



8th ESST/VDZ Conference

Programme

Hofburg Vienna conference and event centre
Vienna, Austria, 5 to 8 May 2024

Internet Access

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Accompanying persons programme

Sunday, 5 May 2024

19 h ESST Welcome Reception sponsored by
AGRANA (Riesenrad Panorama)

Monday, 6 May 2024

18 h 10 Get together in exhibition area

Tuesday, 7 May 2024

9 h 45 Sightseeing tour of Vienna by bus
(Meeting point Heldenplatz)

12 h Guided Tour of Vienna
"Zuckergoscherl & Mehlspeistiger"
in English and German

19 h 30 Dinner at Schweizerhaus (Prater)
sponsored by Fachverein der Zuckerfabriken
Österreichs
Dresscode: Smart Casual

Registration

Sunday, 5 May 15 to 18 h Hofburg

Monday, 6 May 8 to 16 h Hofburg

Sunday, 5 May 2024

- 14 h 30 ESST Board (Hofburg, Radetzky I)
- 16 h 30 ESST Council (Hofburg, Künstlerzimmer)
- 19 h ESST Welcome Reception sponsored by AGRANA (Riesenrad Panorama)

Monday, 6 May 2024

- 8 h 00 VDZ-Ausschuss für Preisarbeiten (Hofburg, Künstlerzimmer)
- 9 h 30 ESST Scientific Committee (Hofburg, Künstlerzimmer)
- 9 h 30 VDZ-Vorstand (Vorstand und Beirat) (Hofburg, Radetzky I)
- 9 h 30 Arbeitskreis Junge Mitglieder (Hofburg, Radetzky III)

Monday, 6 May 2024

13 h 30 Opening
 Bram Fetter, Harald Powitz

Plenary Presentation

Chairman: Piotr Wawro

13 h 40 Norbert Harringer (AGRANA)
 Sustainability and decarbonization in the sugar
 market

14 h 10 Erik Bek-Pedersen
 Sugar-based chemicals and fuels – ongoing
 developments and trends

Challenges in decarbonization of sugar production

Chairman: Wolfgang Klosterhalfen

15 h 00 Josh Gartland
 Climate neutrality toolbox of CEFS

15 h 25 Coffee break and Poster session

15 h 55 Stephane Petit
 “Digital energy twin” project

16 h 20 Daniel Nouws, Marc van Dijk
 Integrating thermal vapor recompression in a
 sugar factory

16 h 45 Saiedeh Wicht, Yannis Affeldt, Boris Morgenroth
 Beet sugar factory decarbonization

Monday, 6 May 2024

- 17 h 10 Nils Träber, Wjatscheslaw Popov, Deike Laue
Energy and cost efficiency in the sugar house:
combining proven methods with continuous
crystallization and vapour compression
- 17 h 35 Sébastien Schellen, Vincent Couplet, Adrien
Couplet
Efficient crystallization: Paving the way to 100%
electrification in crystallization
- 18 h Bestowal of ESST Science Award

Evening Programme

- 18 h 10 Get together in exhibition area
- 20 h 15 End

Short Presentations

Chairman: Piotr Wawro

9 h 00 Mischa Baier
Slurry, viscosity reducer and color remover for efficient and energy-saving sucrose crystallization based on laboratory data and field tests

Mario Gürtl
Sugarlyzer 5000 – The fully automated lab for the sugar industry

Stefan Schöpf
Revolutionary candle type precoat filtration within the sugar industry

Isabel Bejenke, Torben Erichsen, Elke Hilscher
The future shines bright – Implementation of NIRS-based process-analytical systems in sugar factories

Jakab Rózsa
Perfecting supersaturation curves in various sugar crystallization processes

Karin Abraham, Karl Schlumbach, Luiza Fritzsche, Eckhard Flöter
The effect of dextran on sucrose crystal color and morphology

General Sugar Technology

Chairman: Stephane Petit

- 9 h 40 Martin Bruhns
The beet sugar factory – a European cultural asset
- 10 h 05 Dierk Martin
ICUMSA®: Aims, development and current activities
- 10 h 30 Coffee break and Poster Session

Sugar technology knowledge transfer to new generations – challenges and good practices

Presentation 10 min + Panel discussion 30 min

Chairman: John P. Jensen / Eckhard Flöter

- 11 h 10 Lauran Rademaker, Peter van Dam
Operator Training System – Practical experiences in the sugar industry
- Isabel Altmann
Bringing shift work closer to young skilled workers
- Volker Baumann, Sven Boetcher, Nils Bertram
Humans, technology, organization: Managing generation change in sugar analytics
- Mahesh Kumar Murugaiah
Digitally bridging generations: LLM-RAG innovation in sugar industry
- Maciej Wojtczak, Aneta Antczak-Chrobot
Educating the next generation of sugar technology experts: Best practices and challenges

- 12 h 30 Lunch

Digitization

Chairman: Stefan Frenzel

- 13 h 45 Romy Ries
Weihenstephan Standards and OPC UA – Paving the way for transparent and efficient future production
- 14 h 10 Bo Stig
Energy optimizing vacuum pans through machine learning
- 14 h 20 Brett Stewart, Pablo Fabian Escobar Grajeda
Transforming sugar manufacturing with the power of artificial intelligence
- 14 h 30 Wolfgang Klosterhalfen, Mark O. Burkhardt
Visual Smart Sensor (VSS) for cossettes quality determination (VSS cossettes)
Visual Smart Sensor (VSS) for beet quality determination (VSS external beet quality)
- 15 h 05 Coffee break

Climate change and beet availability and quality

Chairman: Marco de Vries

- 15 h 35 Stefan Frenzel
Technical and technological effects of changing texture properties of sugar beet
- 16 h 00 Karl Schlumbach, Jörg Tuchert
Beet texture – Technological value of texture altered beet
- 16 h 25 Christa Hoffmann
Impact of drought stress on yield, quality, and beet texture of sugar beet
- 16 h 50 Fernando Finger, Abbas Lafta, Mohamed Khan, Karen Fugate
Relationship of long-term storage and raffinose metabolism in sugar beet

Evening Programme

- 19 h 30 Dinner at Schweizerhaus (Prater)
sponsored by Fachverein der Zuckerfabriken Österreichs
Dresscode: Smart Casual

9 h **VDZ-Mitgliederversammlung**
(only for VDZ members)

Tagesordnung

1. Begrüßung und Eröffnung
2. Bericht des Vorsitzenden
3. Bericht des Geschäftsführers
4. Bericht des Kassenprüfers
5. Entlastung des Vorstandes
6. Wahl des Vorstandes
7. Wahl der Kassenprüfer
8. Bericht aus dem Ausschuss für Forschung und Prüfung von Publikationen
9. Bericht des Arbeitskreises „Junge Mitglieder“
10. Ehrung von Mitgliedern
11. Bekanntgabe des Tagungsortes 2025

General Sugar Technology

Chairman: Barbara Muir

- 10 h Karl Schlumbach, Susanne Rudolph, Daniel Eichstädt, Eckhard Flöter
First steps towards a process model of extraction towers
- 10 h 25 Rebekka Birke *et al.*
Biodegradation potentials of microorganisms in sugar factories
- 10 h 50 Janus Egholm, Ricco Kügler
In-line detection of foreign particles and color measurement for dry sugar on conveyor belt
- 11 h 15 Coffee break

General Sugar Technology

Chairman: Florian Emerstorfer

- 11 h 35 Felix Geisendörfer, Eckhard Flöter
Numerical modelling regarding the role of sucrose crystals for the evaporation process within a discontinuous evaporating crystallizer
- 11 h 55 Christiane Lakenbrink
Application of rapid methods for product release
- 12 h 15 Manuel Ruiz Holst, Leandro Dinnocenzo
Solids-liquid filtration technology and solutions in the sugar beet processing and sugar production: Specific industrial application developments and process optimization
- 12 h 35 Marlies Rothauer
Quality management systems and their further development
- 12 h 55 Closing remarks / Best Paper Award

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Posters

The numbers in brackets indicate the position of the poster

Mischa Baier

Slurry, viscosity reducer and color remover for efficient and energy-saving sucrose crystallization based on laboratory data and field tests **(1)**

Mario Gürtl

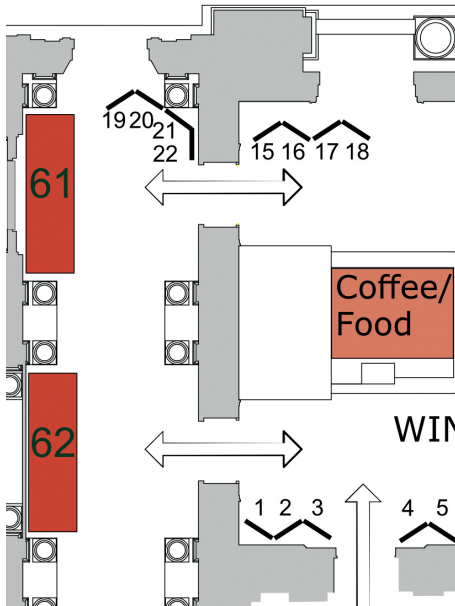
Sugarlyzer 5000 – The fully automated lab for the sugar industry **(2)**

Stefan Schöpf

Revolutionary candle type precoat filtration within the sugar industry **(3)**

Isabel Bejenke, Torben Erichsen, Elke Hilscher

The future shines bright – Implementation of NIRS-based process-analytical systems in sugar factories **(4)**



Posters

Jakab Rózsa

Perfecting supersaturation curves in various sugar crystallization processes **(5)**

Karin Abraham, Karl Schlumbach, Luiza Fritzsche, Eckhard Flöter

The effect of dextran on sucrose crystal color and morphology **(6)**

Sakurako Yagami, Karl Schlumbach, Eckhard Flöter

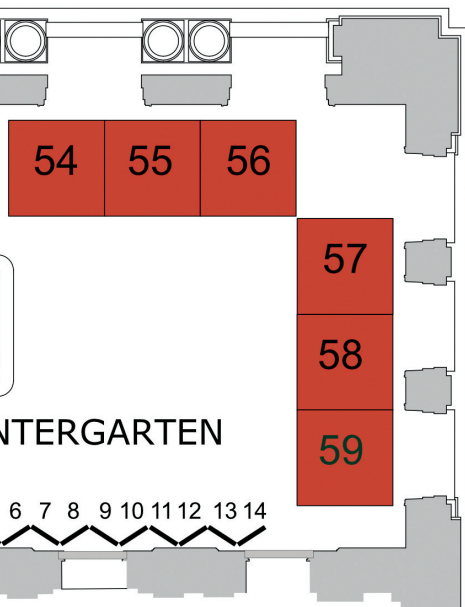
First steps towards optimized process condition in tower extraction as a function of beet quality **(7)**

Sakurako Yagami, Karl Schlumbach, Eckhard Flöter

Characterization and purification of technical non-sucrose solutions **(8)**

Markus Honkanen, Hannu Eloranta, Harjeet Singh Bola, Boris Morgenroth, Naresh Saini

Crystallization process optimization with on-line process microscope **(9)**



Posters

Brett Stewart, Pablo Fabian Escobar Grajeda
Transforming sugar manufacturing with the power of artificial intelligence **(10)**

Simona Gillarová, Svatopluk Henke, Zdeněk Bubník,
Pavel Kadlec, Evžen Šárka, Vladimír Pour
Application of continuous chromatography for mannitol production **(11)**

Svatopluk Henke, Simona Gillarová, K. Chalupný, Š. Zvěřina,
D. Kulichová, Zdeněk Bubník, Pavel Kadlec, Vladimír Pour
Sugar beet analysis using HPCEC-RI and ITP **(12)**

Karen Fugate, Abbas Lafta, Mohamed Khan,
Fernando Finger
Changes in composition and metabolism of sugarbeet root cell walls during storage **(13)**

Martin Bruhns
Upgrading two falling-film evaporators at the Chortkiv sugar factory, Ukraine – design and installation of centrifugal juice separators below the calandria **(14)**

Claire Rua, Catherine Bouche
ITECA on-line crystal growth technology applied to improving pan stage performance: Review of some applications **(15)**

Jens Mahrholz, Andreas Lehnberger
Alternative suspension agents for slurry production **(16)**

Quido Smejkal, Arash Bagherzadeh
Process development of beet sugar factories: reduction of fossil energy and CO₂-emissions based on master plan of technology improvements **(17)**

Philip Schofield
Can I improve the efficiency of my batch centrifuge when I change the basket **(18)**

Posters

Markus Kratz

Enhancing production safety and reliability: Smart vibration motors for screens and feeders **(19)**

Tristan Stephan

Assessment of dust explosions in the sugar industry with regard to screening technology **(20)**

Bo Stig

Energy optimizing vacuum pans through machine learning **(21)**

Bjarne Christian Nielsen

Comments on validity and benefits of sucrose crystals colour determination by laboratory and indirect real-time method, with comparison between the two **(22)**

ESST Programme Committee

Piotr Wawro (President)

Nico C.J. Antens

Remi Aubry

Eckhard Flöter

Stefan Frenzel

Svatopluk Henke

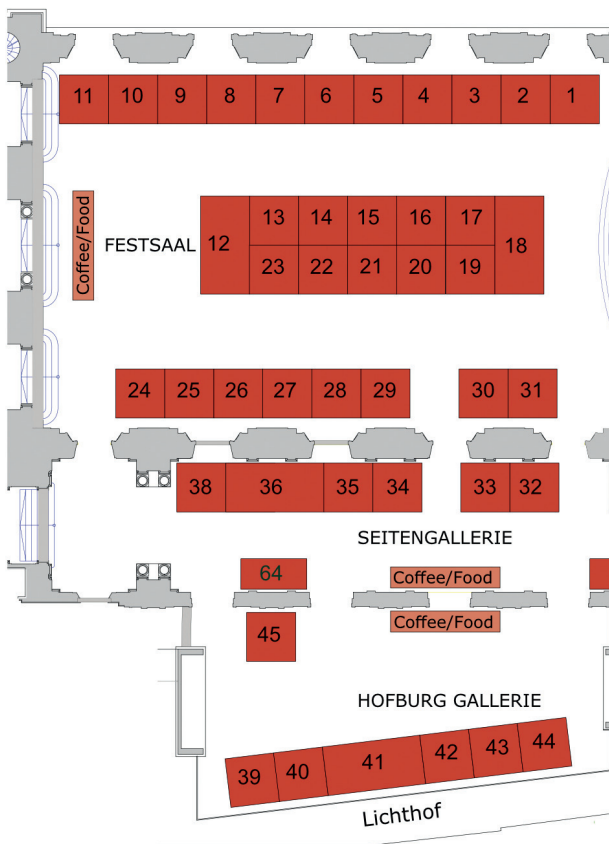
John Preben Jensen

Timo Johannes Koch

Barbara Muir

Maciej Wojtczak

Exhibition



Opening hours

Monday 6 May

13 h to 20 h 15

Tuesday 7 May

9 h to 17 h

Wednesday 8 May

9 h to 13 h

Exhibitors

airpower europe

30

AMF-Bruns

8

Andritz Fiedler

41

Anton Paar Optotec

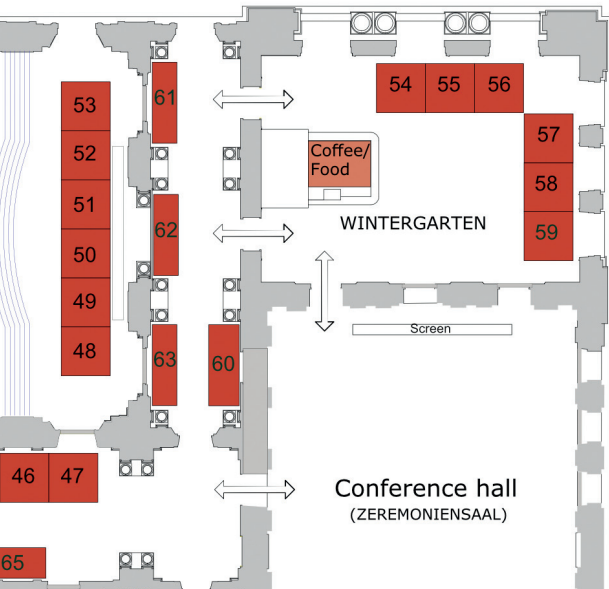
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Applexion

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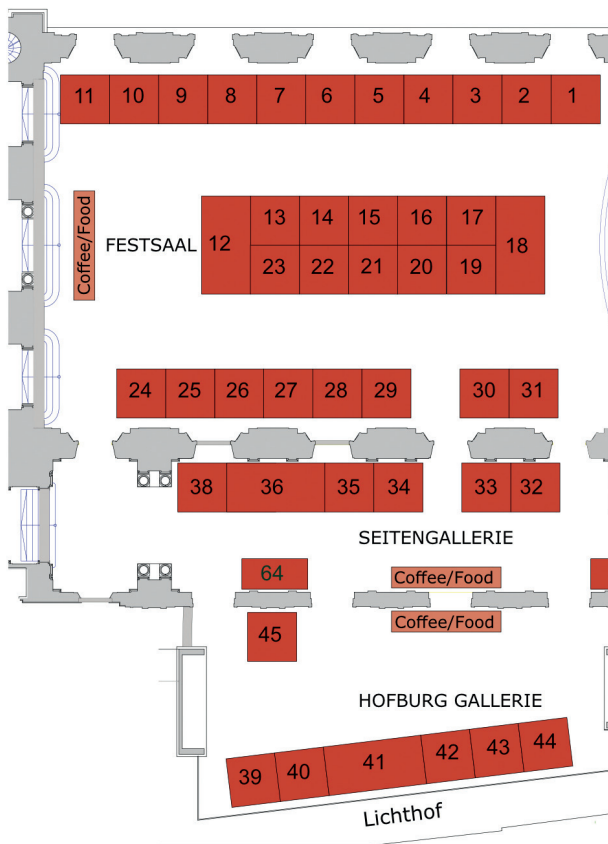
APRO Polska

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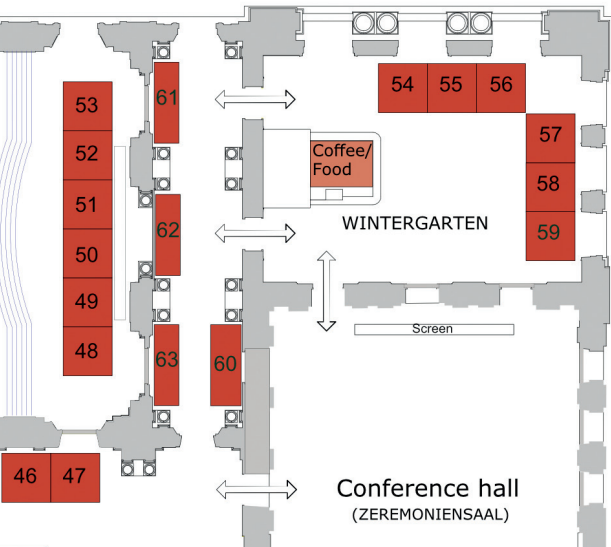


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Sugar producers

ACOR S. coop.
AGRANA Zucker GmbH
British Sugar plc
Cooperativa Produttori Bieticoli
Cosun Beet Company
Cristal Union
Krajowa Grupa Spożywcza S.A.
Lantic Sugar Inc.
Lesaffre Freres SAS
Nordzucker AG
Pfeifer & Langen GmbH & Co. KG
Schweizer Zucker AG
Südzucker AG
Tereos Sucres
The Andhra Sugars Ltd.

Sugar Technologists Associations

American Society of Sugar Beet Technologists (ASSBT)
ANTZA – Associazione Nazionale Tecnici Zuccheri e Alcool
Fachverein der Zuckerindustrie Österreich
SNFS – Technical Commission
Stowarzyszenie Techników Cukrowników
Verein Deutscher Zuckertechniker

Suppliers

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ArmaSys Armaturen und Systemtechnik GmbH
AUCOTEC AG
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Barriquand Heat Exchangers
BetaTec Hop Products Ltd.
Blackburn Chemicals Ltd.
BMA Braunschweigische Maschinenbauanstalt GmbH
Broquet Pumps Georges Briere S.A.
Buckau-Wolf GmbH
Bussetti & Co. GmbH
Carbo Solutions International LLC

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SIEMENS AG
Silver Weibull Sweden AB
Stord International AS
Sugars International LLC
Sulzer Pumps Finland Oy
Tenens SAS S.r.l.
Trasmec S.r.l.
Veco B.V.
W. Kunz dryTec AG

Directions

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directions

Conference Centre:

Schweizerhof, Hofburg Wien
Entrance: Botschafterstiege
1010 Vienna, Austria



Welcome Reception on Sunday:

Riesenrad Panorama
Riesenradplatz 1
1020 Vienna, Austria



Reception and Dinner on Tuesday:

Schweizerhaus
Prater 116
1020 Vienna, Austria



Accompanying Persons Programme on Tuesday:

Heldentor
Heldenplatz 1
1010 Vienna, Austria



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