



# ELEVCON 2023

THE 23RD INTERNATIONAL CONGRESS ON  
VERTICAL TRANSPORTATION TECHNOLOGIES

JUNE 20-22, 2023, GRANDIOR HOTEL, PRAGUE, CZECH REPUBLIC

## PROGRAMME




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# WELCOME

ELEVCON PRAGUE  
CONGRESS BY IAEE



## USEFUL INFORMATION

<b>REGISTRATION DESK HOURS:</b>	<b>Monday, June 19</b> 13:00 -18:00 <b>Tuesday, June 20</b> 08:00-14:00 <b>Wednesday, June 21</b> 08:00-14:00 <b>Thursday, June 22</b> 08:00-14:00
<b>COCKTAIL RECEPTION:</b>	<b>Tuesday, June 20</b> 18:30 The reception will take place at the Grandior Conference Center.
<b>CITY TOUR &amp; DINNER:</b>	<b>Wednesday, June 21</b> 17:30 We will meet in the lobby of the hotel at 17:30 sharp and start our tour of the city, which will take us through some of the major attractions of the city of Prague. We will end the tour at U Fleku brewery and restaurant in the Old Town Square. The restaurant was founded in 1499 and is considered the oldest brewery in Prague. The restaurant offers typical Czech dishes. <i>*Please come in comfortable shoes.</i>
<b>HI TECH AWARD:</b>	<b>Thursday, June 22</b> 12:30 
<b>CONFERENCE ENTRANCE AND NAME TAG:</b>	<b>Your name tag is your ticket</b> to the conference, lunch and activities. Please keep your name tag always with you during conference activities.
<b>MOBILE PHONES:</b>	Please keep your mobile <b>phone on silent</b> mode during the sessions.
<b>WI-FI</b>	User: ELEVCON Password: elevcon2023
<b>IAEE MEMBERSHIP:</b>	<b>Join IAEE</b> Membership applications may be submitted at the registration desk during opening hours.



TUESDAY, JUNE 20, 2023

## ELEVCON 2023 - PROGRAMME - DAY 1

TIME	FUNCTION
08:30-09:00	Registration and Morning Coffee
09:00-09:30	<b>OPENING SESSION</b> Welcome & Introductory Remarks: Dr. Marja-Liisa Siikonen, M.Sc, Ph.D., CEO, MLS Lift Consulting Ltd., Elevcon 2023 Chairwoman & Program Manager Gil Stier, IAEE Administrative Board Chairman
<b>SESSION 1:</b>	<b>ELEVATOR COMMUNICATION AND INFORMATION SYSTEMS</b> Chairperson: Dr. Stefan Gerstenmeyer, Global Cluster Lead, Traffic and Group Control Research & Development, TK Elevator, Germany
09:30-10:00	Subject: Emergency, Security, Communication, Monitoring (voice, video) Abstract: Future of Elevator Emergency Communication after Traditional Fixed Lines, 2g & 3g Networks Sunset Author: Petr Chovanec, 2N Telekomunikace a.s, Czech Republic Presenting: Mr. Petr Chovanec, 2N Telekomunikace a.s, Czech Republic
10:00-10:30	Subject: Communication, IoT, COP Common Operating System Abstract: IoT Takes the Elevator World into Industry 5.0 Author: Christian-Erik Thöny, CEDES Group, Switzerland Presenting: Mr. Christian-Erik Thöny, Member of Advisory Board CSEM, CEDES Group, Switzerland
10:30-11:00	Coffee Break
<b>SESSION 2:</b>	<b>ELEVATOR AND SHAFT COMPONENTS</b> Chairperson: Prof. Dr.-Ing. Mazen Ayoubi, Head of Research and Innovation, PohlCon GmbH, Germany
11:00-11:30	Subject: Shaft Components, Bracket design, Simulation, Earthquake, Seismic Abstract: The Simulation of Seismic Effects on Guide Rail Fasteners and Re-design of Brackets Authors: Abdülmelik Sancak <sup>1</sup> , Adem Candas <sup>2</sup> , C. Erdem Imrak <sup>3</sup> , Sefa Targıt <sup>4,1,2,3</sup> ITU Elevator Technologies Laboratory, Turkey, <sup>4</sup> ASRAY, Turkey Presenting: Prof. Erden Imrak, ITU, Elevator Technologies Laboratory, Turkey
11:30-12:00	Subject: Elevator Cab, Point Fixed Laminated Glass Abstract: Finite Element Analysis of Glass Panels with Bolted Connections Designed for a Running Car Authors: Prof. Eren Kalay <sup>1</sup> , C. Erdem Imrak <sup>1</sup> and Adem Candas, ITU Elevator Technologies Laboratory Presenting: Prof. Erden Imrak, ITU, Elevator Technologies Laboratory, Turkey
12:00-12:30	Subject: Elevator Component, Strength Evaluation, Adhesion Abstract: Evaluation of Elevator's Car Floor Using Adhesive Bonding Authors: Akira Nagao, Takashi Abe, Katsuhiro Shimada, Tomoki Kariya, Akihiro Yamaguchi, Satoshi Ihara, Hitachi Building Systems Co., Ltd., Hitachi, Ltd Presenting: Mr. Akira Nagao, Hitachi Building Systems Co., Ltd., Japan
12:30-13:30	Lunch

TUESDAY, JUNE 20, 2023

## ELEVCON 2023 - PROGRAMME - DAY 1

TIME	FUNCTION
<b>SESSION 3:</b>	<b>SAFETY COMPONENTS</b> Chairperson: Prof. Erdem Imrak, ITU, Elevator Technologies Laboratory, Turkey
13:30-14:00	Subject: Traction Machine Design, Brakes and Safety Components Abstract: Selection Criteria for Safety Components – Based on Elevator Brakes for Traction Machines Author: Alexander Hutler, Mayr Power Transmission, Mauerstetten, Germany Presenting: Mr. Alexander Hutler, Key Account Manager Elevator Brakes, Chr. Mayr GmbH + Co. KG, Germany
14:00-14:30	Subject: Electronic Sensors, EN Standards, Safety Components, Overview Abstract: The State-of-The-Art and Future of Safe Shaft Information Systems Author: Stephan Rohr, ELGO Batscale AG, Liechtenstein Presenting: Dr.-Ing. Stephan Rohr, Chief Technology Officer, ELGO Batscale AG, Liechtenstein
14:30-15:00	Subject: Rope Inspection, Objective Analysis, Testing Abstract: Elevator Wire Ropes Inspection: Regulations, State of the Art, Statistics Authors: Bruno Vusini, Daniel Rossi, Tommaso Bertani, AMC Instruments Presenting: Dr. Bruno Vusini, Managing Director, AMC Instruments, Italy
15:00-15:30	Subject: Safety, Monitor, Escalator, Computer Vision Abstract: Enhancing Escalator Safety with Optic-Fiber Sensing Technology Authors: William T.W. Au <sup>1</sup> , K.C. Cheng <sup>2</sup> , W.H. Chung <sup>2,3</sup> , Y.K. Yu <sup>3</sup> , H. Y. Tam <sup>2,1</sup> , The Electrical and Mechanical Services Department, Government and Hong Kong Special Administrative Region of the People's Republic of China (HKSAR), Hong Kong <sup>2</sup> , Avaron Technologies Limited, <sup>3</sup> The Hong Kong Polytechnic University, HKSAR Presenting: Prof. Hwa-Yaw Tam, The Hong Kong Polytechnic University, HKSAR, Hong Kong
15:30-16:00	Coffee Break
<b>SESSION 4:</b>	<b>WORKSHOP 1</b>
16:00-17:00	Subject: How to Setup Safety Devices in an Elevator Authors: Stephan Rohr <sup>1</sup> , Christopher Bormann <sup>2</sup> , <sup>1</sup> ELGO Batscale AG, Liechtenstein, <sup>2</sup> ELGO Electronic GmbH, Germany Presenting: Dr.-Ing. Stephan Rohr, Chief Technology Officer. ELGO Batscale AG, Liechtenstein
18:30	Reception



WEDNESDAY, JUNE 21, 2023

## ELEVCON 2023 - PROGRAMME - DAY 2

TIME	FUNCTION
08:30-09:00	Registration and Morning Coffee
<b>SESSION 5:</b>	<b>MODERNIZATION AND RIDE COMFORT</b> Chairperson: Dr. Albert So, International Association of Elevator Engineers (HK-China Branch), Visiting Professor in Lift Engineering Faculty of Arts, Science & Technology, University of Northampton, UK
09:00-09:30	Subject: Modernization, Site Survey, Method Abstract: Digital Elevator Survey – Improving Modernization Site Surveys Author: Mr. Darren Batey, Kone Industrial Ltd., Finland Presenting: Mr. Mikko Kontturi, People Flow Planning Expert, KONE Industrial Oy, Finland
09:30-10:00	Subject: Ride Comfort, Regression Analysis Abstract: Estimation of Parameters Affecting Ride Comfort in Elevators Authors: Keisuke Terada, Yoshitake Kamijo, and Yoshiyuki Iwata, Toshiba Infrastructure Systems & Solutions Corporation Presenting: Mr. Keisuke Terada, Toshiba Infrastructure Systems & Solutions, Japan
10:00-10:30	Subject: Testing, Acoustical Impairment, Noise and Vibration to The Shaft Abstract: Compare Study on The Performance of Acoustic Insulation Element for Guide Rail Connections Using Anchor Channels with Channel Bolts Authors: Mazen Ayoubi <sup>1</sup> and Sacha Aobotta <sup>1</sup> , PohlCon GmbH, Berlin Presenting: Prof. Dr.-Ing. Mazen Ayoubi, Head of Research and Innovation PohlCon GmbH, Germany
10:30-11:00	Coffee Break
<b>SESSION 6:</b>	<b>ELEVATOR GROUP CONFIGURATION AND DESIGN</b> Chairperson: Mr. Raymond Spiteri, Managing Director, TVI Services Ltd.
11:00-11:30	Subject: Elevator Group Configurations, Divider Beam, Modular System, Design Standard, Quality Control Abstract: Divider Beam Design as Part of The Standard Elevator Design Author: Michael Merz, Hilti Corporation, Principality of Liechtenstein Presenting: Dr.Sc.techn. Michael Merz, Competence Manager, Hilti Corporation, Principality of Liechtenstein
11:30-12:00	Subject: Optimal Elevator Design, Space, Consultant Abstract: Design Challenges in Asia due to Manufacturers' Differences Authors: K. Rajah Venkatraman, Vinay Venkatraman, Fortune Consultants, India Presenting: K. Rajah Venkatraman, Vinay Venkatraman, Fortune Consultants, India
12:00-12:30	Subject: Elevator Design, Dual Cars, Multifunctional Abstract: Multifunctional Lift Design for Slender Luxury Residential Towers Author: Hongliang Liang, Aliang Lift Design Studio Ltd, UK Presenting: Mr. Hongliang Liang, Vertical Transportation Consultant, Aliang Lift Design Studio Ltd, UK
12:30-13:30	Lunch

WEDNESDAY, JUNE 21, 2023

## ELEVCON 2023 - PROGRAMME - DAY 2

TIME	FUNCTION
<b>SESSION 7:</b>	<b>MAINTENANCE AND CONDITION MONITORING</b> Chairperson: Mr. Sefa Targit, Vice President, MAKFED Turkish Machinery Federation, Turkey
13:30-14:00	Subject: Maintenance, ASME Standard, Tasks Abstract: Vertical Equipment Maintenance Author: John W. Koshak, QEC, CEI eMCP, LLC - Managing Member, USA Presenting: Mr. John W. Koshak, QEC, CEI eMCP, LLC, Managing Member, USA
14:00-14:30	Subject: Maintenance, Predictive, False Alarms, Fault Data Abstract: Condition Monitoring of Elevator Using Deep Learning and Frequency Analysis Approach Authors: Krishna Mohan Mishra <sup>1</sup> , John-Eric Saxen <sup>2</sup> , Jerker Bjorkqvist <sup>2</sup> , and Kalevi J. Huhtala <sup>1</sup> , <sup>1</sup> Unit of Automation Technology and Mechanical Engineering, Tampere University, Tampere, Finland, <sup>2</sup> Department of Information Sciences, Abo Akademi University, Turku, Finland Presenting: Dr. Krishna Mishra, Unit of Automation Technology and Mechanical Engineering, Tampere University, Tampere, Finland
14:30-15:00	Subject: Elevator Monitoring with Computer Vision, Detect Objects Abstract: Automatic Detection of Objects Blocking Elevator Doors Using Computer Vision Authors: David Baumgartner <sup>1</sup> , Ignace Jordens <sup>2</sup> , Daniel Wilfing <sup>3</sup> , Oliver Krauss <sup>4</sup> , Dorfmeister <sup>1</sup> , Gerald Zwettler <sup>1</sup> , <sup>1</sup> University of Applied Sciences Upper Austria – Research Group Advanced Information System and Technology (AIST), Austria, PXL University of Applied Sciences and Arts, Belgium, <sup>3</sup> VIEW Promotion GmbH (Ltd) Presenting: Mr. Gerald Zwettler, Senior Researcher, University of Applied Sciences Upper Austria, Advanced Information System and Technology (AIST), Austria
15:00-15:15	Coffee Break
<b>SESSION 8:</b>	<b>WORKSHOP 2</b>
15:15-16:15	Subject: Reverse Engineering - Remote Monitoring of Elevators and Authorised Third-Party Access to Elevator Data Author: Esko Kilpinen, Modusolutions, Finland Presenting: Mr. Esko Kilpinen, Modusolutions, Finland
17:30	City Tour & Dinner



THURSDAY, JUNE 22, 2023

## ELEVCON 2023 - PROGRAMME - DAY 3

TIME	FUNCTION
08:30-09:00	Registration and Morning Coffee
<b>SESSION 9:</b>	<b>ELEVATOR PLANNING AND SIMULATION</b> Chairperson: Mr. Robert Nicholson, President, Architectural Elevator Consulting, LLC, USA
09:00-09:30	Subject: Elevator, Energy Consumption, Simulation Abstract: A Procedure to Estimate Elevator Energy Consumption Using Elevator Traffic Simulation Authors: Janne Sorsa, KONE Corporation, Finland Presenting: Dr. Janne Sorsa, D.Sc. (Tech), KONE Corporation, Finland
09:30-10:00	Subject: Elevator Design, High Schools, Case Study Abstract: Vertical High Schools - The Future of Failure? Authors: Scott Hampson, Arup, Australia Presenting: Mr. Scott Hampson, Vertical Transportation Leader, Arup, Australia
10:00-10:30	Subject: Elevator and Escalator Design, Traffic, Simulation Abstract: Simulation Based Design of Transportation Systems in Buildings Authors: Henri Hakonen, Lic.Sc. (Tech) & Juha-Matti Kuusinen, D.Sc. (Tech), and Janne Sorsa, D.Sc. (Tech), KONE Corporation, Finland Presenting: Mr. Henri Hakonen, Lic.Sc. (Tech), KONE Corporation, Finland
10:30-11:00	Coffee Break
<b>SESSION 10:</b>	<b>EMERGENCY AND EVACUATION</b> Chairperson: Dr. Janne Sorsa, Head of People Flow Planning, KONE Major Projects
11:00-11:30	Subject: Evacuation, EN and ISO Standards Abstract: Evacuation Lift Standardization Author: Ari Kattainen, KONE Technology and Innovation, Finland Presenting: Mr. Ari Kattainen, Leading Expert, Codes and Standards, KONE Technology and Innovation, Finland
11:30-12:00	Subject: Seismic Detectors, Self-Diagnostics, Auto Recovery Abstract: Enhancement of Auto-Recovery Function for Elevators After Earthquake Author: Shohei Kondo, Shuichi Hayakawa and Junji Takeda, Toshiba Elevator and Building Systems Corporation, Japan Presenting: Mr. Shohei Kondo, Toshiba Elevator and Building Systems Corporation, Japan
12:00-12:30	Subject: Hazard, Earthquake, EN 81-77 Abstract: A Field Study on the Damage of Elevators After the Twin Earthquakes Authors: Ferhat Çelik <sup>1</sup> , C. Erdem Imrak <sup>2</sup> , and Sefa Targıt <sup>3</sup> . <sup>1</sup> Blain Hydraulic GmbH, Heilbronn, Germany <sup>2</sup> ITU Elevator Technologies Laboratory, <sup>3</sup> ASRAY, Turkey Presenting: Mr. Sefa Targıt, General Manager of ASRAY and Vice President of MAKFED, Turkey
12:30-12:45	High Tech Award Elevatori Presenting: Eng. Matteo Volpe, Editor, Elevatori Magazine, Italy

THURSDAY, JUNE 22, 2023

## ELEVCON 2023 - PROGRAMME - DAY 3

TIME	FUNCTION
12:45-13:45	Lunch
<b>SESSION 11:</b>	<b>FUTURE ELEVATOR SYSTEMS</b> Chairperson: Dr. Marja-Liisa Siikonen, M.Sc, Ph.D. CEO, MLS Lift Consulting Ltd. & Elevcon 2023 Chairwoman & Programme Manager , Finland
13:45-14:15	Subject: Elevator, Space and Moon Environment Abstract: Elevators On the Moon Are Closer Than You Think - Vertical Transportation Space Era Authors: Yuval Valiano-Rips <sup>1</sup> , Maya Glickman-Pariente <sup>2</sup> , <sup>1</sup> Rips Elevators Group (Rips Engineering Ltd), Israel, <sup>2</sup> SPACECIALIST Ltd, Israel Presenting: Mr. Yuval Valiano-Rips, Rips Elevators Group, Rips Engineering Ltd, Israel
14:15-14:45	Subject: Ropeless, Vertical and Horizontal Movement History Abstract: A Brief History of Multidirectional, Rope-less Elevator Systems Author: Dr. Lee E. Gray, The University of North Carolina at Charlotte, USA Presenting: Dr. Marja-Liisa Siikonen, CEO, MLS Lift Consulting Ltd. & Elevcon 2023 Chairwoman & Programme Manager , Finland
14:45-15:15	Subject: Ropeless, Hoisting Systems, Simulation, Power Consumption, Power Failure Abstract: Study on Linear Permanent Magnet Synchronous Machines for Ropeless Lifts Authors: Albert So <sup>1</sup> and W.L. Chan <sup>2</sup> , International Association of Elevator Engineers (HK-China Branch), <sup>1</sup> University of Northampton, <sup>2</sup> The Hong Kong Polytechnic University, UK, Hong Kong Presenting: Dr. Albert So, International Association of Elevator Engineers (HK-China Branch), Visiting Professor in Lift Engineering Faculty of Arts, Science & Technology, University of Northampton, UK
15:15-15:30	Closing Remarks





### 2N TELEKOMUNIKACE a.s.

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Director: Michal Kratochvil, CEO

Marketing Manager: Vit Kovarik, Marketing Communication Director

### About 2N TELEKOMUNIKACE a.s.

2N have over 30 years of experience developing high quality, innovative products. Our portfolio includes intercoms, answering units, lift systems and access control readers.



### ALBERTO SASSI S.p.A.

Address: Via Guido Rossa,1 40053 Loc. Crespellano Valsamoggia BO Italy

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Website: www.sassi.it

Director: Matteo Lomonaco

Marketing Manager: Veronica Franzoni

### About ALBERTO SASSI S.p.A.

Alberto Sassi S.p.A. company is part of Sassi Holding Group.

We produce permanent magnets motors, asynchronous motors , brakes and safety brakes for our geared and gearless machines. We provide fully assistance and control over our machines.



### Elevator World Inc.

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Website: www.elevatorworld.com

Director: T. Bruce MacKinnon

Marketing Manager: Bülent Yilmaz

### About Elevator World

Since, Elevator World, Inc. has been the premier publisher for the global vertical transportation industry. It employs specialists in Mobile, Alabama, and has technical and news correspondents around the world.



### Elevatori Magazine

Address: Via Di Vittorio, 21, 20060 Vignate, Milano

Tel: +39 3386534543

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Website: www.elevatorimagazine.com

Director: Matteo Volpe

Marketing Manager: Maddalena Parotelli

### About Volpe Editore Srl

Elevatori Magazine – The International Elevator Magazine is one of the leading magazines in the international vertical transport sector. The magazine is ranking second in importance and circulation worldwide and ranking first in Europe and Italy. Today Elevatori Magazine is recognised by the vertical transportation operators as the leader from the technical viewpoint.

Elevatori is a modern, dynamic magazine, committed to a constant updating of its readers concerning the latest techniques and trends in the design and development of vertical transportation means.



### Interempresas Media S.L

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Communication Advisor: Ramon Cardona

### About Interempresas Media S.L

The No. 1 industry platform in Spanish language with the widest editorial variety in specialized professional press with the widest diffusion and segmentation in Spanish language.



**LIFTjournal (Verlagsanstalt Handwerk)**

Address: Auf'm Tetelberg 7, D-40221 Düsseldorf, Germany  
Tel: +49 211 39098-969  
E-Mail: lotze@lift-journal.de  
Website: www.lift-journal.com  
Director: Dr. Rüdiger Gottschalk  
Marketing Manager (Editor-in-Chief): Ulrike Lotze

**About LIFTjournal**

LIFTjournal is the trade medium of the European elevator industry. The bilingual trade journal (German/English) is published six times a year - also as digital magazine. The website provides up to-date and professional information.

**PohlCon GmbH**

Address: Nobelstrasse 51, 12057 Berlin, Germany  
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Website: www.pohlcon.com  
Directors: Daniela Veit, Oliver D. Gessert  
Marketing Manager: Julian Baasch

**About PohlCon GmbH**

With our brands PUK, JORDAHL and H-BAU Technik we offer a broad product portfolio from shell and existing construction to technical building equipment – even as customized solutions.

**SERAPID Deutschland GmbH**

Address: Wilhelm-Frank-Str.30, 97980 Bad Mergentheim, Germany  
Tel: +49 7931-9647-0  
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Website: www.serapid-liftsystems.com  
Director: Klaus Würkner  
Marketing Manager: Jutta Schneider

**About Serapid**

SERAPID offers a complete range of Car, Truck, Goods and special lifts powered by our unique Rigid Chain Technology (RCT), which provides significant key advantages over traditional technologies.

**TEK GÜNDEM ASANSOR**

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Director & Marketing Manager: TURHAN KORKMAZ

**About Tek Gündem Asansor**

Tek Gündem Asansor started its broadcasting life in 2014. Published every 15 days, our newspaper conveys the technologic developments and changes in the Turkish elevator industry and the global elevator industry to its readers. Our Goal is to be bridge between elevator sector, legislators and NGO.



# NOTES

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