

VINNOVA
Sweden's Innovation Agency



Swedish
Research
Council



Swedish Agency
for Economic and
Regional Growth

big
science
sweden

Conference starts at 08.30

BIG SCIENCE SWEDEN

JOIN US IN BUILDING
THE BIG SCIENCE ECOSYSTEM

CONFERENCE

2020

VIRTUAL CONFERENCE
NOVEMBER 24, 2020

Anna Hall

Director Big Science Sweden

Particle Accelerators



CERN, ESS, MAX IV, ESRF, ILL, ISIS, XFEL, DESY, FAIR

Fusion

ITER
DONES



Space

ESO, SKA, EISCAT



Funded by:



Big Science Sweden is led by a consortium:



Big Science Sweden - Mission

- **Support** Swedish industry, institutes and universities to contribute to building up **excellent big science facilities**.
- Focus in **high-tech contributions** that drive research, innovation, international collaboration and generate good business for Sweden.
- Create value for Swedish industry and society by **transferring new knowledge, technology and competence** to diverse areas of application.

Big Business

Golden eggs – Competence and
Knowledge Transfer

Research Facilities which Sweden are investing in

MAX IV

CERN
EISCAT
ITER
ESO

ESS

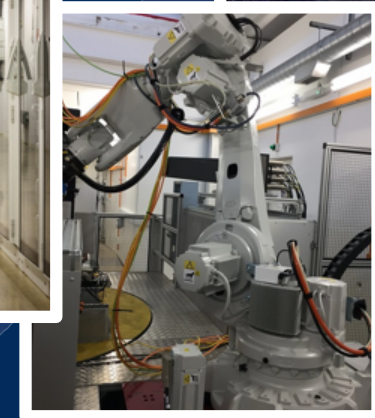
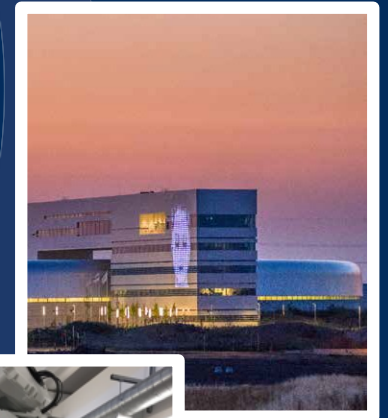
XFEL
ILL
DESY
SKA

DESY
FAIR
ESRF

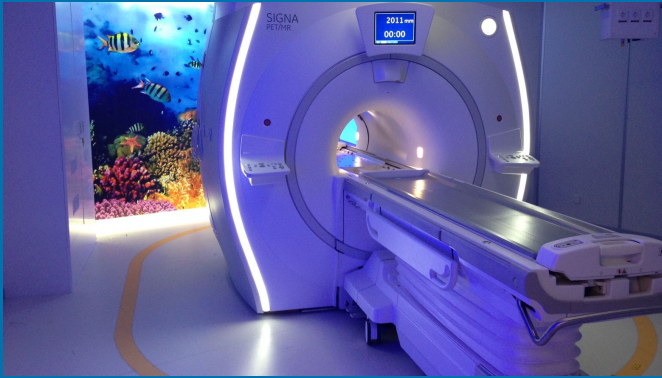


A range of competences needed

- Accelerator technology
- Construction and Civil Engineering
- Coating, Joining and Casting
- Electronics, RF and Microwave Technologies
- Magnets
- Materials
- Mechanical Engineering
- Optics, Sensors and Diagnostics
- Power Supply
- 3D printing
- Big Data
- AI/ML
- Data handling & Visualization
- Remote Handling
- Cryogenics
- Robotics
- Software and Control Technologies
- Utilities and Instrumentation
- Vacuum and Low Temperature Technologies
- Others



Big Science – Driving innovation and cutting-edge technology



Particle accelerators • Cancer treatment



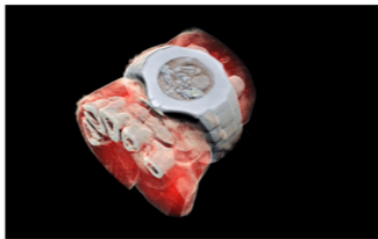
Particle accelerators • Mobility



Particle accelerators /Fusion • Autonomous driving

First 3D colour X-ray of a human
using CERN technology

Authored by Romain Muller
| Last updated on 20 July, 2018



Particle accelerators
• Medtech



Particle accelerators • AI • Autonomous Factories



Particle accelerators • AI • Smart Cities



Particle accelerators • Material
innovation & Advanced manufacturing

Programme - Morning

08:30

Welcome to Big Science Sweden Conference 2020
Anna Hall, Director Big Science Sweden

08:45

Introducing Sweden as a Big Science player, Pia
Kinhult, Head of Host States Relations at ESS and
Anna Hall

09:00

Creating collaboration and business in the Big Science
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Coffee Break and Interaction

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Take part of CERN Knowledge transfer
ecosystem, developing the innovation culture in a big
science ecosystem – why, how and success factors

11:45

Conclusions, Anna Hall Director Big Science Sweden

12:00

Lunch Break

Programme - Afternoon

13:00

Breakout session - Learn more about challenges and needs of research facilities in different technology fields.

1. AI, Control Systems & Data Acquisition, Big Data
2. Diagnostics Part 1
3. Material and advanced manufacturing
4. Remote handling & robotics

13:45 Break

14:00

Breakout session - Learn more about challenges and needs of research facilities in different technology fields.

5. Diagnostics Part 2
6. Drones applications
7. Electronics and RF system
8. Opportunities for Swedish industry with Knowledge transfer from Big Science
9. Vacuum, Cryogenics & Magnets

14:45

Coffee Break

15:15

1-1-matchmaking meetings.

A matchmaking event is a quick and easy way to meet potential cooperation partners in face-2-face talks.

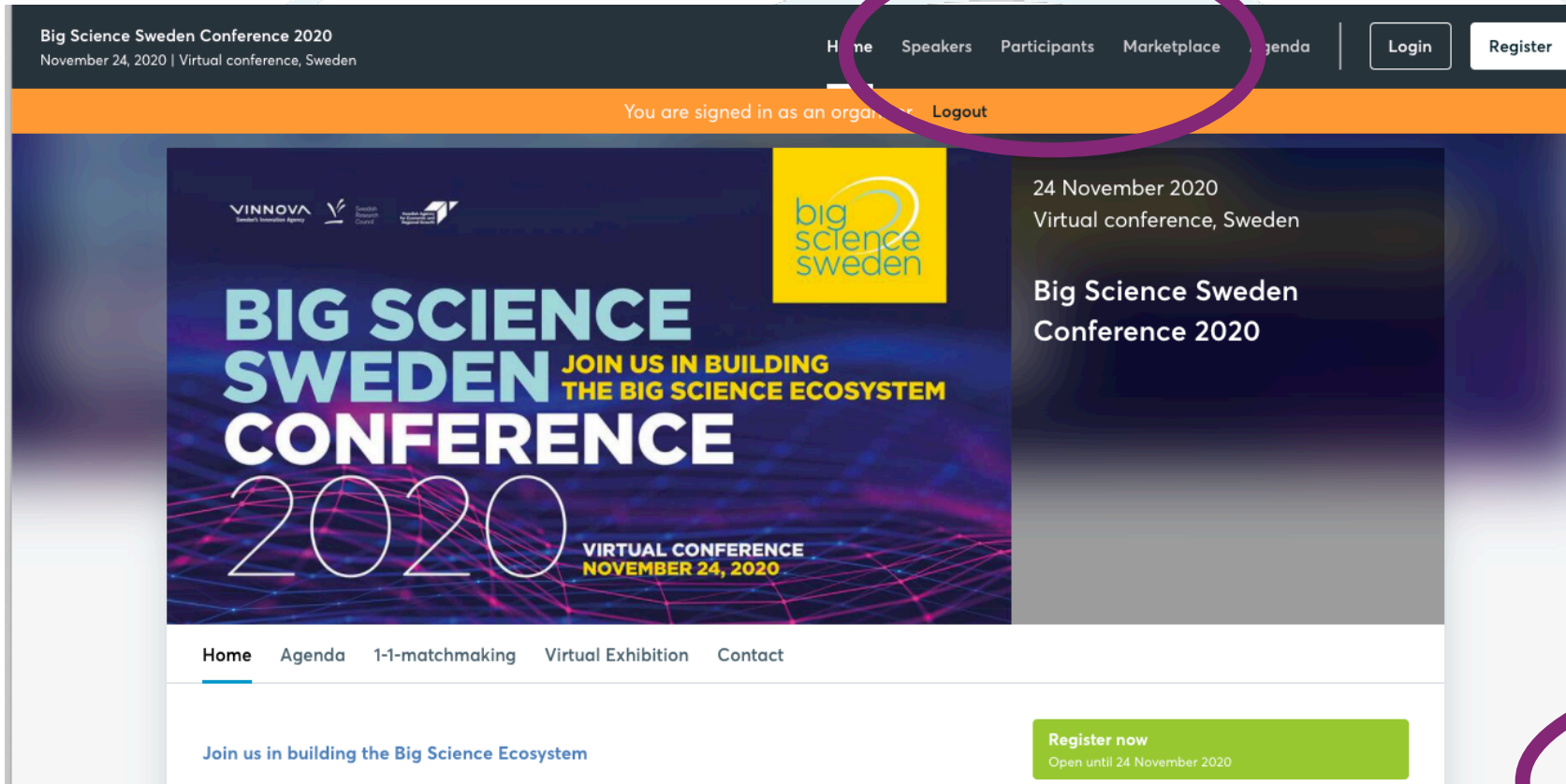
17:00

End of conference

Take the opportunity to book your one-to-one meeting

Find the participant at the venue – Digital conference Arena – click on "Book a meeting".

Virtual venue for Big Science Sweden Conference 2020



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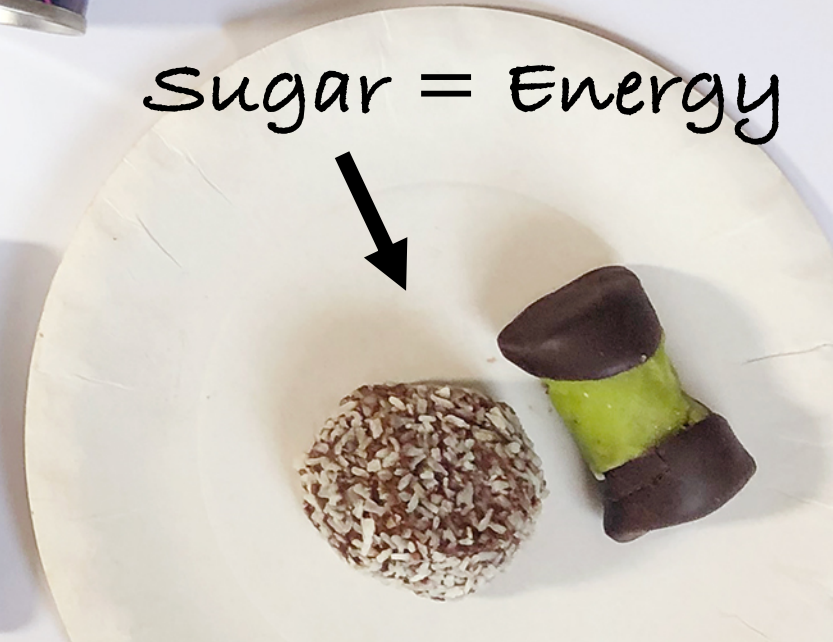
Coffee = Energy



Nuts = Energy



Sugar = Energy



Powerbank = Energy (For your phone)



The Swedish FIKA

Punsch-roll (Swedish: **dammsugare**)

is a Swedish small cylindrical pastry covered with green marzipan with the ends dipped in chocolate, with an interior consisting of a mix of crushed biscuits, butter, and cocoa, flavoured with punsch liqueur.

This pastry is often called dammsugare ("vacuum cleaner"), referring not only to its appearance, but also to the supposed practice of the pastry baker collecting crumbs from yesterday's cookies for filling.

Other names are arraksrulle (as arrak is an ingredient in punsch) and "150-ohmer" (because a brown-green-brown colour sequence on a resistor denotes a resistance value of 150Ω .)





ORGANIZATION TYPES

- ☐ Company (SME <249) (76)
- ☐ University & Institute (53)
- ☐ Big Science facility (50)
- ☐ Company (≥ 250) (27)
- ☐ Association/Agency (20)
- ☐ Authority/Government (7)

10 Big Science Organizations
represented:

ESS, Max IV, CERN, ITER, F4E, XFEL,
ESRF, FAIR, ESO, SKA

Join us in building the Big Science Ecosystem

Go to www.menti.com and use the code 38 73 37 8

 Mentimeter

With what can Sweden contribute in building the Big Science Ecosystem in Europe? Please answer with Key-words.





Pia Kinhult

Head of Host States Relations at ESS

A European research centre for the world



**SCIENCE
VILLAGE**
SCANDINAVIA





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Conclusions, Anna Hall Director Big Science Sweden

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Lunch Break

Jerome Pierlot

Head of Procurement for Accelerator and Technology Section at CERN

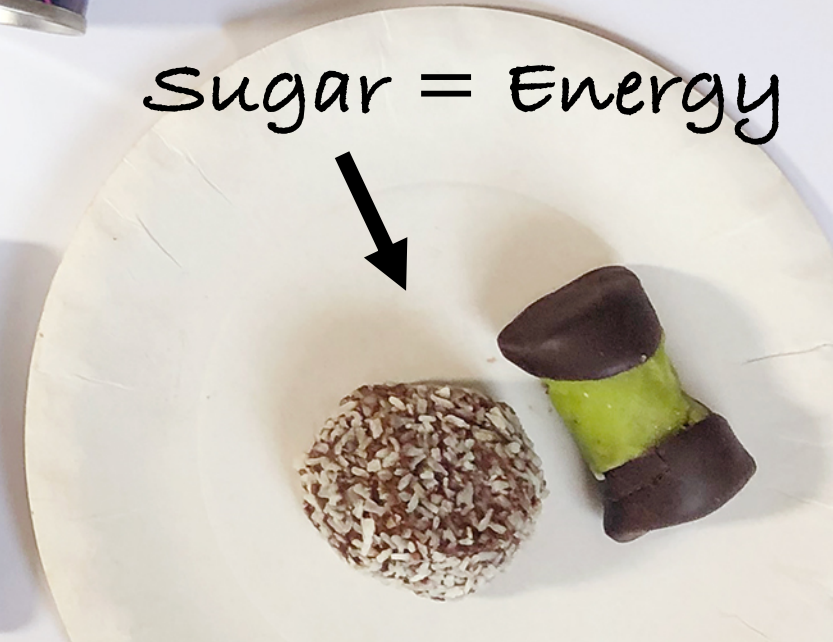
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Book 1-to-1 meetings

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Break - see you at 09.45

#bigsciencesweden

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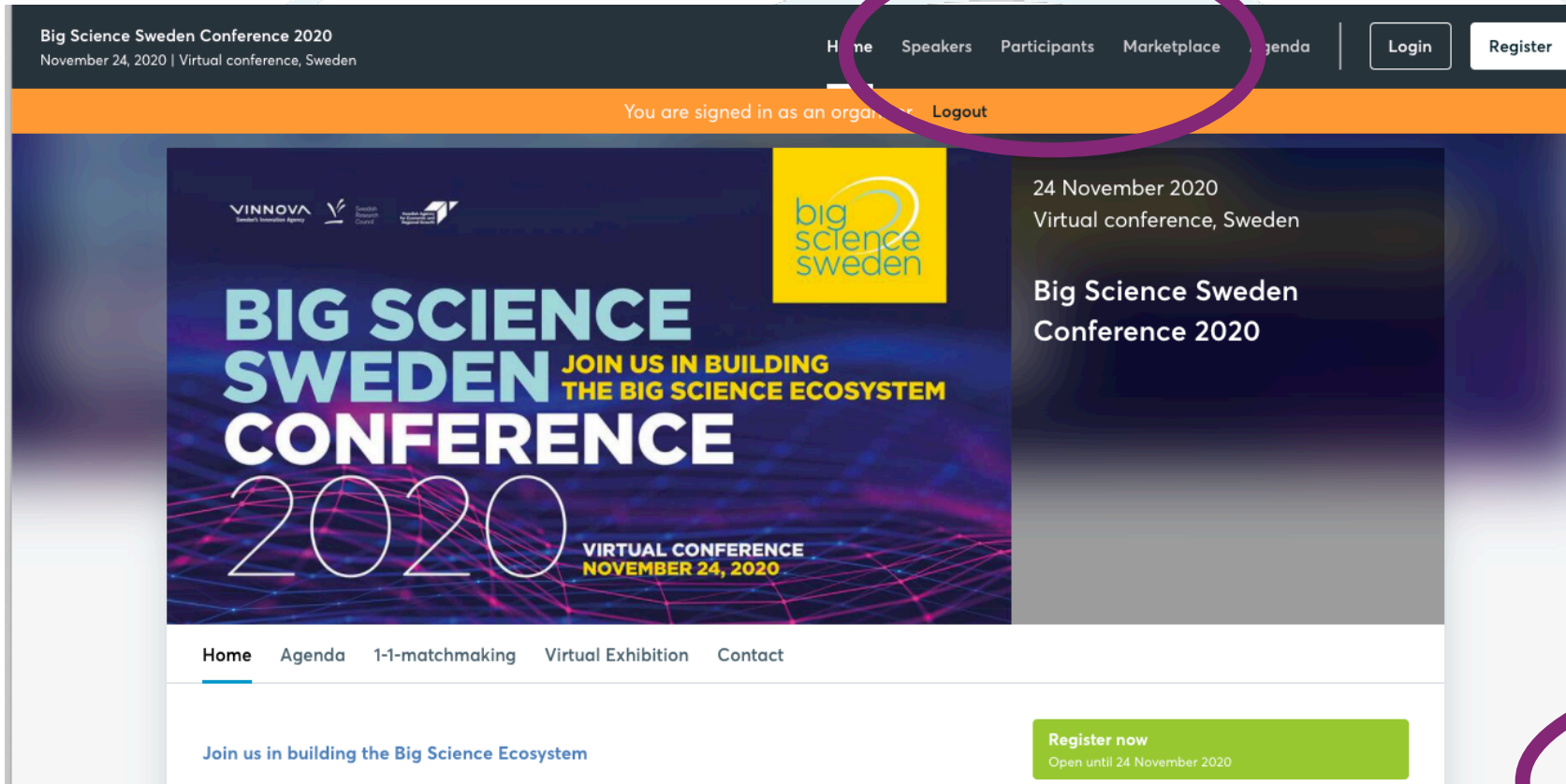
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Lunch Break

Ingrid Milanese

Head of Procurement & Contracts Administration Division at ESRF

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#bigsciencesweden



Mehdi Daval

Market Intelligence group at F4E

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Conclusions - Anna Hall

Director Big Science Sweden

AWARD

The Big Science Influencers

- ResearchFacilities
- Industry
- Academia
- Newcomer

BIG SCIENCE SWEDEN 2020 CONFERENCE AWARD

This is an award for an individual showing particular engagement in helping to build Sweden as a Big Science nation and in driving Big Science Technology.

Big Science Sweden Influencer: Research Facility

By sharing his in-depth knowledge with pedagogical skill, this person inspires curiosity about the Big Science world. He is always prepared to collaborate with the Big Science ecosystem by giving presentations, educating, and connecting people. Jérôme Pierlot has been a key figure in developing long-term relationships between Swedish industry, academia, and CERN.

Thank you, Jérôme!

Jérôme Pierlot

CERN

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Big Science Sweden Influencer: Industry

With expertise, integrity and a focus on quality and sustainable business, this person is not only an important influencer, but also a leader and a doer, in the Big Science ecosystem. He and his team have a long-term business partnership with ESS, they have taken on important contracts for ESO, and are now looking to contribute their skills and expertise to other facilities. We hope that more Swedish companies will follow Carl Johan Fagerström's lead in exploring Big Science technology and business. Thank you, Carl Johan!

Carl Johan Fagerström

Fagerström Industrikonsult AB

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Big Science Sweden Influencer: University

With enthusiasm and determination, this person plays a key role in developing Big Science in Sweden. He and his team have contributed important parts of the accelerator control system for ESS, and he has shown great flexibility and readiness to help solve the problems of others – which is really needed when building complex facilities. With pedagogical skill and patience, Anders Johansson shares his expertise, and has become a champion for EPICS and MicroTCA in Sweden, enabling others in both academia and industry to contribute. Please continue this fine work – thank you, Anders!

Anders J Johansson

Lund University

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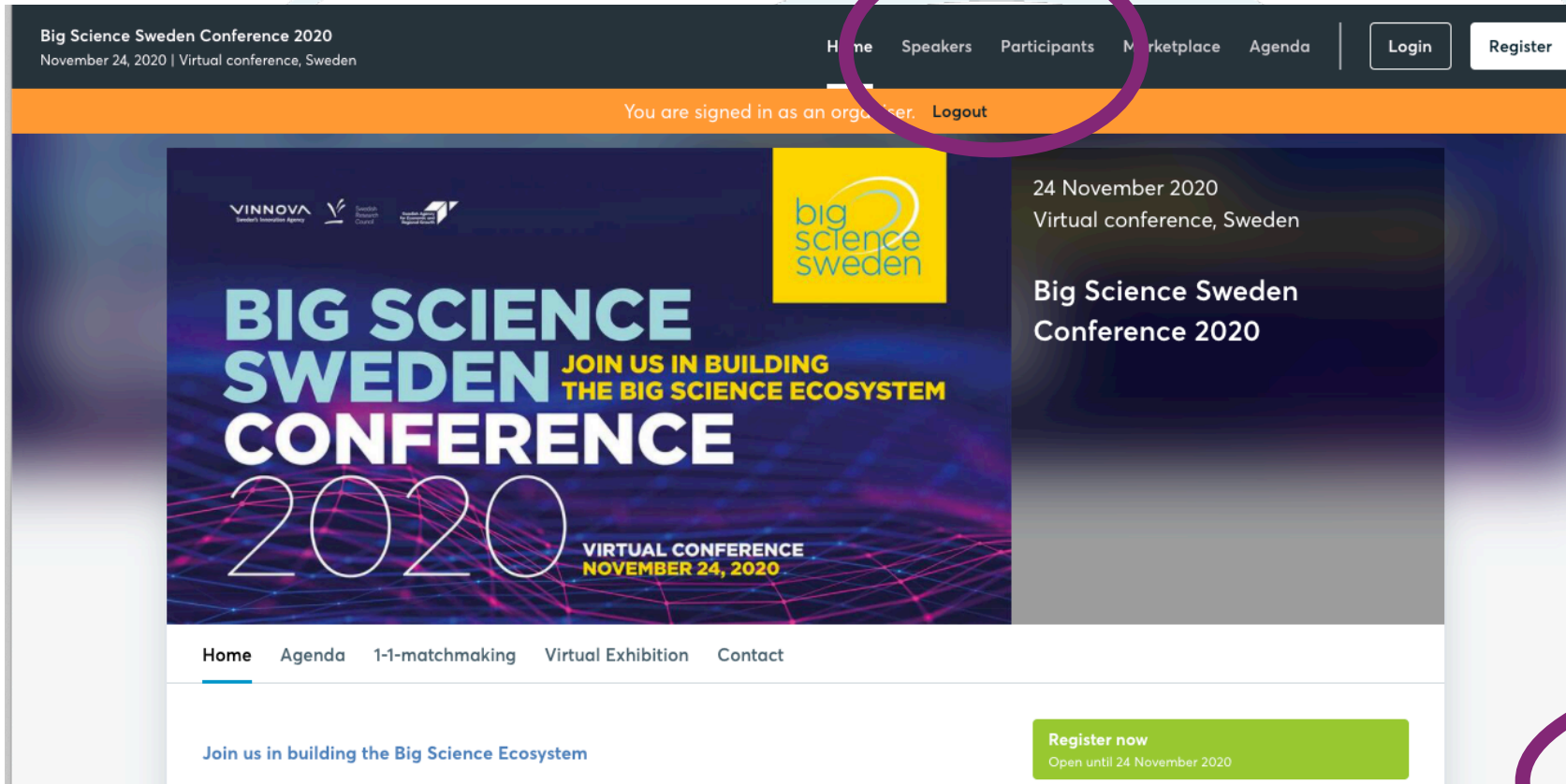
Big Science Sweden Influencer – Newcomer

Operating in a company with the courage to acknowledge Big Science as a new market segment, this person has showed great professionalism, enthusiasm, and a determined business focus. She is always ready to take on new challenges and is never afraid of new areas and technical complexity. Her company already supplies some of the research facilities, and is always looking to involve other Småland companies in the local ecosystem of manufacturing SMEs. We hope that more Swedish companies will follow Sofia Davidsson's lead in exploring Big Science Business. Thank you, Sofia!

Sofia Davidsson

Qtech Group AB

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TEST YOUR CAMERA AND MICROPHONE for one-to-one meetings

Lunch - see you at 13.00

Enter your Breakout session

through the Agenda at the digital
venue site

#bigsciencesweden

Do not forget to log into the
Digital Venue site



Henrik Carling

Head of division Integrated Control Systems at European Spallation Source