

Preface

The International Elevator and Escalator Symposium (IEES) is organized by Liftinstituut Solutions B.V. and Elevator World Inc., fully independent, well-known institutions that have many years of experience in the lift market.

The inaugural IEES event was held in Istanbul on November 15-16, 2018. Professionals from the elevator and escalator industry, architects, developers and owners were invited to attend the program, which explored the topics of *Safety in Vertical Transportation and New Technologies*. Presentations were delivered by 20 international experts over the course of the two-day event, which ensured a platform for gaining knowledge and meeting with professionals. This book contains the full papers delivered during the symposium, in the order in which they were presented. Additionally, IEES offered technology companies the opportunity to showcase their new projects and product details in an expo setting.

The IEES will be an annual event held in a different country each year, always presented in the English language. The second annual IEES event is planned for November 2019 in Las Vegas, Nevada, U.S.A.

The IEES is proud to donate a portion of the proceeds from this event to the Elevator Escalator Safety Foundation (EESF), the leading resource for educational programs that teach children and adults how to properly ride elevators, escalators and moving walks. EESF is a nonprofit organization founded in 1989 in the United States by the National Elevator Industry, Inc. (NEII®), the National Association of Elevator Contractors (NAEC), NAESA International and Elevator World, Inc. For more information on this organization and its programs, please visit www.eesf.org.

Organizing companies Elevator World Inc. and Liftinstituut Solutions B.V. are longtime industry advocates. Elevator World has been the voice for the international building transportation industry since 1953. Readers and advertisers are dedicated to Elevator World's network of magazines and websites because they are considered the most credible sources of industry news and information, covering all corners of the "elevator world". The most well-respected professionals in the industry help write, review and influence Elevator World publications, providing readers with news and market information they can trust.

The independent and highly skilled consultants at Liftinstituut Solutions B.V. work hard every day to make sure millions of people around the world can use vertical transportation safely, comfortably, and without any problems. Motivated by safety and a passion for technology, Liftinstituut helps building managers and owners, as well as producers worldwide, to make the right decisions on construction, maintenance and modernization. Its focus is not only on the installation, but also on its environment.

Table of Contents

The Role of Risk Assessment in Innovative Product Development	9
<i>by Louis Bialy, Louis Bialy & Associates, U.S.A.</i>	
Remove the Rope, Remove Limitations	19
<i>by Michael Ridder, Materials Services, Thyssenkrupp Elevator, Germany</i>	
24/7 Connected Services: Improving the Flow of Urban Life	27
<i>by Jean Paul Bourgeat, SEMA Service Director, KONE Elevators & Escalators, France</i>	
What Makes an Elevator Brake Safe and Reliable?	35
<i>by Sebastian Steinert, Key Account Manager – Elevators, Mayr GmbH, Germany</i>	
Electronic Safety Actuator	45
<i>by Pascal Rebillard, Senior Manager, Systems Modeling & Simulation, Otis SCS, France; Peter Herkel, Fellow, Safety Systems and Control, Otis CEC, Berlin, Germany; Ruben Sanchez Munoz, Design Engineer, Otis CEC, Madrid, Spain; and Randy Dube, Director, Safety Systems, Otis GEE, Farmington, U.S.A.</i>	
Integrated Lift Control System	57
<i>by Melih Aybey, General Manager, Aybey Elektronik A.S., Turkey</i>	
Impact of Cultures on Elevating	63
<i>by TAK Mathews, Principal Consultant, TAK Consulting Pvt Ltd., India</i>	
Method for Managing Maintenance	69
<i>by John W. Koshak, Managing Member, eMCP LLC., U.S.A.</i>	
Inside the Mind of a Hacker	79
<i>by Mark Hearn, Director, IoT Security, Irdeto, Canada</i>	
CAFM, an Industry Challenge.	91
<i>by Max Guijt, Owner and Managing Director, Shanderry Elevator Escalator Consultants Ltd., Ireland</i>	
Integral Safety Vision	97
<i>by Robert Kaspersma, Product Certification Specialist, Liftinstituut B.V., The Netherlands</i>	
Connecting Equipment, Customers and Passengers: The Internet of Elevators & Escalators	105
<i>by Matthias Schiller, Head of Marketing & Sales, Schindler Digital Business AG, Switzerland, and Dr. Clarissa Falge, Innovation Manager, Schindler Digital Business AG, Switzerland</i>	
Fire Homologations	113
<i>by Samuel Lopez, Product Operations Manager, Fermator S.A., Spain</i>	
Studies on Characteristics and Production of Concentrated Magnetic Flux-Type Elevator Traction Machine Composed of Non-Rare Earth Magnet	123
<i>by Sung-In Park, Jong-Wan Choi and Sung Joon Bae, TM Development Team, Hyundai Elevator, Korea</i>	
Minimizing the Mechanical Losses on Sliding Door Systems	135
<i>by Emre Köroğlu, Deputy General Manager, Merih Asansor A.S., Turkey</i>	

Voluntary Egress Elevators, Enhancements to the 2004 CTBUH Guideline	147
<i>by Johannes de Jong, Founder & EVP, Elevating Studio Pte. Ltd., Finland</i>	
A New Approach Necessary to Keep All New Lifts Safe and Reliable	159
<i>by Luciano Faletto, Secretary General, EFESME, Belgium</i>	
Automated Emergency Detection in Elevators	173
<i>by Daniel Wilfing, Research and Development, VIEW Promotion GmbH, Austria, and Oliver Krauss, Advanced Information Systems and Technology, AIST University of Applied Sciences, Austria</i>	
Safety Issues on Panoramic Cars with Handrails Mounted Directly on Stiff SentryGlas®Plus (SGP) Laminated Glass Elements	183
<i>by Dr. Iraklis Chatziparasidis, Senior Research Engineer, KLEEMANN Complete Lifts SA, Greece, and Dimitrios Giagopoulos, Mechanical Engineering Department, University of Western Macedonia, Greece</i>	