meetings between people – something that is at the core of what we do at IVA. Many more participants – especially those outside the Stockholm area or from other countries – will be able to take part in our discussions using the effective digital tools at our disposal. During a pandemic it's easy to forget the other challenges we're facing. But the climate crisis and the transition necessary have not taken a break. Last spring we were quick to launch

our Sustainable New Start for Sweden project involving strong joint action where, in a limited amount of time, we were able to propose initiatives to quickly get the economy going during the pandemic in a way that is sustainable for the long term.

Also during the year we concluded our *Climate Crossroads* project and launched a project on the opportunities offered by digitalisation in the social services sector and another on a sustainable water supply. Our long-term projects focusing on Swedish school education and entrepreneurship – made possible thanks to generous donations from so many – really picked up speed in 2020. Both themes are highly significant for Sweden's future as an entrepreneurial and innovative knowledge nation. IVA's year ended as it began, with a visit from Matilda Ernkrans, Sweden's Minister for Higher Education and Research. In January she was in attendance in a full Wallenberg Auditorium talking about her work on the upcoming Research and Innovation Bill. At the end of December she was back, this time on a screen in the Auditorium presenting the final bill which – despite the pandemic – includes an increase in resources for research and innovation-driving activities. A record audience of more than 1,000 people tuned into the live stream.

IVA's knowledge base is built on the solid expertise in engineering sciences and economics of more than a thousand Academy Fellows. To supplement this expertise we have far-reaching networks, not least through the Business Executives Council and Student Council, and all of those working at the Academy offices. I'm proud and delighted that so many have been involved in our activities despite the difficult external circumstances this past year. The strategy that we created together in 2018 has come to life through our committed Fellows who shape and take on the responsibility for the content of our projects and programmes.

I would like to express my heartfelt gratitude to all of you who have helped IVA fulfil its vital role in society during the pandemic.



Tuula Teeri, President of IVA





# The Executive Council, Fellows, Divisions and the Business Executives Council



24/10 2020: Academy Chair **Carl-Henric Svanberg** talks about the future with **Anna Adolfsson**, former Chair of the Student Council and current Chair **Karin Östman** at IVA's Annual Meeting, which was live-streamed from the Wallenberg Auditorium.



All information applies from 31 December 2020 unless otherwise indicated. Division affiliation is shown in brackets.

## THE EXECUTIVE COMMITTEE

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Carl-Henric Svanberg (VI), Chair of the Academy 2018–2021 (extended)  
 Magdalena Gerger (VI), Business Executives Council Chair 2020–2022  
 Magnus Hall (VIII), Vice Chair 2020–2022  
 Cecilia Hermansson (IX), Vice Chair 2019–2021  
 Pia Sandvik (XI), Vice Chair 2018–2020  
 Johan Sterte (IV), Vice Chair 2018–2020  
 Tuula Teeri (IV), President of the Academy 2017–2023

*Adjunct members:*  
 Johan Weigelt, Secretary to the Academy, Executive Vice President

Karin Östman, Chair of IVA's Student Council

## THE ADVISORY COUNCIL

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The Advisory Council includes the Chair of the Academy, the chairs or vice chairs of the Academy's divisions, chairs of the regional networks and President of the Academy. The Secretary to the Academy and the chairs of the Business Executives Council, the Industrial Research Committee and Focus Area Councils are also called upon to attend meetings.

Carl-Henric Svanberg (VI), Chair  
 Tuula Teeri (IV), President  
 Johan Weigelt, Secretary to the Academy, Executive Vice President (adjunct member)

## Division Chairs

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Catharina Modahl Nilsson (I)  
 Pontus Johnson (II)  
 Jonas Eliasson (III)  
 Martin Malmsten (IV)  
 Gert Nilson (V)  
 Fredrik Lagergren (VI)  
 Fredrik Laurell (VII)  
 Lena Ek (VIII)  
 Anders Lindberg (IX)  
 Stefan Ståhl (X)  
 Peter Larsson (XI)  
 Ulf Wahlberg (XII)

## Chairs of IVA's regional networks

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Per Eriksson (XI), IVA South  
 Erik Höglund (I), IVA North  
 Marianne Dicander Alexandersson (VI), IVA West



## Chair of IVA's Business Executives Council

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Magdalena Gerger (VI)

## Chair of the Industrial Research Committee (IRC)

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Torbjörn Holmström (I)

## Chairs of IVA's Focus Area Councils

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Maria Anvret (X), World-Class Knowledge  
Karl Bergman (II), Climate-Resources-  
Energy

Carola Lemne (VI), Industry and  
Enterprise of the Future  
Åsa Söderström Winberg (III),  
People-Technology-Society

## FELLOWS

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As of 31 December 2020 IVA had 987  
National Fellows and 268 International  
Fellows.

## Elected Fellows 2020

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Håkan Buskhe (I), CEO FAM  
Jonas Gustavsson (I), President and CEO  
AFRY  
Cecilia Larsson (I), Head of R&D Saab  
Kockums  
Sonja Berlijn (II), Senior Vice President  
R&D, Statnett  
Björn Ekelund (II), Research Director,  
Ericsson  
Thomas Erséus (III), CEO of Almega  
and Director of Almega Service  
Associations  
Kerstin Lindberg Göransson, CEO of  
Akademiska Hus  
Olle Samuelson (III), Research  
and Innovation Strategist at IQ  
Samhällsbyggnad





Ulf Ellervik (IV), Professor  
Lund University  
Örjan Gustafsson (IV), Professor  
Stockholm University  
Emma Sparr (IV), Professor  
Lund University  
Eva Lindh-Ulmgren (V), Director Materials  
Design, Strategic Research at Sandvik  
Materials Technology  
Jan Moström (V), President and CEO LKAB  
Ulla Eriksson-Zetterquist (VI), Director  
Gothenburg Research Institute  
Ulrika Kolsrud (VI), President Health and  
Medical Solutions, Essity  
Per Olofsson (VI), Chair Climeon  
Per Wassén (VI), CEO PowerCell Sweden  
Mikael Karlsson (VII), Associate Professor  
in Environmental Science, Royal Institute  
of Technology (KTH)  
Amy Loutfi (VII), Professor in Information  
Technology, Örebro University  
Ann Wennerberg (VII), Vice Dean,  
Sahlgrenska Academy, Gothenburg  
University  
Alice Kempe (VIII), Chair Kempestiftelserna  
Johan Kuylenstierna (VIII), Chair, Swedish  
Climate Policy Council  
Sören Petersson (VIII), CEO of Holmen  
Skog  
Maria Bratt Börjesson (IX), Professor of  
Economics at the Swedish National Road  
and Transport Research Institute  
Johan Forssell (IX), President and CEO  
Investor  
Anna Söderblom, PhD Econ., Stockholm  
School of Economics  
Daniel Waldenström (IX), Professor  
in Economics, Research Institute of  
Industrial Economics  
Eugen Steiner (X), Partner,  
board professional HealthCap  
Pernilla Wittung-Stafshede (X),  
Professor Chalmers University of  
Technology  
Per-Arne Andersson (XI), Director,  
Swedish Association of Local Authorities  
and Regions  
Birgitta Bergvall-Kåreborn (XI),  
Vice Chancellor Luleå University of  
Technology

Maria Knutson Wedel (XI),  
Vice Chancellor Swedish University of  
Agricultural Sciences  
Virginia Dignum (XII), Professor Umeå  
University and Program Director WASP-HS  
Magnus Frodigh (XII),  
Head of Ericsson Research  
Cecilia Magnusson Sjöberg (XI),  
Professor Stockholm University

## Elected International Fellows 2020

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Mung Chiang, Dean of College of  
Engineering at Purdue University, Chief  
Global Technology Officer in the Office  
of the Under Secretary of State, USA  
Ola Källenius, CEO of Daimler and  
Chairman of the Board of Management  
of Mercedes-Benz AG, Germany.  
Marie-Laure Salles, Director The  
Graduate Institute, Geneva Switzerland  
Yoshiyuki Sankai, Professor University of  
Tsukuba, CEO of founder of Cyberdyne,  
Japan  
Andreas Schleicher, Director for the  
Directorate of Education and Skills,  
OECD, France  
Marc Tessier-Lavigne,  
President of Stanford University, USA  
Diego Pavia, CEO  
EIT InnoEnergy, Spain

## Deceased Fellows 2020 (Year inducted in parentheses)

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Torvild Aakvaag, Director General  
(Int., 1977)  
Janne Carlsson, Professor em. (I, 1981)  
Bengt Berg, Director (I, 1979)  
Arne Elmroth, Professor (III, 1990)  
Lars Andersson, MSc Engineering (IV,  
2015)  
Ingmar Grenthe, Professor (IV, 1979)  
Jan-Olov Liljenzin, Professor (IV, 1991)  
Torbjörn Norin, Professor (IV, 1987)  
Louis Améen, Director (V, 1977)  
Sven Axsäte, Professor (VI, 1994)  
Gunnar Borg, Professor (VI, 1970)

Bengt Eskilson, Director (VI, 1994)  
Jan Ollner, Director (VI, 1973)  
Nils Hartler, Professor (VIII, 1977)  
Hans Norrström, Ass. Professor (VIII, 1987)  
Stig Larsson, Director General (XI, 1986)  
Assar Lindbeck, Professor (IX, 1970)  
Karl-Axel Linderöth, Director (IX, 1986)  
Sten Wikander, Director (IX, 1986)  
Bengt Hallström, Professor (X, 1984)  
Sten Trolle, Director (XI, 1995)  
Lars Irstad, MSc Engineering (XII, 1988)  
Dirk Thoenes, Professor (Int., 1985)

## IVA DIVISIONS

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### Division I: Mechanical Engineering

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Chair 2020–2022: Catharina Modahl  
Nilsson, Executive Vice President Group  
Research & Development  
Vice Chair 2020–2022:  
Per Grunewald, Founding Partner  
Vice Chair 2020–2022:  
Monica Bellgran, Professor  
Secretary: Ingrid Jansson, IVA  
Number of Fellows: 92

### Division II: Electrical Engineering

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Chair 2020–2022: Pontus Johnson,  
Professor  
Vice Chair 2020–2022:  
Magnus Olofsson, PhD  
Vice Chair 2020: Birgitta Resvik,  
Senior Advisor  
Secretary: Karin Byman, IVA  
Number of Fellows: 51

### Division III: Building and Construction

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Chair 2019–2021:  
Jonas Eliasson, Professor  
Vice Chair 2019–2021:  
Kristina L Nilsson, Professor

Vice Chair 2020–2022:  
Carina Edblad, CEO  
Secretary: Staffan Eriksson, IVA  
Number of Fellows: 81

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## Division IV: Chemical Engineering

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Chair 2018–2020:  
Martin Malmsten, Professor  
Vice Chair 2018–2020:  
Henrik Thunman, Professor  
Vice Chair 2019–2021:  
Ulrika Edlund, Professor  
Secretary: Jan Westberg, IVA  
Number of Fellows: 80

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## Division V: Mining and Materials

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Chair 2018–2020:  
Gert Nilson, D.Eng.  
Vice Chair 2018–2021:  
Lars Hultman, Professor  
Vice Chair 2020–2022:  
Susanne Norgren, Adj. Professor  
Secretary: Johan Weigelt, IVA  
Number of Fellows: 68

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## Division VI: Management

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Chair 2019–2021: Fredrik Lagergren,  
President of the Academy  
Vice Chair 2019–2021:  
Marcus Lindahl, Professor  
Vacant  
Secretary: Malin Mohr, IVA  
Number of Fellows: 127

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## Division VII: Basic and Inter-disciplinary Engineering Sciences

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Chair 2020–2022:  
Fredrik Laurell, Professor  
Vice Chair 2020–2022:  
Erik Lindahl, Professor  
Vice Chair 2019–2021:  
Fredrik Höök, Professor

Secretary: Per Hjertén, IVA  
Number of Fellows: 102

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## Division VIII: Forest Technology

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Chair 2018–2021:  
Lena Ek, Board Chair  
Vice Chair 2018–2021:  
Jon Haag, Director  
Vice Chair: Vacant  
Secretary: Anna Lindberg  
Number of Fellows: 59

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## Division IX: Economics

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Chair 2019–2021:  
Anders Lindberg, Board Chair  
Vice Chair 2019–2021:  
John Hassler, Professor  
Vice Chair 2018–2020:  
Cecilia Hermansson, PhD Econ.  
Secretary: Hampus Lindh, IVA  
Number of Fellows: 116

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## Division X: Biotechnology

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Chair 2017–2020:  
Stefan Ståhl, Professor  
Vice Chair 2017–2020:  
Lena Gustafsson, Professor  
Vice Chair 2018–2020:  
Magnus Lundberg, Board Chair  
Secretary: Maja Neiman, IVA  
Number of Fellows: 65

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## Division XI: Education and Research Policy

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Chair 2018–2020: Peter Larsson,  
Director of Social Policy  
Vice Chair 2018–2020:  
Susanne Ås Sivborg, Director General  
Vice Chair 2019–2021:  
Hans Hentzell, CEO,  
Secretary: Eva Lundgren, IVA  
Number of Fellows: 75

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## Division XII: Information Technology

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Chair 2020–2022:  
Ulf Wahlberg, MSc Eng  
Vice Chair 2020–2022:  
Erik Lindahl, Professor  
Vice Chair 2020–2022:  
Anette Novak, Director General  
Secretary: Linda Olsson, IVA  
Number of Fellows: 71

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## REGIONAL SECTIONS

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### IVA North

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Chair 2018–2021:  
Erik Höglund (I), Pro Vice-Chancellor  
Vice Chair 2018–2021:  
Lars-Eric Aaro (V), Senior Advisor  
Vice Chair 2018–2020:  
Stina Blombäck (VIII), CEO  
Secretary: Eva Lagerblad, IVA

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### IVA South

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Chair 2018–2020:  
Per Eriksson (XI), Professor,  
Vice Chair 2019–2021:  
Sven Mattisson (II), Associate Professor  
Vice Chair 2018–2020:  
Judith Melin (VII), MD  
Secretary: Jan Westberg, IVA

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### IVA West

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Chair 2019–2020:  
Marianne Dicander Alexandersson (VI),  
Board Chair  
Vice Chair 2017–2021:  
Kristina Mjörnell (III), Professor  
Vice Chair 2018–2020:  
Torbjörn Holmström (I)  
Senior Advisor  
Secretary: Gustaf Wahlström, IVA



## Participants in IRC – IVA's Leadership Programme

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Chair 2020–2022: Torbjörn Holmström, Senior Advisor  
 Niclas Andersson, BTG Process Solution, 2018–2020  
 Henrik Blomberg, Telia, 2018–2020  
 Catherine Boissier, Astra Zeneca, 2019–2021  
 Dilip Chandrasekaran, Kanthal, 2019–2021  
 Fredrik Edström, Drupps, 2018–2020  
 Elena Fersman, Ericsson, 2018–2020  
 Richard Furberg, Electrolux, 2019–2022  
 Karin Johnson, RISE Processum, 2019–2022  
 Gustaf Kylberg, Vironova, 2019–2022  
 Sofia Lundberg, VTI-KTH Campus, 2019–2021  
 Jonas Mann, Atlas Copco, 2019–2021  
 Sandra Olivera Sánchez, Government Offices of Sweden, 2019–2022

Per Sahlholm, Scania CV, 2019–2022  
 Ylva Strander, VINNOVA, 2019–2021  
 Anna-Maria Wiberg, Vattenfall, 2018–2020  
 Program Manager: Elin Elliot, IVA

## BUSINESS EXECUTIVES COUNCIL

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Around 230 companies, government agencies and organisations made up the Business Executives Council in 2020.

## Executive Body

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Chair 2020–2022: Magdalena Gerger (VI), Systembolaget  
 Vice Chair 2019–2021:  
 Håkan Dahlströmm, board professional  
 Vice Chair 2019–2021:

Maria Rankka (XI), board professional  
 Erik Ekudden (XII), CTO Ericsson, 2020–2022  
 Lars Stugemo (VI), HiQ 2015–2020  
 Lena Olving (I), Mycronic 2018–2020  
 Mohammed Homman, Vironova 2018–2020  
 Mikael Pawlo, Red Flag, 2019–2021

## Adjunct members

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Fredrik Gustafsson, IVA's Business Executives Council Östergötland  
 Marc Hoffmann (IVA South)  
 Torbjörn Holmström (I)  
 Senior Advisor (IVA West)  
 Beatrice Kämpe Nikolausson, Linnéakademien  
 Lars Lindblom, Samarkand  
 Thomas Nilsson (IVA North)



# Seminars and meetings



1/4 2020: IVA's Resource Effectiveness and the Circular Economy project had to switch from a seminar inside the Riksdag to a webinar format when infection rates in the community increased.



### 16 January in Stockholm

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Action plans for Resource Effectiveness and the Circular Economy  
Arranged by: IVA's Resource Effectiveness and the Circular Economy project

### 23 January in Stockholm

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Hearing on Swedish research policy  
Arranged by: IVA in cooperation with the Ministry for Education and Research

### 28 January in Umeå

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Progress in Research and Technology 2019  
Arranged by: IVA North, Umeå University, Norrlandsfonden and the Västerbotten Chamber of Commerce

### 29 January in Piteå

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Business forum: Digitalisation's Opportunities – Piteå  
Arranged by: IVA's Smart Industry and Kickstart Digitalisation. Piteå Municipality and IUC Norr

### 30 January in Stockholm

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Sustainable Water Supply – access to clean water in a changing climate  
Arranged by: IVA's Sustainable Water Supply project

### 3 February in Stockholm

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How far will we be able to drive battery-powered heavy goods vehicles in 2040?  
Arranged by: IVA's divisions  
Electrical Engineering

### 5 February in Stockholm

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Seminar and award ceremony  
Smart Industry competition  
Arranged by: IVA's Smart Industry project

### 6 February in Stockholm

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Paper beer bottle and other new materials from the forest  
Arranged by: IVA North and Norrlandsfonden

### 6 February in Stockholm

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Vulnerable areas  
– How can we change the course of development?  
Arranged by: IVA Building and Construction and Information Technology divisions

### 13 February in Karlskoga

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Business forum: Digitalisation's Opportunities – Karlskoga  
Arranged by: IVA's Smart Industry and Kickstart Digitalisation

### 13 February in Stockholm

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Making Sweden Climate Neutral  
Arranged by: IVA's Climate Crossroads project

### 24 February in Lund

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AI – New opportunities for medical research and healthcare  
Arranged by: IVA South

### 24 February in Gothenburg

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Future Entrepreneurship  
Arranged by: IVA's Student Council in cooperation with IVA West

### 4 March in Stockholm

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Machine Learning – the chemical industry on the way out of the starting blocks  
Arranged by: IVA's Chemical Engineering division

### 1 April – Webinar

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Making Sweden a Circular Economy World Leader  
Arranged by: IVA's Resource Effectiveness and the Circular Economy project

### 17 April – Webinar

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How the Coronavirus Crisis is Impacting the Swedish Economy  
Arranged by: IVA Economics division

### 28 April – Webinar

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Nordic Circular Collaboration and Best Practice  
Arranged by: IVA's Resource Effectiveness and the Circular Economy project

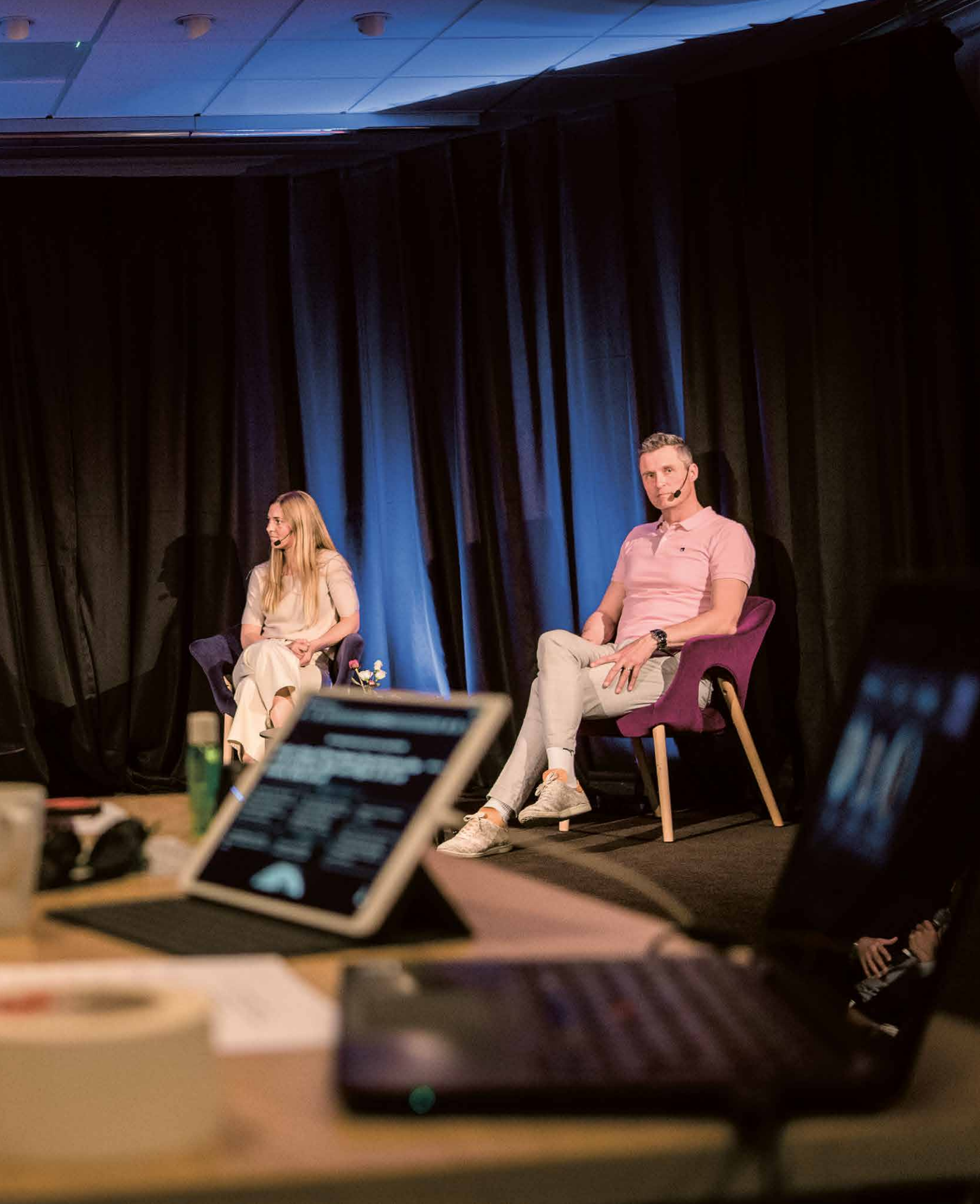
### 7 May – Webinar

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Webinar for prospective Junior Academy applicants  
Arranged by: IVA's Junior Academy project and the New York Academy of Sciences



27/5 2020: Prince Daniel's Fellowship was at the top of the bill when **Studio IVA** was launched.





### 13 May – Webinar

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International Trade on Hold  
– How hard hit is it by the pandemic?  
Arranged by: IVA's Sustainable New Start for Sweden project

### 13 May – Webinar

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Can we ensure delivery reliability in the electricity market?  
Arranged by: IVA's Electrical Engineering division and focus area Climate–Resources–Energy

### 15 May – Webinar

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Diversity brings business benefits  
– the key to unbiased recruiting  
Arranged by: Teknisksprånget

### 27 May – Webinar

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Livestream with Prince Daniel's Fellowship  
Arranged by: IVA's Prince Daniel's Fellowship project

### 27 May – Webinar

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Sustainability in focus  
Arranged by: Jobbsprånget

### 28 May – Webinar

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Covid-19 Crisis Impact on Global Energy Use  
Arranged by: IVA and the World Energy Council

### 1 June – Webinar

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The new normal  
Arranged by: IVA's Sustainable New Start for Sweden project

### 3 June – Webinar

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Can the forest save the climate?  
Arranged by: IVA's Forest Technology division and Sustainable New Start for Sweden

### 24 June – Webinar

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Sustainable New Start for Sweden  
Arranged by: IVA's Sustainable New Start for Sweden project

### 19 June – Webinar

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An Industry Perspective on Research Commercialisation  
Arranged by: IVA's Research2Business project

### 27 August – Webinar

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How can teachers strengthen Swedish education?  
Arranged by: IVA's School in our time project

### 2 September – Webinar

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R2B Wake Up Call  
Arranged by: IVA's Research2Business project

### 2 September – Webinar

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R2B Summit 2020  
Arranged by: IVA's Research2Business project

### 9 September – Webinar

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"X" and "Garage" activity within companies – The right path or a dead end?  
Arranged by: IVA's Swedish Entrepreneurship Academy and IVA's Research2Business projects

### 9 September – Webinar

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The National Power Grid  
– How can we increase capacity?  
Arranged by: IVA's Electrical Engineering division

### 10 September – Webinar

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The Forest Industry  
Contributing to a Growing Swedish Bioeconomy  
Arranged by: IVA's Forest Technology division and the Royal Swedish Academy of Agriculture and Forestry (KSLA)

**18/12 2020:**  
**Matilda Ernkrans**  
presenting the  
Government's  
new Research  
and Innovation  
Bill at IVA.







**2/9 2020: R2B Summit** – a meeting place where researchers meet with decision-makers from businesses and organisations annually.

## 10 September – Webinar

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Virus Detection and Antibody Testing for Covid-19 – a look inside Swedish research labs and towards the future  
Arranged by: IVA's Biotechnology division

## 11 September – Webinar

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How to attract young talent to work in the public sector  
Arranged by: IVA's Tekniskprånet project

## 14 September – Webinar

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Prince Daniel's Digital Entrepreneurship Day  
Arranged by: IVA's Prince Daniel's Fellowship project

## 17 September – Webinar

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The Role of Commerce in Cities of the Future  
Arranged by: IVA's Building and Construction division

## 21 September – Webinar

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Breakfast meeting with Carina Åkerström  
Arranged by: IVA's Business Executives Council

## 22 September – Webinar

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The green transformation – Can we ensure the materials' supply?  
Arranged by: IVA's Mining and Materials division

## 24 September – Webinar

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Assembly of the Academy and presentation of IVA's award for scientific journalism, the Hans Bergström Award  
Arranged by: IVA



## 25 September – Webinar

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Inside the Minds of Young Women Interested in Technology  
Arranged by: Technology Leap and Technology Women

## 25 September – Webinar

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Junior Academy kick-off 2020  
Arranged by: IVA's Junior Academy project

## 29 September – Webinar

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Polymers –100 years of macromolecular science  
Arranged by: IVA's Chemical Engineering division with KTH Materials Platform, Materials Platform Day 2020

## 1 October – Webinar

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Digitalisation as a Facilitator of Future Prosperity – but how?  
Arranged by: IVA's Digitalisation project

## 1 October – Webinar

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Confederation of Swedish Enterprise 2020  
Arranged by: IVA's Private Sector R&D Investment project

## 2 October – Webinar

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Can the internet handle "shock digitalisation"?  
Arranged by: IVA's Digitalisation for Increased Competitiveness project and part of Digital@ldag

## 5 October – Webinar

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Engineers and the future  
Arranged by: IVA's Education and Research Policy division

## 6 October – Webinar

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The Role of Hydrogen Gas in the Energy System  
Arranged by: IVA Economics division and Focus Area Climate–Resources–Energy

### 13 October – Webinar

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Wood – How can it support a sustainable society?  
Arranged by: IVA's Forest Technology division

### 21 October – Webinar

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Innovation Support – a purpose-built tool to utilise knowledge?  
Arranged by: IVA's Research2Business projects

### 23 October – Webinar

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Annual General Meeting 2020  
Arranged by: IVA

### 5 November – Webinar

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Science & Society Forum: Growing ICT sector and more and more data centres  
How is this impacting the energy sector?  
Arranged by: IVA

### 9–10 November – Webinar

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Entrepreneurship Education 2020  
Arranged by: IVA's Swedish Entrepreneurship Academy project

### 25 November – Webinar

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Swedish Business Management in a Challenging Time  
Arranged by: IVA's Business Executives Council and IVA's Management division

### 3 December – Webinar

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China's Climate Promise  
Arranged by: IVA's Forest Technology division

### 3 December – Webinar

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Chester Carlson Research Award 2020  
Arranged by: IVA Foundation for Information Science Research

### 8 December – Webinar

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Now We Drive – sustainable heavy goods transport in the future  
Arranged by: IVA's Climate–Resources–Energy focus area

### 10 December – Webinar

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Top Scientist Dialogue  
Arranged by: IVA and the Office of Science and Innovation, Embassy of Sweden, in China

### 15 December – Webinar

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Government's Role in a Time of Crisis  
Arranged by: IVA Economics division

### 17 December – Webinar

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The Human Protein Atlas – on Sweden's biggest ever research project  
Arranged by: IVA's Biotechnology division

### 18 December – Webinar

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Presentation by of the Research and Innovation Bill  
Arranged by: IVA in cooperation with the Ministry for Education and Research



**1/10 2020:  
R&D Barometer –**  
Technology-intensive companies are more sceptical about the Swedish R&D climate.  
**Ibrahim Baylan,**  
Minister for Business, Industry and Innovation.



# Projects and focus areas



27/5 2020: 17-year old Sarah Rydell won the Young Innovation in a Time of Crisis Award. From the left: Maja Neiman, IVA, Sara Rydell.



## IVA'S PROJECT BY FOCUS AREA

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### World-Class Knowledge

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The Future Knowledge Society  
Junior Academy project  
NTA Digital  
Private Sector R&D Investment  
Education Keeping Up with the Times  
Tekniksprånget

### Industry and Enterprise of the Future

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Jobbsprånget  
IVA's Smart Industry  
Prince Daniel's Fellowship  
Research2Business  
Swedish Entrepreneurship Academy

### Climate–Resources–Energy

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Resource Effectiveness and the Circular  
Economy (concluded in April)  
Climate Crossroads (concluded in June)

### People–Technology–Society

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Digitalisation – Facilitator  
of Future Prosperity  
Sustainable Water Supply

## MEMBERS IVA'S FOCUS AREA COUNCILS

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### World-Class Knowledge

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Chair: Maria Anvret (X)  
Peter Gudmunson (I)  
Ulla Sandborgh (II)  
Anna Kadefors (III)  
Lennart Bergström (IV)  
Susanne Norgren (V)  
Erik Bohlin (VI)  
Anna Sandström (VII)  
Charlotte Bengtsson (VIII)  
Magnus Henrekson (IX)  
Peter Larsson (XI)  
Jan Gulliksen (XII)  
Henrik Friman (BEC)  
William Eulau (Student Council)

### Industry and Enterprise of the Future

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Chair: Carola Lemne (VI)  
Per Grunewald (I)  
Birgitta Resvik (II)  
Svante Hagman (III)  
Michael E. Persson (IV)  
Göran Carlsson (V)  
Laszlo Fuchs (VII)  
Jon Haag (VIII)  
Claes de Neergard (IX)  
Roger Johansson (X)  
Saeid Esmaeilzadeh (XI)  
Staffan Truvé (XII)  
Ulf Troedsson (BEC)  
Henrik Larson (Student Council)

### Climate–Resources–Energy

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Chair: Karl Bergman (II)  
Margareta Norell Bergendahl (I)  
Ingela Lindh (III)  
Charlotte Turner (IV)  
Per Storm (V)  
Lars G Josefsson (VI)  
Jonas Nycander (VII)  
Birgitta Sundblad (VIII)  
Per Kågeson (IX)  
Elisabeth Lindner (X)  
Hans Hentzell (XI)  
Vacant (XII)  
Charlotta Sund (BEC)  
Jonathan Edin (Student Council)

### People–Technology–Society

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Chair: Åsa Söderström Winberg (III)  
Ylva Fältholm (I)  
Ingrid Skogsmo (II)  
Gunnar Svedberg (IV)  
Jan Olof Carlsson (V)  
Peter Gärdenfors (VI)  
Sven Ove Hansson (VII)  
Elisabet Salander Björklund (VIII)  
Agneta Dreber (IX)  
Annika Åhnberg (X)  
Susanne Ås Sivborg (XI)  
Anette Novak (XII)  
Eva Listi (BEC)  
Adam Eriksson (Student Council)

## Student Council

---

Chair: Karin Östman,  
Luleå University of Technology  
Mette Barten, School of Business,  
Economics and Law,  
University of Gothenburg  
Lovisa Berglund, Chalmers University  
of Technology  
Hanna Brouillette, Mälardalen University  
Johan Bäckman Berg,  
Stockholm School of Economics  
Emelie Detert, Linköping University  
Jonathan Edin, Royal Institute of  
Technology, KTH  
Adam Eriksson, Uppsala University  
William Eulau, Uppsala University  
Maria Gunnarsson, Faculty of  
Engineering, Lund University  
Henrik Larson, Chalmers University of  
Technology  
Tamara Patrainika, Royal  
Institute of Technology  
Jakob Nygårds, Swedish University of  
Agricultural Sciences

## STEERING COMMITTEE IVA'S PROJECT

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### Digitalisation – Facilitator of Future Prosperity

---

Chair: Peter Larsson (XI),  
Swedish Association of Graduate  
Engineers  
Maria Gunnarsson (Student Council, LTH  
Ylva Hambreus Björling (XII), Internet  
Foundation  
Mai-Lis Hellenius (X), Professor,  
Karolinska University Hospital  
Bettina Kashefi, Confederation of  
Swedish Enterprise  
Cecilia Magnusson Sjöberg (XI),  
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Patrik Sundström, SKR  
Therese Svanström, TCO  
Ann Söderström, Västra Götaland Region  
Håkan Sörman (VI), Karolinska University

Hospital, Academedia  
Peyman Vahede, Ådalasskolan  
Åsa Zetterberg (XII)  
Swedish IT and Telecom Industries  
Project Manager: Linda Olsson, IVA

## The Future Knowledge Society

---

Chair: Magnus Berggren (XI),  
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Christine Sundberg Carendi,  
Svenska Science Centers  
William Eulau (Student Council)  
Emma Frans, Karolinska Institutet  
Christer Fuglesang (VII), Royal Institute of  
Technology (KTH)  
Susanne Norgren (V), Sandvik  
Anette Novak (XII), Swedish Media  
Council  
Carl-Johan Sundberg (XI),  
Karolinska Institutet  
Klas Wåhlberg (I), Association  
of Swedish Engineering Industries  
Carolina Wåhlby (VII), Uppsala  
University  
Project Manager: Maja Neiman, IVA

## Sustainable New Start for Sweden

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Luleå University of Technology  
John Hassler (IX), Stockholm  
University  
Magdalena Gerger (VI), Systembolaget  
Martin Lundstedt (I), Volvo Group  
Elisabeth Nilsson (V), Knowledge  
Foundation  
Jan Nygren (XI), PrimeKey  
Hans Stråberg (I), Atlas Copco  
Åke Svensson (I), Swedavia  
Tuula Teeri (IV), IVA  
Jacob Wallenberg (VI), Investor  
Project Manager: Karin Byman, IVA

## Sustainable Water Supply

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Chair: Tord Svedberg,  
IVL Swedish Environmental Research  
Institute  
Georgia Destouni,  
Stockholm University  
Lena Ek (VIII), Södra Cell  
John Hassler (IX), Stockholm  
University  
Kenneth M Persson (III),  
Sydvatten  
Björn Sjöberg, Swedish Agency for  
Marine and Water Management  
Gunnar Söderholm  
John Tumpene, Swedish Research  
Council Formas  
Johan Weigelt, IVA  
Project Manager: Staffan Eriksson, IVA

## Preparing for the Research Bill

---

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Ulrika Francke (III)  
Karin Markides (IV)  
Lars Hultman (V)  
Lars Engwall (VI)  
Hjalmar Brismar (VII)  
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Henrik Jordahl (IX)  
Maria Anvret (X)  
Peter Larsson (XI)  
Ulf Wahlberg (XII)  
Mohammed Homman (BEC)  
Patrik Gustafsson (Student Council)  
Project Manager: Martin Wikström, IVA

## IVA's Smart Industry – Jury

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Chair: Johan Weigelt, IVA  
Torbjörn Holmström (I), Senior Advisor  
Mikael Leksell, Siemens  
Björn Langbeck, Swedish Agency for  
Economic and Regional Growth  
Sara Mazur (XI), Knut and Alice  
Wallenberg Foundation

Hans Olofsson, Scania  
Mikael Rudin, ABB  
Robin Teigland (XII), Chalmers University of Technology  
Ulf Troedsson, Siemens  
Klas Wåhlberg (I), Association of Swedish Engineering Industries  
Project Manager: Johan Carlstedt, IVA

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## Mentor4Innovation

Tuula Teeri (IV), IVA  
Johan Weigelt, IVA  
Project Manager: Anders Gezelius, Strategize

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## NTA Digital

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Caroline Ankarcrona, Wallenberg Foundations  
Veronica Bjurulf, NTA School Development  
Ylva Engström, Stockholm University  
Agneta Gulz, Lund University  
Anders Ynnerman (XII), Linköping University  
Project Manager: Hampus Lindh, IVA

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## Private Sector R&D Investment

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Anna Hultin Stigenberg, RISE  
Peter Johansson, Association of Swedish Engineering Industries  
Per Klingbjer, Swedish Association of Professional Scientists  
Peter Larsson (XI), Swedish Association of Graduate Engineers  
Anders Lindberg (IX), JKL  
Göran Marklund, Vinnova  
Torgny Persson, Swedish Forest Industries Federation

Anna Sandström (VII), AstraZeneca  
Martin Wikström, IVA  
Project Manager: Hampus Lindh, IVA

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## Prince Daniel's Fellowship

Honorary Chair: H.R.H. Prince Daniel  
Chair: Marcus Wallenberg (VI), SEB  
Carl Bennet (XI), Carl Bennet AB  
Johan Skarborg, Academic Work  
Johan Weigelt, IVA  
Project Manager: Jakob Rudberg, IVA

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## Research2Business

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Anna Nilsson Ehle (VI), Vinnova  
Malin Persson (XI), Accuracy  
Saeid Esmaeilzadeh (XI), Serendipity Group  
Anna Holmberg, Chalmers School of Entrepreneurship and Sahlgremska School of Innovation and Entrepreneurship  
Mikolaj Norek, Forum for Innovation Management  
Tuula Teeri (IV), IVA  
Project Manager: Malin Mohr, IVA

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## Education Keeping Up with the Times

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Henrik Friman (BEC), IBM Business School  
Edward Jensinger, NTI gymnasiet Lund  
Henrik Jordahl (IX), Örebro University  
Anne-Marie Körling, educator, lecturer, author  
Elisabet Nihlfors, Uppsala University

Karin Röding (XI), formerly at UHR  
Kerstin Sahlin (VI), Uppsala University  
Pia Sandvik (XI), RISE  
Björn Åstrand, Umeå University  
Björn Öckert, IFAU  
Karin Östman (Student Council)  
Project Manager: Eva Lundgren, IVA

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Maria Strømme (VII), Uppsala University  
Thomas Eldered (X), Recipharm  
Pontus Braunerhjelm (XI), Entrepreneurship Forum  
Project Manager: Johan Carlstedt, IVA

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## Tekniksprånget and Jobbsprånget

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Birgitta Bergvall-Kåreborn, Luleå University of Technology  
Helen Dannetun (XI), Linköping University  
Johan Forssell (IX), Investor  
Staffan Isling, SKL  
Tobias Krantz, Government Offices of Sweden  
Peter Larsson (XI), Swedish Association of Graduate Engineers  
Anders Lindberg (IX), JKL  
Camilla Modéer (XI), IVA  
Tuula Teeri (IV), IVA  
Helena Stjernholm (IX), Industrivärden  
Operative Head Jobbsprånget: Alexandra Ridderstad, IVA  
Operative Head Tekniksprånget: Helena Gyurulf, IVA



# Distinctions, scholarships and awards



**24/10 2020:** The digital Annual General Meeting was live-streamed from the Wallenberg Auditorium. From the left: **Carl-Henric Svanberg**, Chair of IVA; **Tuula Teeri**, President of IVA; **Ibrahim Baylan**, Minister for Enterprise, Energy and Communications; **Astrid Söderbergh Widding**, Vice-Chancellor, Stockholm University; **Jan Westberg**, IVA.



## Medal Committee

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Chair: Camilla Modéer (XI)  
Ann-Marie Eklund Löwinder (XII)  
Jens Nielsen (X)  
Aina Nilsson Ström (I)  
Margareta Norell Bergendahl (I)  
Pär Weihed (V)  
Örjan Wikforss (III)  
Gabriel Urwitz (IX)

## Gold Medallists

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### Jury statement

Dr h.c. Marcus Wallenberg was awarded the Academy's Great Gold Medal for his extraordinary contributions to Swedish industry, entrepreneurship, scientific development and Swedish innovation, integrated with his strong commitment to social issues. He has, in a strategic

way, driven the development of global relations and cooperation between universities and industry.

Åsa Bergman MSc Eng was awarded the Academy's Gold Metal for her significant capacity to lead the specialists she works with in the areas of architecture and technology, and for developing a consulting company that is a leader in the built environment in Europe. With her strong drive she has built an inclusive corporate culture distinguished by gender equality and diversity at all levels, based on her conviction that this is how to create sustainable societal development.

Professor Fredrik Bäckhed was awarded the Academy's Gold Medal for his outstanding microbiological research into the connection between

the bacterial flora in the intestines and human metabolism and health, combined with the development of technology to produce intestinal bacteria and new treatment methods, and for actively communicating this knowledge to the public.

Professor Kristina Edström was awarded the Academy's Gold Medal for her outstanding battery research which has brought the world closer to a solution for energy storage – an area of great importance for society. Under her leadership, development of the next generation of battery technology for applications in the automotive industry is world-leading. Her ability to inspire and guide young people enables her to successfully build strong research teams.



Åsa Bergman



Fredrik Bäckhed



Marcus Wallenberg



Kristina Edström

## **IVA's award for scientific journalism – the Hans Bergström Award**

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Journalist and author Ingrid Carlberg has been awarded IVA's award for scientific journalism for her biography of Alfred Nobel.

### **Jury statement**

The biography *"Nobel – Den gåtfulle Alfred, hans värld och hans pris"* (*"Nobel – The Enigmatic Alfred"*) is an outstanding presentation of Alfred Nobel. Mobilising all of her expertise from many years as an investigative and narrative journalist, Ingrid Carlberg has written the ultimate biography of the engineer, the innovator, the entrepreneur and the philanthropist, Alfred Nobel. By persistently sifting through archives in many countries, she uncovered an astonishing number of new facts about the most famous Swede in the world. The motives behind Nobel's donation are significantly more clear after reading Carlberg's book. Carlberg has skilfully described the era of breakthroughs in science and technology that Alfred Nobel lived in and contributed to. Her narrative gives the reader a real feeling for the courage of the entrepreneur/innovator as he navigated resistance and setbacks 150 years ago.

## **Smart industry**

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### **Jury statement**

Climeon, a Swedish energy technology product company, is the winner of the Smart Industry 2020 competition for making significant sustainability gains while utilising the possibilities of digitalisation to develop both products and enterprise. The company, which converts low-temperature waste heat and geothermal heat into green electricity, has grown in just a few years from a small start-up with a prototype and a few employees to a scale-up with over 90 employees in five countries, multiple

commercial installations and sales of SEK 100 million. Thanks to thoughtful customer adaptations, smart use of data and a flexible business model that combines tradition with innovation, Climeon meets all of the jury's criteria and shows great potential for continued positive development.

### **Honourable mention**

OP Teknik  
ZeroPoint Technology

## **IVA-affiliated awards and scholarships**

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### **Hans Werthén Foundation**

In 2020 SEK 1,400,000 was shared between 14 scholarship recipients. The purpose of the scholarships is to give young graduates an opportunity for development in another country where they can gain new knowledge and experience and apply these in industry or academia in Sweden. The Foundation was established in 1990 in honour of Hans Werthén for his lifework as an engineer and business leader.

### **King Carl XVI Gustaf 50th Anniversary Fund**

The purpose of the Fund is to promote research, technical development and enterprise that contribute to the sustainable use of natural resources and the preservation of biodiversity. In 2020 the Fund distributed five scholarships of SEK 100,000 each and eight of SEK 85,000. The candidates are nominated by IVA Fellows or individuals active in research and enterprise. The recipients are announced on H.M. The King's birthday and the scholarships are presented at a reception at the Royal Palace.

### **The Thulin Medal**

The Thulin Medal is the highest distinction within the aerospace industry

in Sweden. The Swedish Society of Aeronautics and Astronautics and IVA have selected winners of the medal every year since 1944. It is awarded to commemorate aircraft pioneer Enoch Thulin. The Thulin Medals in gold, silver and bronze are awarded to individuals who have made important contributions to the development of aerospace engineering in Sweden.

In 2020 the Thulin Medal in gold went to Christer Fuglesang for his extraordinary contributions to Swedish aerospace engineering and in silver to Lars Ulander for his critical achievements in the development of spaceborne radar systems technology and remote sensing.

### **Chester Carlson Research Award**

Professor Peter Hedström, Royal Institute of Technology (KTH) was awarded the Chester Carlson Research Award of SEK 100,000 for his research combining his significant expertise in metal materials with artificial intelligence. The award is administered by the Xerox Foundation for Information Science Research, managed by IVA, and has been awarded since 1985.


The jury statement is as follows: The Xerox Foundation for Information Science Research awarded the Chester Carlson Research Award 2020 to Professor Peter Hedström for the way in which, in the true spirit of Chester Carlson, he has pursued the development of special steels. He has searched among various technologies and digitalised often hard-to-access documentation. He has also combined physical experiments with modern data science methods. He has shown the possibilities of data-driven design of special steels with new and desirable properties. Peter Hedström has also shown that it is possible to significantly shorten the time it takes to develop special steels.



2/9 2020: Author Ingrid Carlberg received the Hans Bergström Award for her biography of Alfred Nobel.



# Publications, responses and financial



27/8 2020: Release of the report "Focus on Teachers in the Swedish School System". Minister for Education Anna Ekström participated virtually. From the left: Eva Lundgren, IVA; Johanna Ringarp, Stockholm University; Carina Byström, Bäckahagens skola; Jan Westberg, IVA.

## RESPONSES TO REPORTS REFERRED TO IVA FOR CONSIDERATION

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In 2020 IVA issued a statement or expressed an opinion on the following proposals and reports for consideration:

Statement on Vinnova's report: *Uppdrag att föreslå organisation för en nationell teknikparksfunktion i anslutning till forskningsanläggningarna ESS och MAX IV.*

Statement on: *En utvecklad vattenförvaltning* (SOU 2019:66)

Statement on memorandum: *Uppföljande underlag för inhämtning av synpunkter rörande genomförandet av artikel 17 i EU:s nya upphovsrättsdirektiv.*

Statement on memorandum: *Ändringar i högskolelagen för att främja den akademiska friheten och tydliggöra lärosätenas roll för det livslånga lärandet.*

*Utvidgade regler om lättnad i beskattning av personaloptioner i vissa fall* Fi2020/04527.

## PUBLICATIONS

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### IVA-M series

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IVA-M 509: Resource-Effective Transport and Mobility, a report from the IVA Resource Effectiveness and the Circular Economy (ReCE) project, 2020, 72 pages.

IVA-M 510: Resource-Effective Plastics Flows, a report from the IVA Resource Effectiveness and the Circular Economy (ReCE) project, 2020, 60 pages.

IVA-M 511: Resource-Effective Textiles in Sweden, a report from the IVA Resource Effectiveness and the Circular Economy (ReCE) project, 2020, 72 pages.

IVA-M 512: Resource-Effective Facilities in Sweden, a report from the IVA Resource Effectiveness and the Circular Economy (ReCE) project, 2020, 60 pages.

IVA-M 513: Resource-Effective Food Industry in Sweden, a report from the IVA Resource Effectiveness and the Circular Economy (ReCE) project, 2020, 72 pages.

IVA-M 514: How Sweden will Reach the Climate Goals, a synthesis report from the IVA Climate Crossroads project, 2020, 60 pages.

IVA-M 515: Resource Effectiveness – Circular Economy – Subproject: Mobility, 2020, 72 pages.

IVA-M 516: Resource-Effective and Circular Plastics Flows – the role of plastic in a circular society, 2020, 62 pages

IVA-M 517: Textiles – From Waste to Resource by 2030, 2020, 72 Pages.

IVA-M 518: Resource effectiveness through shared space in Sweden – Shared space as the norm, 2020, 60 pages.

IVA-M 519: A Resource-Effective Food Sector in Sweden – measuring how much food is lost or goes to waste, 2020, 72 pages.

IVA-M 520: Resource Effectiveness and the Circular Economy, a synthesis report from the IVA Resource Effectiveness and the Circular Economy (ReCE) project, 2020, 60 pages.

IVA-M 521: Resource Effectiveness and the Circular Economy – synthesis report, 2020, 60 pages.

IVA-M 522: Sustainable New Start for Sweden, 2020, 52 pages.

IVA-M 523: Focus on Teachers in the Swedish School System, 2020, 148 pages.

IVA-M 524: Commemorative Booklet, A Tribute to the Memory of (Elise) Lise Meitner, 2020, 44 pages.

## IVA-R series

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IVA-R 510: Textile sustainability from a consumer perspective, independent appendix to the IVA report Resource-Effective Textiles in Sweden – Textiles from Waste to Resource, 2020, 26 pages.

IVA-R 511: Textile sustainability from a consumer perspective, separate appendix to the IVA report Resource-Effective Textiles in Sweden – Textiles from Waste to Resource, 2020, 26 page.

IVA-R 512: R&D Barometer 2020 – Private Sector R&D Investment, 2020, 24 pages.

## OMBUDSMAN

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Erik Nymansson, Justice of the Supreme Administrative Court

## AUDITORS

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Anki Bystedt, appointed by the Government  
Karl-Olof Hammarkvist (IX)  
Peter Ekberg, Authorised Public Accountant

## INVESTMENT COMMITTEE

---

Lars Heikensten (IX), Chair  
Hans Dalborg (IX)  
Irma Rosenberg (IX)

Tuula Teeri (IV), President of IVA  
Katarina Arneving, Chief Financial Officer of IVA

## PROJECT FUNDING

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In 2020 IVA used funding/grants from the following organisations to carry out its projects:

AB Volvo  
ABB  
Almi  
AstraZeneca  
Chalmers University of Technology  
Clas Ohlson  
Energiföretagen  
Ericsson  
Erling Persson Family Foundation  
Swedish Research Council Formas  
Fortum  
Göteborgs parkerings AB  
Handelsbanken  
Swedish Agency for Marine and Water Management  
Holmen  
IF Metall  
IKEM  
J. Gust. Richert Foundation  
Jernkontoret  
The Knowledge Foundation  
Knut and Alice Wallenberg Foundation  
LKAB  
Marianne and Marcus Wallenberg Foundation  
Mistra  
Swedish Civil Contingencies Agency (MSB)  
Swedish Association of Professional Scientists  
Nordea  
Swedish Patent and Registration Office  
RISE  
Scania  
SEB  
Siemens  
Swedish Forest Industries Federation  
Swedish National Agency for Education

Swedish Foundation for Strategic Research  
Marcus and Amalia Wallenberg Memorial Foundation  
Sven Tyrén Foundation  
Confederation of Swedish Enterprise  
Swedish Water  
Swedish Association of Graduate Engineers  
Swedbank  
Södra Cell  
Södra Skogsägarna  
Association of Swedish Engineering Industries  
Tekniska verken Linköping  
Swedish Agency for Economic and Regional Growth  
Vasakronan  
Vattenfall  
Vinnova  
ÅForsk

In 2020 IVA also used supplementary funds from the Academy's Jubilee Fund 2019 (see 2019 Annual Report).



# NOBEL PRIZE FOR GENE SCISSORS

IVA Fellow **Emmanuelle Charpentier** received the 2020 Nobel Prize in Chemistry for the discovery of the sharpest tool in genetic engineering: the CRISPR/Cas9 gene scissors. Charpentier published the discovery in 2011 when she was a guest lecturer at Umeå University. The same year she partnered with biochemist Jennifer Doudna with whom she shared the Nobel Prize. Together they managed to get the gene scissors to work in a test tube and simplified the molecular components to make the tool easier to use. Since then the use of the gene scissors has exploded. The tool has contributed to numerous scientific discoveries, and plant researchers have been able to produce crops that withstand mould, pests and draught. Clinical trials are under way for therapies to treat diseases such as cancer. Emmanuelle Charpentier became an international Fellow in 2017. She has served as Director of the Max Planck Unit for the Science of Pathogens in Berlin since 2018.



# Employees



## Management team

---

Tuula Teeri, President  
Johan Weigelt, Secretary to the Academy  
Executive Vice President  
Katarina Arneving, Chief Financial Officer  
Lars Fog, Property Manager  
Camilla Koebe, Chief Communications Officer  
Monica Krutmeijer, Assistant to the President

## Development Office

---

Katarina Mellström

## Academy and Projects

---

Johan Weigelt, Secretary to the Academy  
Executive Vice President  
Ingrid Jansson, Academy Coordinator  
Karin Byman, Focus Area Director  
Johan Carlstedt, Focus Area Director  
Staffan Eriksson, Focus Area Director  
Martin Wikström, Focus Area Director  
Alexandra Ridderstad, Operative Head, Jobbsprånget  
Helena Gyrulf, Operative Head, Tekniksprånget

## International Affairs

---

Elin Elliot, Head of International Affairs  
Ellen Frostell, International Coordinator

## Temaenheter och projekt

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### World-Class Knowledge

Martin Wikström, Focus Area Director  
Hampus Lindh  
Eva Lundgren  
Helena Mehra  
Maja Neiman  
Alicia Parvin

## Industry and Enterprise of the Future

Johan Carlstedt, Focus Area Director  
Peter Mandahl, Consultant  
Malin Mohr  
Jakob Rudberg  
Maria Saker  
Monica Sannerblom  
Gustaf Wahlström  
Sofia Yngwe

### Climate-Resources-Energy

Karin Byman, Focus Area Director  
Caroline Linden  
Anna Lindberg

### People-Technology-Society

Staffan Eriksson,  
Focus Area Director  
Per Hjertén  
Eva Lagerblad  
Linda Olsson  
Jan Westberg

### Jobbsprånget

Alexandra Ridderstad, Operative Head  
Eva Glaumann  
Kristian Andersson  
Armin Ahmedzadeh  
Per Edman  
Kajsa Karlsson  
Laras Pinjii  
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### Tekniksprånget

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Linus Brandin  
Louise Forsberg  
Helena Lind  
Mattias Lindberg  
Saba Mosazghi  
Kristian Nilsson  
Sara Rhodes  
Olle Wallin  
Linnea Werlid

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Anna Lindberg  
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Johanna Theander  
Sofia Yngwe  
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Lena Anderson  
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Helena Brejke  
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## Property

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Lennart Ohlsson

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Ann Clauson  
Anna-Karin Friskopps  
Linda Hillborg  
Robert Komakech  
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ISSN: 1100-5645  
ISBN: 978-91-89181-15-1

Project Management: Lars Nilsson, Anna-Karin Friskopps  
Layout: Pelle Isaksson  
Printed by: E0 Grafiska

Photos: Erik Cronberg, Kristian Pohl/Regeringskansliet  
& Bernhard Ludewig



For 100 years the Royal Swedish Academy of Engineering Sciences (IVA) has been a meetingplace for Sweden's future. IVA builds bridges between the business community, the public sector, academia and the political sphere. We bring together the expertise and experience of more than 1,200 Academy members and 250 companies.



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