World Sustainable Energy Days 2022

5 - 8 April 2022 Wels, Austria

HYBRID EVENT

2022:

Energy transition – full speed ahead!

Conferences:

- Energy Efficiency Policy Conference
- European Pellet Conference
- Young Energy Researchers Conference
- Industrial Energy Efficiency Conference
- Innovation Workshops
- Smart E-Mobility Conference







World Sustainable Energy Days 2022

NEW in 2022

- Fit for 55
- Speeding up the energy transtition
- · The new EU directives
- Meet2Talk

Programme overview



European Pellet Conference

The world's largest annual conference on pellets with a focus on technologies, markets, policies and financing



European Energy Policy Conference

Fit for 55 • New EU Directives • EE Markets • Energy Efficiency Watch



Industrial Energy Efficiency Conference

More decarbonisation, better business • Energy flexibility • Innovation



Innovation Workshops

New research results on buildings and technologies



Smart E-Mobility Conference

Mass rollout: Infrastructure • Technology trends • Business models



Young Energy Researchers Conference

Presenting the work of young energy researchers • Best Young Energy Researcher Awards



Poster Presentation

Displaying energy projects, products and EU project results to international experts



Tradeshow

Major tradeshow (Energiesparmesse-Webuild) • Austrian companies present product innovations



With the World Sustainable Energy Days, Upper Austria is the meeting place for the energy transition. Europe has set itself the ambitious target of becoming the first climate-neutral continent. We present and discuss solutions to practically implement the Green Deal. With highly-efficient and renewable energy systems, we will achieve economic growth, create new jobs and make the energy transition happen!

Markus Achleitner, Regional Minister for Economy and Energy, Upper Austria

Timetable	On-site Event	Online Event	Tuesday 5 April	Wednesday 6 April	Thursday 7 April	Friday 8 April
European Pellet Conference	1	1				
European Energy Efficiency Conference	1	1				
Energy Efficiency Policy Conference	1	1				
Industrial Energy Efficiency Conference	1	1				
Smart E-Mobility Conference	1	1				
Young Energy Researchers Conference	1	1				
Innovation Workshops		1				
Poster Presentation	1					
Tradeshow	/					

WHAT are the World Sustainable Energy Days (WSED)?

The new "Fit for 55" package aims to put the EU on track towards climate neutrality. Energy accounts for 75 % of GHG emissions. Speeding up the energy efficiency is critical!

In 4 days, the leading conference on the energy transition and climate neutrality offers delegates 6 dedicated conferences, including the European Energy Efficiency Policy Conference, the European Pellet Conference, the Industrial Energy Efficiency Conference and the Smart E-Mobility Conference.

WHO attends the event?

Over 650 experts from more than 60 countries each year!

- A wide range of business actors engaged in the energy transition: technology and equipment companies, energy companies, service providers, planners, developers, financing sector etc.
- the sustainable energy **research community**
- representatives from public bodies (e.g. EU institutions, national, regional and local governments, energy agencies)

WHEN does it take place?

5 - 8 April 2022

HOW to join?

Mark your calendar and register today! (www.wsed.at)

This "special edition" of our annual conference will be held as a hybrid event: You can participate onsite (following COVID rules in place at the time of the event) or connect digitally from anywhere in the world. Registered participants will receive detailed information prior to the conference.

WHERE does it happen?

In Wels/Austria. The region of Upper Austria is an ideal location for this conference: Through significant increases in energy efficiency and renewable energy, GHG emissions from buildings were reduced by 39 % in 10 years. 60 % of all space heating and 31 % of the primary energy in Upper Austria already come from renewables.



European **Pellet Conference** 2022

6 April 2022



6 April | 09.00

Strategy Session: Fuelling the energy transition with pellets!

We show how firing up pellet markets can boost the energy transition and how to position pellets as an important climate solution.

- How can bioenergy profit from the "Fit for 55" package? Johannes Baur, European Commission, DG Energy
- Update on European pellet markets Irene Di Padua, Bioenergy Europe
- Best Young Biomass Researcher Award
- Bioenergy as a job engine Rabia Ferroukhi, International Renewable Energy Agency (IRENA)
- Land use for bioenergy: synergies and trade-offs Floortje van der Hilst, Utrecht University, The Netherlands



6 April | 11.30

Pellet Leadership Forum

Leading experts share their views and insights on burning topics about the future of pellets and the development of pellet markets.

- Thomas Meth, Enviva, USA
- Stefan Ortner, ÖkoFEN, Austria
- Michael Hjorth Christensen, CM Biomass, Denmark
- Christiane Egger, OÖ Energiesparverband, Austria

6 April | 14.15

Pellet Innovation Factory

In this session, we showcase innovations in pellet technologies, projects and solutions across the bioenergy value chain.

Pellet innovations from Upper Austria applied worldwide

- Wolfgang Aichinger, Hargassner, Austria
- Werner Emhofer, Fröling, Austria
- Gottfried Baumann-Leitner, Windhager, Austria

Dynamising the US market: Tax credits for pellet boilers

Emanuel Wagner, Biomass Thermal Energy Council (BTEC), USA

- Branding: a key success factor for consumer trust
 Rainer Elste, Steinbeis-Beratungszentrum Vertriebsund Marketinginstitut, Germany
- A renovation campaign for biomass heat
 Francisco Puente Salve, Escan Energy Consulting,
 Spain

A new test method for biomass boilers: development and validation

Markus Schwarz, BEST, Austria / Hans Hartmann, TFZ, Germany

- Safe operation of pellet production plants
 Fahimeh Yazdan Panah, Wood Pellet Association of Canada
- New requirements for pellet bag silos
 Hans Martin Behr, Deutsches Pelletinstitut, Germany

6 April | 16.30

World of Pellets Session

International experts offer updates and outlooks on pellet markets around the world, which topics are key and where.

Opening

Gordon Murray, on behalf of the European Pellet Council

Japan

Kenichiro Kojima, Pellet Club Japan

Brazi

Afonso Bertucci, Braspell Bioenergia

Germany

Martin Bentele, Deutscher Energieholz- und Pellet-Verband (DEPV)

Austria

Christian Rakos, proPellets Austria

Spain

Pablo Rodero Masdemont, AVEBIOM / President European Pellet Council

Russia

Alexander Makhonko, Russian Pellet Council

Chairperson:

Gordon Murray, Wood Pellet Association of Canada

18.00 Conference end

19.00 Evening programme

Energy Efficiency Policy Conference

7 April 2022



7 April | 09.00

Fast tracking energy efficiency: Fit for 55

The new "Fit for 55" package aims to put the EU on track towards climate neutrality. Energy accounts for 75 % of GHG emissions. Speeding up the energy transition is critical! Gain insights into this new and far-reaching policy framework and how it supports energy efficiency. We present how to increase acceptance, trigger investments and get things moving – full speed!

- Opening and welcome
 - Markus Achleitner, Regional Minister for Economy and Energy, Upper Austria
- "Fit for 55" with energy efficiency Claudia Canevari, European Commission, DG Energy
- Energy efficiency progress on the path to the Paris targets
 Kevin Lane, International Energy Agency
- Best Young Energy Efficiency Researcher Award
- The Austrian renewable heat strategy a key element of the energy transition
 Jürgen Schneider, Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology, Austria
- Narratives for the energy transition:

 a global perspective

 Miranda Schreurs, Technical University of Munich, Germany



7 April | 11.00

Driving energy efficiency investments

Stepping up energy efficiency investments offers great opportunities for both the energy transition and a positive economic development. Well-designed Recovery Plans lead the way forward in using clean energy as an agent for economic revival. We present how to make clean energy investments happen at national and regional levels in Europe and beyond.

 Sustainable energy investments in national Recovery Plans

Nadine Müller / Marius Lungu, European Commission, Recovery and Resilience Task Force

- Energy Leader Upper Austria
 Gerhard Dell, OÖ Energiesparverband, Austria
- Business leadership for a climate neutral economy Martin Porter, Cambridge Institute for Sustainability Leadership (CISL). United Kingdom
- A spotlight on the energy transition in the Gulf countries

Andrea Di Gregorio, Ras Al Khaimah, United Arab Emirates

7 April | 12.00

Engaging and empowering citizens

Citizens are at the heart of the energy transition. They also show an increased interest in taking an active part in energy markets. We take a closer look at the key role they play and present the policy framework and opportunities for engaging and empowering them for energy efficiency.

- Empowering consumers for the energy transition Charles Esser, Council of European Energy Regulators (CEER)
- Cooperatives enabling citizen-based energy investments
 Sem Oxenaar, REScoop.eu, Belgium
- "Centrales Villageoises" citizen-owned energy companies

 Patrick Diagram Annouse Bhâne Aleas Facusia

Patrick Biard, Auvergne-Rhône-Alpes Energie Environnement, France

Chairperson: Jan Geiss, Eufores

13.00 Lunch break

This conference is organised in the context of the H2020 "Energy Efficiency Watch 4" project: www.energy-efficiency-watch.org



Industrial Energy Efficiency Conference

7 April 2022

7 April | 14.00

Driving the industrial energy transition

A step change in the industrial energy transition is a key factor both for economic competitiveness and the overall energy transition. Sustainable energy solutions support industrial companies' in doing "better business" instead of "business as usual". The session focuses on key developments in this sector.

- Making the transformation of industrial regions happen Manfred Fischedick, Wuppertal Institute, Germany
- The role of hydrogen in industry's transition Christopher Hebling, Fraunhofer Institute for Solar Energy Systems ISE, Germany
- Accelerating the industrial energy transition Gerhard Dell / Christiane Egger, OÖ Energiesparverband, Austria
- Climate neutral industrial processes: technology solutions
 Àngels Orduña Cao, A.SPIRE, Belgium



7 April | 16.00

Energy flexibility for a clean and digital transformation

Increasing energy flexibility, digitalisation and innovations in storage technologies offer interesting new solutions for industry. They enable companies participation in energy markets, support their decarbonisation ambitions and impact positively their overall competitiveness. We show how!

- Flexible energy markets what is in it for industry?
 Alfons Haber, e-control, Austria
- Digitalisation as a booster for energy flexible factories

Alexander Sauer, University of Stuttgart, Germany

- Industrial Microgrids: an innovative energy exchange platform
 Gerald Steinmaurer, University of Applied Sciences Upper Austria, Austria
- The industrial energy transition needs storage solutions

Dirk Uwe Sauer, RWTH Aachen University, Germany

7 April | 17.00

Striving for climate neutrality: examples worth replicating

Ever more companies are tackling their energy transition full on with motivation and innovative solutions! Hear about success stories and best practice examples worth replicating.

 The "Future Energy Plant" at Smurfit Kappa Nettingsdorf

Günter Leitgeb, Smurfit Kappa Nettingsdorf, Austria

- Renewable energy options for industrial process heat Keith Lovegrove, IPT Renewables, Australia
- Biomass and heat pumps examples for process heat Thomas Führer, STIWA / Markus Brychta, Peneder Gruppe, Austria

18.00 Conference end

19.00 Evening programme



Smart E-Mobility Conference

8 April 2022



8 April | 09.00

Navigating electric mobility

This session presents the policy framework and markets that are powering up the e-mobility sector. It shows how they enable the establishment of the mobility solutions of the future, now! Leading experts offer updates on policies, technologies and markets.

- Opening and welcome Gerhard Dell, OÖ Energiesparverband, Austria
- European policies for e-mobility and charging infrastructure
 Kai Tullius, European Commission, DG Move
- The uptake of e-mobility in Europe: status-quo and outlook
 Marie Rajon Bernard, International Council on Clean Transportation (ICCT)
- Battery-electric vehicles for everyone by 2030
 Christian Hochfeld, Agora Transport Transformation, Germany
- Electric vehicles and renewable energy: a perfect match
 Dolf Gielen, International Renewable Energy Agency (IRENA)
- Electric heavy duty trucks
 Harm Weken, FIER Automotive, The Netherlands



8 April | 11.00

Innovation session: business models and charging solutions

Innovative business models and cutting-edge charging solutions are driving e-mobility forward. We show how these innovations enable the large-scale rollout of e-mobility.

- 100 % fossil free Volvo Group vehicles Niklas Andersson, Volvo Group, Sweden
- A paradigm shift in charging solutions Lars Frieg, Elli, Volkswagen Group, Germany
- Increasing deployment of Megawatt Charging Systems (MCS)
 Johan Peeters, ABB EV Charging Infrastructure, The Netherlands
- Intelligent and climate neutral charging solutions
 Gerhard Wimmer, KEBA Energy Automation, Austria
- Charging infrastructure for company fleets: use cases
 Christoph Leitinger, Energie AG Oberösterreich, Austria
- Emil smart charging solution for companies
 Michael Schubert, Fronius International, Austria
- Shifting gears: fully emission-free SAP fleet by 2025
 Jürgen Rennar, SAP, Germany

13.00 Conference end



Innovation Workshops

8 April 2022 Online only



8. April | 13.30 - 15.30

Two workshops present latest results from EU funded projects in the fields of buildings and innovative technologies.

Renewable heating & cooling in the residential sector

Organised in the context of the H2020 project REPLACE

- Welcome and introduction
 - Herbert Tretter, Austrian Energy Agency, Austria
 - Dominik Rutz, WIP Renewable Energies, Germany
- The role of residential heating in the "Fit for 55" Package

Ana Sin Bagüés, European Commission, CINEA

- REPLACE in a nutshell
 Gašper Stegnar, Jožef Stefan Institute Energy Efficiency Centre, Slovenia
- Renewable heating & cooling options: real-life stories
 Benedetta Di Costanzo, WIP Renewable Energies,
 Germany
- The REPLACE heating system calculator
 Herbert Tretter, Austrian Energy Agency, Austria
- Roundtable: Challenges and drivers for renewable heating & cooling in South-Eastern and Central Europe
 - Marin Petrović, Enova Consultants and Engineers, Bosnia and Herzegovina
 - Dražen Balić, Energy Institute Hrvoje Požar (EIHP),
 - Angel Nikolaev, Black Sea Energy Research Centre (BSERC). Bulgaria
 - Emilija Mihajloska, SDEWES Centre, Macedonia
 - Karina Knaus, Austrian Energy Agency, Austria
 - Ana Sin Bagüés, European Commission, CINEA Chairperson: Stefan DrexImeier, Energiewende Oberland, Germany
- Wrap-up and recommendations
 Francisco Puente Salve, Escan Energy Consulting, Spain

Chairperson: Karina Knaus, Austrian Energy Agency, Austria

8. April | 13.30 - 15.30

EnerMaps: Open-access energy data management

Organised in the context of the H2020 project EnerMaps

Welcome

Jakob Rager, CREM, Switzerland

The EnerMaps project

Jakob Rager, CREM, Switzerland

The EnerMaps Gateway

Giulia Conforto, e-think, Austria

• The EnerMaps Data Visualisation Tool and Calculation Modules

- Marcus Hummel, e-think, Austria
- Eric Wilczynski, EURAC, Italy

Chairperson: Jakob Rager, CREM, Switzerland



Young Biomass Researchers Conference

5 April 2022

5 April | 14.00

This conference presents the work and achievements of young biomass researchers from all over the world.

- Opening and welcome
 Gerhard Dell / Christiane Egger,
 OÖ Energiesparverband
- Global biomass trade for energy: an overview Svetlana Proskurina, LUT University, Finland
- A predictive method for wood pellet degradation in pneumatic conveying pipelines
 Gulab Singh, University of Greenwich, UK
- Enabling wood ash recycling to ensure sustainable forest utilisation
 Malin Pettersson, Lund University, Sweden
- Emissions from realistic operation of wood-fired hydronic heaters
 Rebecca Trojanowski, Brookhaven National Laboratory, USA
- Size-resolved particle emissions from wood-fired hydronic heaters
 Jake Lindberg, Stony Brook University, USA
- Combustion and heat transfer modelling of a rocket cookstove
 Diego Alejando Quan Reyes, Eindhoven University of Technology, NL / Oscar Ivanov Flores Gaitán, Quantum Energy and Engineering, Guatemala / Avishek Goel, Tampere University, Finland
- Waste biomass combustion system for dehydrating fruits and vegetables
 Sachin Payyanad, Jain University, India
- A GIS-multi criteria decision analysis for biogas site selection in Scotland

Rosanna Curtis, University of St. Andrews / reheat ltd, UK

Techno-economic assessment of Bio-Synthetic Natural Gas production

Marilene Fuhrmann, BEST, Austria

- Low-cost Particle Image Velocimetry for collecting data from a biogas reactor
 Camila D'Bastiani / Gerald Gallagher, Technical University Dublin, Ireland
- Systematic biorefinery modelling with ProMo Robert Pujan, DBFZ, Germany



 Bioenergy solutions for rural areas based on avocado waste
 Maria Camila Garcia Vallejo, Universidad Nacional de Colombia

- Leaching pre-treatment of agricultural residues: parameters and industrial applicability
 Abhishek Singhal / Vaibhav Agarwal, Tampere University, Finland
- Treatment of tannery effluents for a biocircular economy
 Ashton Mpofu, Cape Peninsula University of Technology, South Africa
- Perspective of hydrothermal carbonisation in kraft lignin valorisation
 Orlando Enrique Salcedo Puerto, Lappeenranta Lahti University of Technology, Finland
- Using thermodynamics for optimal CO₂ reduction to value-added compounds
 Laura Rovira-Alsina / Meritxell Romans-Casas, University of Girona / LEQUIA, Spain
- Evaluation of biochar as anode material in microbial fuel cells
 Ankit Kumar / Shaily Chauhan / Rohit Kumar / Soumya Pandit, Sharda University, India
- Effect of carbonisation temperature on characteristics of biochars
 Oluwatosin Oginni, Idaho National Laboratory, USA
- Low-cost carbon dots as anode catalyst for microbial fuel cells
 Nishit Savla, Amity University Mumbai / Abhilasha

Mishit Savia, Amity University Mumbai / Abhilasha Mathuriya / Kanu Priya, Sharda University, India

Chairperson:

Elisabeth Wopienka, BEST - Bioenergy and Sustainable Technologies, Austria



Young Energy Efficiency Researchers Conference

5 April 2022



5 April | 9.00

This conference presents the work and achievements of young energy efficiency researchers from all over the world.

- Opening and welcome
 Gerhard Dell / Christiane Egger, OÖ Energiesparverband
- The energy transition needs young people!
 Nikolas Reschen, Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology, Austria
- Promoting energy efficiency programme equity through collaborative governance
 Alexis Washburn, Massachusetts Department of Energy Resources, USA
- Recovering waste heat from the London underground: sizing the opportunity
 Henrique Lagoeiro / Matt Wegner, London South Bank University, UK
- Canadian carbon pricing: effects on emissions and employment
 Olivia Chen, Paris School of Economics, France
- Assessment tool for energy communities
 Diana Neves, Instituto Superior Tecnico Universidad de Lisboa, Portugal
- Estimating price premium of high energy-efficient appliances
 Elena López-Bernabé, Basque Centre for Climate Change, Spain
- Decarbonising steel: energy efficiency and green premium mitigation
 Alli Devlin, University of Oxford, UK
- Electrification of heat generation in industry: technologies, integration and barriers
 Frédéric Bless, OST Fachhochschule Ostschweiz / Matthias Speich, ZHAW Zurich University of Applied Sciences, Switzerland
- Behaviour of Li-ion on the surface of Ti3C2-T Mxene Konstantina Papadopoulou, Coventry University, UK
- Bio-based phase change materials for thermal energy storage: a review
 Ecem Sen, Ege University, Turkey
- Unlocking the renovation wave: the European Central Bank's green discount rate
 Uuriintuya Batsaikhan / Stanislas Jourdan / Adua Dalla Costa, Positive Money Europe, Belgium

- Brazilian policies for climate-neutral buildings
 Veronica Martins Gnecco, Federal University of Santa Catarina, Brazil / Luka Pajek,
 University of Ljubljana, Slovenia
- Accelerating energy-efficiency renovation of single-family houses
 Hanna Westling, Anthesis Group, Sweden
- Modelling the impact of climate change on residential heating demand in Belgium Essam Elnagar, University of Liege, Belgium
- Improved indoor climate with energy-efficient micro-environment systems
 Weixin Zhao, Aalto University, Finland
- Influence of climate change on energy performance and indoor temperatures
 Bartosz Witkowski, Wrocław University of Science and Technology, Poland
- A simulation tool for self-sufficient buildings
 Andrii Zakovorotnyi, Lucerne University of Applied Sciences and Arts, Switzerland
- Analysis of smart building solutions for operational efficiency
 Norbert Harmathy, Budapest University of Technology and Economics, Hungary
- Optimising building energy efficiency and comfort: a simulation Ayush Kamalia / Pedro Correa de Melo, Politecnico di Milano, Italy
- Form follows "the human"?
 Balázs Fürtön / Baláz Nagy, Budapest University of Technology and Economics, Hungary

Chairperson: Gerald Steinmaurer, University of Applied Sciences Upper Austria

13.00 Lunch break



Upper Austria – a leader in the clean energy transition

Upper Austria, one of Austria's nine regions with a population of 1.5 million, is a leader in the clean energy transition. This makes it an ideal location for this conference. Through significant increases in energy efficiency and renewable energy, greenhouse gas emissions from buildings were reduced by 39 % in 10 years.

60 % of all space heating and 31 % of the primary energy in Upper Austria already come from renewables.

- 31 % of the primary energy is supplied by renewables
- 39 % reduction of greenhouse gas emissions in the buildings sector in the last decade
- 2.8 billion Euro invested annually in renewable energies and energy efficiency

www.energyleaders.eu





The audience - the whole energy transition sector!

Each year, the World Sustainable Energy Days attract over 650 experts from more than 60 countries including:

- a wide range of business actors engaged in the energy transition: technology and equipment companies, energy companies, service providers, planners, developers, financing community etc.
- the energy efficiency research community
- representatives from public bodies (e.g. EU institutions, national, regional and local governments, energy agencies)

The conference organiser OÖ Energiesparverband

The OÖ Energiesparverband (ESV) is the energy agency of Upper Austria. The agency, which was established by the regional government, drives the energy transition by promoting energy efficiency, renewables and e-mobility. It provides comprehensive services to households, businesses of all sizes and municipalities. It also supports energy technology companies in the context of the Cleantech-Cluster.



The tradeshow - energy efficiency product innovations in real life!

Visit a major tradeshow on renewable energy and energy efficiency ("Webuild-Energiesparmesse")! The tradeshow is held in parallel to the conference (subject to the Covid situation).

Austrian companies present their latest product innovations. Seize the opportunity to network in-person, on the tradeshow floor!

Practical information

Hybrid Event:

- On-site participation: following COVID rules in place at the time of the event. Registered participants will receive detailed guidance prior to the event.
- Online participation from anywhere in the world

Conference venue

Stadthalle Wels, Pollheimerstrasse 1, 4600 Wels, Austria

Conference fees

All fees include conference documentation. All fees plus 10 % VAT

- 70 Euro for all WSED events (on-site and online)
- 30 Euro for the European Energy Efficiency Conference, 7 - 8 April (on-site and online)
- 30 Euro for the European Pellet Conference, 6 April (on-site and online)
- 20 Euro each for the conferences: Policy (7 April); Industry (7 April); E-Mobility (8 April) (on-site and online)
- Free online participation in the Young Energy Researchers Conference and the Innovation Workshops
- Students can apply for free participation to office@esv.or.at

Conference languages

Simultaneous translation in English and German

Photos: OÖ Energiesparverband, iStock

World Sustainable Energy Days 2022

5 - 8 April 2022 Wels, Austria

Conference office

OÖ Energiesparverband Landstrasse 45, 4020 Linz, Austria Tel. +43/732/7720-14386 office@esv.or.at, www.esv-en.at, www.wsed.at

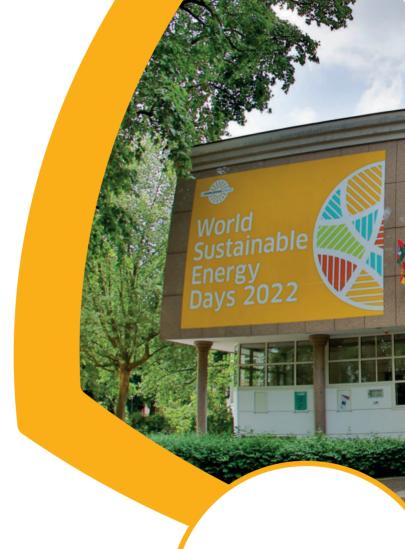
Registration

Online at www.wsed.at

How to reach Wels?

- by railway: direct connections from Vienna and Vienna airport, Linz, Salzburg, Munich, Paris, Brussels, etc.
- by road: A1 and A25 motorways
- by air: airports in Linz (17 km from Wels), Vienna (222 km), Salzburg (110 km), Munich (247 km)





650 participants60 countries

6 Conferences

















