



FINAL PROGRAM

Glass Performance Days 2023
June 13-16, 2023, Tampere Finland

Workshops June 13-14

Exhibition & Step Change June 14-16

Conference Sessions June 15-16



GPD 2023 WORKSHOPS

GPD workshops are 4–8-hour intensive courses that focus on techniques and skills in specific fields. The main emphasis is on interaction and exchange of information among small groups. For practical workshops number of participants will be limited to 5–15 persons and 20–50 persons for theoretical workshops.

- > For details, please visit www.gpd.fi
- > Price: EUR 170 € + VAT 24% / workshop
- > Please note that workshop organizers have a right to accept or reject participants.

Workshops June 13

9:00–17:00 **Float Glass processing: storage, transport, washing, corrosion protection**
Michael Emonds, Chemetall/BASF & Reinhold Senft, Grafotec Spray Systems GmbH

9:00–17:00 **Optimizing productivity, energy consumption & quality in the glass tempering process**
Taneli Ylinen, Pekka Lyytikäinen
– [Glaston Finland Oy](#)

Workshops June 14

9:00–13:00 **Water-filled glass(WFG) façades: Construction aspects, structural and energy performance**
Matyas Gutai, Water-filled Glass Ltd

9:00–13:00 **Glass surface temperature vs. interlayer temperatures in glass lamination process**
Kalle Kaijanen, [Glaston Finland Oy](#)

9:00–13:00 **All-glass structure – cantilevered viewing platform**
Christoph Bauchinger, se-austria GmbH
Peter Eckardt, seele GmbH

9:00–17:00 **Sustainable Float Glass processing: Chemicals in glass cutting, grinding, and water treatment**
Michael Emonds, Chemetall & Josep Sais, VITROSEP

9:00–17:00 **Opportunities in a circular economy approach to the glazing industry**
Graeme DeBrincat, Arup
Lisa Rammig, Eckersley O'Callaghan

9:00–17:00 **An introduction to and advanced instruction to the vacuum insulated glazing**
Cenk Kocer, University of Sydney

9:00–13:00 **Thermal stress analysis of IGU windows and façade glazing**
Gregor Schwind, Technical University of Darmstadt, Institute of Structural Mechanics and Design, Glass Competence Center

9:00–13:00 **Sending glazing to North America? A standards overview**
Urmilla Jokhu-Sowell, National Glass Association
Julia Schimmelpenningh, Eastman Chemical Company
William Lingnell, Lingnell Consulting Services, LLC.
Dr. Stephen Morse, Texas Tech University

9:00–13:00 **Reduction of grinding process cost under consideration of perfect edge quality and highest process stability**
Robert Kraus, [Glaston Corporation](#)

13:00–17:00 **Industrial Glass Cutting – Choosing the right cutting wheels and cutting parameters for perfect cutting results**
Dennis Kampmann, Bohle AG

PROGRAM HIGHLIGHTS

June 14, at 17:30

Opening Ceremony + Get Together Party

Presentations and discussion in the opening ceremony will be graced by distinguished professionals. Their names and presentation topics will be released closer to the event.

June 15 – 16, 9:00 – 17:00

Technical Conference sessions

The conference will have 6 parallel technical sessions organized each day. In total, over 120 face-to-face presentations will be given by glass industry experts over a content-rich two days. Details on pages 4 and 5 of this document or at the GPD website at <https://gpd.fi/events/gpd-finland-2023/program/>

Exhibition and Step Change

The conference exhibition will provide glass industry companies, media, associations, research, and academic institutions with a platform for networking and commercial discussions with like-minded professionals. In addition, exhibitors benefit as follows:

- Enhancing organization's profile
- Establishing new contacts and laying the foundations for future business
- Promoting company and products directly to a targeted audience of high-level decision makers (and not really product sales)

The 2023 Step Change event will be held in conjunction with the exhibition. It will introduce startups and scale-ups present their new technologies and disruptive ideas to the industry to stimulate growth and development. The program of the event is under production and will be released soon.

A limited number of exhibition booths are available for sale. They are allocated on a first come, first served basis. For more information and to reserve a booth, please go to <https://gpd.fi/events/gpd-finland-2023/exhibition/>

June 15 – 16, 19:00 onwards

Evening networking activities

All conference days will be crowned by our popular GPD evening activities:

- June 14 – Get together Party
- June 15 – Conference dinner
- June 16 – Farewell party

THURSDAY JUNE 15

8:00		Onsite registration				
9:00	Research & Development	Laminated Glass	Architectural Challenges & Solutions	Facade Engineering	Industry Trends	Glass and Sustainability in Buildings
	A guide to assessing the fire resistance of load-bearing laminated safety glass Maximilian Möckel, TU Dresden, Institute of Building Construction	Review of Security Glazing Standards and Testing Vaughn Schauss, Kuraray	Combining bird protection with functional glass coatings in laminated safety glass Wim Stevels, Alex Caestecker, Eastman	Tiffany and Puma flagship stores. Design, logistics and installation of oversized pre-fabricated glazed facade elements in central Manhattan Andreas Hafner, seele GmbH	New carbon pricing system and new carbon border tax at EU level: what impacts for the glass and glazing sector Iva Ganev, Glass for Europe	Transparent Solar Facades for Building Energy Generation and Smart Features Miles Barr, Ubiquitous Energy
9:25	Numerical heat transfer model for predicting temperature gradients and fracture in glass panes Evelien Symoens, Ghent University	Contribution of the interlayer films to the safety properties of the laminated safety glass at different temperature conditions Steffen Bornemann, Folienwerk Wolfen GmbH	Patterned Architectural Coatings for Large Area Glass Façades and Potential Applications Marcus Frank, Bühler Leybold Optics GmbH, Alzenau, Germany	The Woolbeding Kinetic Glasshouse Carles-Hug Bitlloch, Bellapart, Les Preses	Flat glass recycling in Europe and the US: state of play and challenges for enhanced circularity Bertrand Cazes, Glass for Europe Urmilla Sowell, National Glass Association	High-transparency clear window-integrated PV and agrivoltaics Victor Rosenberg, Clifton Smyth, Jamie Lyford, Clearvue Technologies, Perth
9:50	Towards practically stronger glass – recent advances and outlook Stefan Karlsson, RISE Research Institutes of Sweden	Play Safe With Stiff Interlayers Louis Moreau, MOGLEX Corp	SOUND LAB AI Tool - Machine learning for sound insulation value predictions Ingo Stelzer, Michael Kraus, Kuraray Europe GmbH	Double Skin Structural Glass Miguel Ángel Núñez Díaz, ENAR	North American Glass and Glazing Market Trends Urmilla Sowell, National Glass Association	ColorQuant – customized, bright colored solar modules with 95% efficiency enabling a colorful, sustainable future Sebastian Barth, Holger Geisler, Merck KGaA
10:15						
Coffee break (45 mins) · one-to-ones · meeting with sponsors etc						
11:00	Research & Development	Laminated Glass	Architectural Challenges & Solutions	Facade Engineering	Product & Process Case Studies	Glass and Sustainability in Buildings
	Effective Thickness – Informed Use in Laminated Glass Analysis Adam Nizich, Eckersley O'Callaghan , New York, USA	Natural weathering study of the resistance of various glass types against UV-induced color fading Stefan Reich, Anhalt University of Applied Sciences	Playground at height–designing and building the Skyslide in Dubai Agnes Koltay, Koltay Facades	Advanced engineering methods unlock higher permitted stresses for structural glazing designs Jon Kimberlain, DOW Silicones Corporation	Edge strength of annealed float glass: Identification and optimisation of cutting process parameters Matthias Seel, Institute of Structural Mechanics and Design Glass Competence Center	Dynamic Glass–What is needed? Romarc Massard, eLstar-Dynamics, Eindhoven, Netherlands
11:25	Pre-stressing Glass by Elastic Deformation: A New Twist on Reducing Deflection Austin Bensend, Enclos	Glass Timber Panel–A new hygiene material for health care and hospitality Sagar Vanapalli, Anhalt University of Applied Sciences, Dessau, Germany	Broken glass ceiling around Fearless Girl Sophie Penner, Enclos	Resource-optimised pavilion glazing through the interplay of structure and façade Jona Vetterli, Dr. Luechinger+ Meyer Bauingenieure AG, Zürich	Heat Soaked Glass–Requirements, Implications, and Case Studies in the US Vicente Montes-Amoros, Curtain Wall Design & Consulting, Inc.	SunSmart–Thermochromic Smart Window for Optimized Solar Heat Management: From Lab to Pilot-Scale Production and Test Buildings Daniel Mann, TNO, Eindhoven
11:50	Adaptive Passive Cooling Cellulose-based Films for Smart Windows Aayush Jaiswal, VTT Technical Centre of Finland	Determination of relationship between chemical properties of different interlayers and mechanical resistance in laminated glass structures exposed to different loads Milica Baric, Universität Bundeswehr	Dome-shaped gridshell over monumental courtyard Iris Rombouts, Octatube Koos Fritzsche, Delft	Reimagine thrill with structural glass: Levitation Timo Bühlmeier, Josef Gartner GmbH	Investigations on defective glass components to identify critical manufacturing conditions Martin Krappitz, Fraunhofer Institute for Mechanics of Materials IWM	Water-filled glass (WFG) as a Heat Displacement System for saving energy in buildings Matyas Gutai, Fazel Ganji Kheybari, Water-filled Glass Ltd
12:15						
Lunch break (1,5hrs) · one-to-ones · other meetings						
13:45	Research & Development	Laminated Glass	Architectural Challenges & Solutions	Facade Engineering	Product & Process Case Studies	Glass and Sustainability in Buildings
	Analytical solution and exact effective thickness for multilayered laminated glass beams of arbitrary composition. Application to cantilevered balustrades Gianni Royer-Carlaghi, University of Parma	Predicting interlayer and glass temperatures in automated glass lamination process Mikko Rantala, Glaston Finland Oy	25m x 2.55m Cantilevered structural glass canopy Mateo Marcos, ENAR Architectural Envelopes SLP	Grand Hall, Montreal. Design, engineering and installation of an all glass roof structure Peter Eckardt, seele GmbH	Laser cutting technology for automotive and architectural glass products Anton Krumm, Corning Laser Technologies GmbH	Sustainable growth by optimized production organization Klaus Mühlhans, A+W Software GmbH
14:10	Numerical simulation of impact on glass panes and the fracture energy equilibrium Stefan Reich, Anhalt University of Applied Sciences, Dessau, Germany	Large area atmospheric plasma surface processing of PVB and Ionoplast interlayers for performance improvement of laminated glass Dušan Kováčik, Masaryk University, Brno, Czech Republic	Structure-property correlations in borosilicate in comparison to soda-lime glass Juliane Brandt-Slowik, Helmut Kugelmann, Schott AG	New model for performance of silicone bonded facades during seismic events Valerie Hayez, DOW Silicones	Increased production yields during glass cutting and in downstream processes by selecting cutting wheels with proper surface finish and microstructure Thorsten Böllinghaus, Bohle AG	Closing the loop on glass recycling Graham Coult, Eckersley O'Callaghan
14:35	Evaluation of the suitability of UV-curing acrylate adhesives in structural glass applications by DMTA Dominik Offereins, University of the Bundeswehr	Fractional viscoelastic modelling of polymeric interlayers in laminated glass. Comparisons with Prony series approach Lorenzo Santi, University of Parma, Parma, Italy	The history of development of the glass pane size of historical glass and glass structures from 1880 to 1970 Franziska Rehde, Technische Universität Dresden	Use of cast glass in buildings Gennady Vasilchenko-Malishiev, Bath, Bath, United Kingdom	Fast and effective large-area cleaning and activation of float glass with improved micro-uniformity by atmospheric plasma surface processing Richard Krumpolec, Masaryk University, Brno, Czech Republic	Silicones – an important enabler of sustainable design Enrico Cutri, Philippe Willareth, DOW Europe GmbH
15:00						
Coffee break (45 mins) · one-to-ones · other meetings						
15:45	Research & Development	Laminated Glass	Architectural Challenges & Solutions	Facade Engineering	Product & Process Case Studies	Glass and Sustainability in Buildings
	Glass Bottle Columns - Experiments and Design Concepts for Reuse Hoessein Alkisaee, Christian Louter, Delft University of Technology	Quantification of the linear viscoelastic behavior of multilayer interlayers Miriam Schuster, TU Darmstadt	Glass in buildings – Renovation, Rehabilitation or Restoration? Peter Lenk, Arup, London	New Glass Screen System with slender tempered glass stiffeners Shoji Maebashi, Total Co., Ltd, Chino, Japan	Digital Laser Printing and plant automation Hubert Haselsteiner, Haselsteiner GmbH	The holistic approach to the recovery of glazing materials Graeme DeBrincat, Florence Wu, Ove Arup & Partners Limited
16:10	The reuse of post-consumer flat glass: a study of its environmental benefits, quality and mechanical properties Angelica Rota, Politecnico di Bari, Bari, Italy in partnership with AGC Glass Europe, Charleroi, Belgium		High Transparency RETRO-fitted - New Lobby Glass Enclosures beyond the Cutting Edge Dirk Schulte, Roschmann Group	N-AM Design to Manufacture of Complex Building Envelopes Single-layer Envelopes, Standard Profile Systems, and 3D-printed Metal Nodes Alamir Mohsen, Lithium Designers GmbH		From WASTE via RECYCLE to REUSE: First valid steps on the pathway to better re-utilization of glass elements Markus Schoisswohl, Hegla New Technology GmbH & Co KG
16:35	Investigation of the joining area of additive manufactured glass structures on float glass Philipp Amir Chhadeh, Technical University Darmstadt			NEERO-Façade – A new concept of façade design with lightweight thin glass-plastic-composite panels Julian Hänig, TU Dresden		Developing a more sustainable glass recycling system Steve Whettingsteel, Krysteline Technologies Ltd
17:00						
Break / happy hour						
19:30–23:30						
Conference dinner						

FRIDAY JUNE 16

8:00		Onsite registration				
9:00	Research & Development	Tempering / Pre-Processing	Structural Glass Applications	Complex Geometry	Automotive and Display Units	IGU & Window Technology
	Effects of wind loads on the mechanical performance of vacuum glazing and its influence on the VIG design parameters Isabell Schulz, TU Darmstadt	Lasers vs. lasers: a comprehensive review over various laser-based glass processing technologies and their applications Erik Raita, Hypermemo Oy	Inherent stress concentration in patterned glass Marco Zaccaria, AGC Glass Europe	Methodology of multicriterial optimization of different models of geometrically complex glass facade Tatjana Kosić, University of Belgrade	Processing strategies for future automotive glazing and displays Matthias Loppacher, Glaston Switzerland	Thermoplastic spacer (TPS) - process requirements for optimal application Uwe Risle, Gennadi Schadrin, Glaston Germany
9:25	Thermal loads on Vacuum Insulated Glazing (VIG)-Hybrids - Experimental and numerical Investigation Franz Paschke, TU Darmstadt	Automated white haze detection in the tempering process Riku Färm, Glaston Finland Oy Peter Pfannenstill, Soft Solution	A Proposed Method for Predicting the Load Resistance of a Particular Type of Ceramic Enamel Glass Michael Brackin, Beason Brackin & Associates	Curved Glass: Modernizing Form and Function in Convex and Concave Applications Javier Sanchez-Gil, Cristacurva	Benefits of low weight and durable borosilicate glasses in transportation Hubert Wieseke, SCHOTT Technical Glass Solutions GmbH	Sustainable glass architecture through intelligent adhesive and sealant solutions Chris Davis, H.B. Fuller Kömmerling Christian Scherer, H.B. Fuller Kömmerling
9:50	Innovative FEM for the thermal analysis of architectural glazing exposed to solar radiation. Proposal for a simplified engineering approach Gianni Royer-Carlaghi, University of Parma	Investigation of Breaking Stresses on Cut-Edge Quality Adrian Lareida, IWF ETH, Zürich	Potential of thin glass-polycarbonate composite panels Sebastián Andrés López, Universität Siegen, Siegen, Germany	Influence of Poisson's effect on the determination of the bending tensile stress of thin glass Daniel Pfarr, TU Dresden	Main benefits from convection preheating in Automotive WS/ SR production Antti Aronen, Glaston Finland Oy	The Extent of Condensation: How much does Condensation Resistance (CR) Rating actually tell us? Helen Sanders, Alexandra Blakeslee, Technoform North America
10:15 Coffee break (45 mins) · one-to-ones · meeting with sponsors etc						
11:00	Research & Development	Tempering / Pre-Processing	Structural Glass Applications	Complex Geometry	Automotive and Display Units	IGU & Window Technology
	Numerical Modelling of UV-curing acrylate adhesives Alexander Pauli, University of the Bundeswehr	Investigation of cooling systems in a glass grinding process Adrian Lareida, IWF ETH, Zürich	Structural Performance of Glass to Iron-based Shape Memory Alloy Adhesive Shear Joints Considering the Effect of Temperature Zhikang Deng, ETH Zurich	Optimizing methodologies for cold bending of glass Valerie hayez, DOW Silicones	Application of ultrathin glass in cars–A feasibility study Wilma Dewald, Volkswagen AG	An enhanced model of thermo-mechanical loading on a Vacuum Insulated Glazing Antti Aronen, Glaston Finland Oy, University of Sydney
11:25	Assessment of different concepts for pre-stressing glass beams with iron-based shape memory alloy elements Vlad-Alexandru Silvestru, Institute of Structural Engineering, ETH Zurich	Partial processing and method imports from other industries Jukka Vuoristo, Volframi Oy Ltd	Laminated Glass vs. Laminated Safety Glass-influence of coatings, PV or fire resistance Gerald Siebert, University of the Bundeswehr	(Stop) Pushing the Envelope: Achieving the World's Largest Cold Bent Façade with Computational and 3-Dimensional Framing Keyan Rahimzadeh, Front, Inc., London	Business Case Studies	Vacuum insulated glazing - manufactured in vacuum Zheng DU, LEADUS Glass
				Insights to emissivity changes during tempering processes and its potentials for utilization Jorma Vitkala, SURAGUS		
11:50	Application of Effective Thickness for Finite Element Analysis of Laminated Glass Fins Adam Nizich, Eckersley O'Callaghan, New York, USA	How to change the tempering process control from settings to specifications Antti Aronen, Glaston Finland Oy	Safety concept for the assessment of different failure scenarios on load-bearing glass structures Nathalie Nießer, Universität der Bundeswehr	Coatings Technology & Applications	Optical Distortion in tempered glass—a claim or a feature and how to visualize it Michael Elstner, AGC Glass Europe, Eclat Digital	Glass and Sustainability in Buildings
				Roll-to-roll deposition of thermochromic coatings on flexible glass Jolanta Szelwicka, Fraunhofer FEP		Façade futures: Unplanned obsolescence and the looming threat posed by the facade to future building performance Stephen Selkowitz, Lawrence Berkeley National Laboratory
12:15 Lunch break (1,5hrs) · one-to-ones · other meetings						
13:45	Research & Development	Tempering / Pre-Processing	Structural Glass Applications	Coatings Technology & Applications	Business Case Studies	Glass and Sustainability in Buildings
	Characterization of polymeric interlayer materials in the laminated state using fibre optic sensors Christian Hammer, Thorsten Weimar, Universität Siegen	Probabilistic assessment of tempered glass failure based on high fidelity process and in-service modelling techniques Asier Iglesias, Mondragon Unibertsitatea	Wide span glass roofs: Design-Structural analysis–Errors Barbara Siebert, Dr. Siebert and Partner Consulting Engineers PartGmbH	Selective alloying of thin silver films: a strategy for next generation energy-saving windows Kostas Sarakinos, MIMS! Materials AB	Making glass flatness a standard Juan Pablo Martinez, Tecnoglass	How a holistic approach enables the production of Low-Carbon float glass, with an embodied CO2 footprint reduced by 40%? Hugues Lefevre, AGC Glass Europe
14:10	Appearance, properties and prevalence of small glass inclusions Timon Peters, Technische Universität Darmstadt	Breakage probability of nickel sulphide inclusions in heat strengthened glass Francis Serruys, Saint-Gobain	Finite element analysis of a glass structure in a superyacht superstructure Danie Wium, Ghent University	Multilayer Optical Films for Glazing Applications Raghu Padiyath, 3M Company	OPC 40301: Standardization of machine interfaces for flat glass processing Markus Schoisswohl, HEGLA GmbH Klaus Mühlhans, A+W Software GmbH	The Performance of Glass as Cladding Material in Long-Span Biome Structures Eoin Casserly, VOLUTA, Sligo
14:35	Energy Embodiment and Carbon Footprint of the process of thermally toughening glass Cenk Kocer, University of Sydney	Temper Scanner 5D: the new complete metrology scanner after furnace exit and its capabilities for furnace optimization and quality control Sandra Kugler, Viprotron GmbH	The BAM approach for the calculation of double and triple Insulating Glass Units Laura Galuppi, University of Parma	Quality Control for Conductive Coatings in Architecture, Automotive, Smart and Solar Glass Applications Across the Value Chain Marcus Klein, SURAGUS	Mobile digitizing at ease Klaus Mühlhans, A+W Software GmbH Kai Vogel, Viprotron	Glass Marking – Material Passport with Quality Control Functionality Graham Coult, Eckersley O'Callaghan
15:00 Coffee break (45 mins) · one-to-ones · other meetings						
15:45		Tempering / Pre-Processing		Coatings Technology & Applications	Business Case Studies	Glass and Sustainability in Buildings
		Correct temperature measurement during tempering process of different types of coated glass Ingo Stahlkopf, Optris GmbH		What are Protective Coatings for glass and what role do they play? Lukasz Pajdak, National Glass Association	Retrofitting of additional functions in the building cover through the use of mobile laser technology Thomas Rainer, HEGLA boraident GmbH & Co. KG	STRATO: structural and carbon-free interlayers shake up the safety-glass industry Elvira Reino, Satinal s.p.a.
16:10		Controlling Glass Quality During Heat Treatment Eric Hegstrom, LiteSentry			Sustainable and digital - on the way to a circular economy for glass and facades - creating a REAL digital twin Andreas Bittis, Saint-Gobain Glass	Sustainable products in float glass (with special focus on ECHA microplastics guideline–Annex XV) Michael Emonds, BASF/Chemetall
16:35						In situ detection of product age and argon concentration as measure of the re-use potential of insulation glass in buildings Elke Van Nieuwenhuijzen, Amsterdam University of Applied Sciences
17:00 Break / happy hour						
19:30–03:30 Farewell party						

PARTICIPANT REGISTRATION & HOTEL RESERVATION

Register now!

Participant registration is available at the GPD website. Two options of the conference registration fees are available.

The conference ticket option is 1,390 € + 24%VAT. It does not include the pre-networking activity on June 13 and the conference dinner on June 15.

The VIP ticket option is 1,540 € + 24%VAT. It includes the pre-networking activity and the conference dinner. See illustration below for more info on what is included in the registration fees.

CONFERENCE TICKET

1,390 €

+ service fee, + VAT 24%

- Two-day conference access GPD 2023
- All inclusive catering
- Networking platform activities
- Get-together party
- Farewell party

VIP TICKET

1,540 €

+ service fee, + VAT 24%

All the included in the conference ticket plus:

- Pre-networking event
- Conference dinner

During the registration process for the conference, you can also select and register for specific workshops and the evening networking activities. Participating in any workshop comes at an additional fee of 170 € + VAT 24%.

To register, go to <https://gpd.fi/events/gpd-finland-2023/registration-visitor-information/>

Hotel Reservation

Please, keep in mind that during the time of the Conference, Tampere hotels may be fully booked. For this reason, we encourage you to book your hotel room immediately after finalizing your registration. For your convenience, GPD has a limited number of rooms allocated in the hotels listed on our website at

<https://gpd.fi/events/gpd-finland-2023/registration-visitor-information/#hotels>

More information at <https://gpd.fi/events/gpd-finland-2023/>



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CONTACT INFORMATION:

Brown Onduso

Conference Manager
brown.onduso@gpd.fi
Tel. +358 40 773 9313

Mar Fernández-Aliseda Garrido

Conference Coordinator
mar.garrido@gpd.fi
Tel. +358 46 921 3833

Glass Performance Days

P. O. Box 25, 33731 Tampere, Finland
gpd2023@event.gpd.fi
Tel. +358 10 500 500

www.glaston.net
www.gpd.fi