

# TestForum 2023

Tuesday November 28th and Wednesday November 29th, 2023

# Best Western, Vilnius, Lithuania

A Nordic event for exchange of experience and know-how within the field of production test of electronics.

Meet colleagues and experts, gain knowledge about trends and best practices in the area of test of electronics.





# TestForum 2023 November 28th and 29th Vilnius, Lithuania

## Dear Invitee,

On behalf of the Nordic Test Forum committee, it is my pleasure to invite you to Best Western, Vilnius, Lithuania to the annual NTF conference, TestForum 2023.

Again, this year, we have managed to put together an excellent technical program for TestForum, focusing on test automation, test strategies, test quality, structural test, functional test and JTAG based test. The Keynote focusses on quality assurance in automotive industry and connecting bridges with non-automotive electronics manufacturing. The day 1 technical program ends with a panel session about artificial inelegance impact for electronics test engineer future. No question that the topic is one of the hot issues for many of us in test engineering in present years.

Among the presenters, we find experts from Austria, Great Britain, Italy, Lithuania, Spain, France, Germany, The Netherlands, Norway, Sweden, and Hungary.

This year's Keynote speaker is Shayan Ali, managing director at Continental Automotive Lithuania. The title of the keynote is

"Intertwined Future: Connecting Bridges Between Automotive and Non-Automotive Electronics Manufacturing Sectors in Lithuania"

The conference, the conference dinner and the mini exhibition offer great opportunities for technical and business discussions and networking.

On behalf of the program committee, I am looking forward to seeing you at TestForum 2023 in Vilnius on November  $28^{th}$  and  $29^{th}$ , 2023

Yours sincerely

Knut Båtstoløkken

Chairman of Nordic Test Forum

Knut Batstolekken



# **Keynote Speaker**



Shayan Ali,
Managing director Continental Automotive Lithuania

Meet Shayan Ali, the dedicated Managing Director of Continental in Lithuania, with an impressive 25-year tenure at the company. Shayan's unwavering commitment to Lithuania's growth and success has earned him recognition, including the Global Lithuanian Leader award for his contributions to investments in the country. Shayan hails from the Continental Chicagoland area and moved to Lithuania with his Lithuanian wife in 2017 to establish the greenfield plant for Continental. He strongly promotes innovation and collaboration, empowering his team to drive advancements in Lithuania's automotive sector.



#### **Nordic Test Forum in Brief**

*TestForum* is an annual event that *Nordic Test Forum (NTF)* runs every fall/early winter. *TestForum* typically has 3-thematic areas and cover a broad balance of test and inspection.

TestForum has its roots back the late eighties, where it originated as an event for the Norwegian electronics industry. However, from the late part of 2001 a group of people from Norway, Sweden and Denmark established the network, Nordic Test Forum. Later, this activity (including the TestForum event was extended to include all the Nordic countries. The language of the official presentations is English. Content and focus of the TestForum varies over time, but always within topic areas in focus at a given point in time.

TestForum has its main emphasis on issues relevant to production managers, engineers and technicians working in the fields of production, test, inspection, and validation of electronics. At TestForum events we offer technically relevant presentations on methodology, tools, modules/instruments, and available technology. The interaction between users and suppliers within the focus areas is an important asset of TestForum, and this balance and interaction is pursued in presentations, panel discussions, and in the planning of the events.

## **TestForum Aims at:**

- Creating and sustaining a relevant, balanced, and coherent interaction between users as well as between users and suppliers of solutions for test, inspection, validation, and production of electronics.
- Providing an up-to-date view on new methodologies and tools for relevant test, inspection, validation, and production of electronics.
- Establishing a relevant and balanced view on equipment, systems, tools, and software from tool vendors in the domain.

## **Target Audience of TestForum**

Engineers and technicians, managers, and planners within the fields of electronics production and test, inspection, and validation. Also includes decision makers in organizations that procure equipment, tools and systems for production and test, inspection, and validation of electronics.

## **Executive Committee of TestForum event and NTF organization**

Knut Båtstoløkken
Birger Schneider
Bjørn B Larsen
Artur Jutman
Erik Larsson
Lars Kongsted-Jensen
Mats Klarholm
Kitron AS, Norway (Chairman)
CHAMAJ, Denmark (Treasurer)
NTNU, Norway (Secretary)
Testonica Lab, Estonia
Lund University, Sweden
EP-TeQ A/S, Denmark
Columbia Elektronik, Sweden

Mattias Ericsson AddQ, Sweden

Mick Austin JTAG Technologies, Finland

Mika Pussinen Nokia, Finland
Paulius Musteikis UAB Kitron, Lithuania
Raimedas Sodaitis EP-TeQ UAB, Lithuania
Stig-Gunnar Jensen Delta Electronics, Norway

Thomas Goetz Keysight Technologies (associate member), Germany



#### **Become a Member of Nordic Test Forum**

If you are involved in production test, validation test, and inspection of electronics and your professional work is related to activities in the Nordic countries as a test professional, design engineer, manufacturer, supplier of solutions, consultant, etc., you may register as member of Nordic Test Forum (NTF) to benefit from:

- Exchange of know-how in testing
- Increased contact network in the Nordic countries
- Surveillance and information of international activities in the area of test and inspection
- Discounts at NTF seminars and TestForum events
- Membership list

Please register on the WEB page: <a href="http://www.NordicTestForum.org">http://www.NordicTestForum.org</a>

# **TestForum 2023 Local Organizer**

The local organizer is:

Raimedas Sodaitis EP-TeQ UAB Jurbarko g. 2A LT-47138 KAUNAS Lithuania

Phone: +370 620 40226 E-mail: rs@ep-teq.com



# **Technical Program of TestForum 2023**

# Nordic Test Forum (NTF) Annual Assembly, November 27<sup>h</sup> 2023

The NTF organization holds an annual general assembly a day before the TestForum conference. This year it will be held on **November 27**th at **20:00**. The agenda and motions will be dispatched to the members in a separate mailing.

The official program of TestForum 2023 starts on Tuesday, November 28<sup>th</sup>, 2023, see below.

# Tuesday, November 28th, 2023

Time	Titles	Speakers or additional info	
08:15-08:30	Registration		
08:30-08:40	Welcome / Introduction	Knut Båtstoløkken	
08:40-09:40	Key Note Session	Chairman: Knut Båtstoløkken	
08:40-09:40	Intertwined Future: Connecting Bridges Between Automotive and Non-Automotive Electronics Manufacturing Sectors in Lithuania	Shayan Ali, Continental Autonomous Mobility Lithuania & Continental Automotive Lithuania	
09:40-10:20	Exhibitor Forum: short presentations	Chairman: Mick Austin	
10:20-11:00	Coffee Break / Exhibition (short)		
11:00-12:30	Session 1: Structural test I	Chairman: Stig-Gunnar Jensen	
11:00-11:30	1.1 Parallel High Speed Flashing in ICT	Bernard Fleck, Teradyne	
11:30-12:00	1.2 IST Interconnect Stress Test – an accelerated test method for bare board reliability verification	Hermann Reischer, Polar Instruments	
12:00-12:30	1.3 How to test Backplanes on the Flying Probe?	Lothar Diez, SPEA	
12:30-13:30	Lunch		
13:30-15:00	Session 2: Functional test	Chairman: Paulius Musteikis	
13:30-14:00	2.1 Testing modern RAM architectures using Boundary Scan and other embedded technologies	Jan Heiber, GÖPEL electronic GmbH Aristotele Pangan, Continental Lithuania UAB	
14:00-14:30	2.2 How ICT testers and Flashing stations can be integrated into a fully automated Working cell		
14:30-15:00	2.3 Cost-effective manufacturing test of IEEE802.3bt Powered Devices	Daniel Rhodin, E-Sharp AB	
15:00-15:40	Coffee Break / Exhibition		
15:40-17:10	Session 3: Various	Chairman: Raimedas Sodaitis	
15:40-16:10	3.1 Al driven data recognition, unification and smart correlation automation	Frits Wibbelink, QualityLine	
16:10-16:40	3.2 Secure reuse of DfT during operation	Erik Larsson, Lund University	
16:40-17:10	3.3 AOI – Depth from focus and AOM solution for pin test on THT. AXI – AI and ICT inline solutions	Anthony Wang, TRI Test Research Europe GmbH	
17:10-17:40	Fruit & Refreshments / Exhibition		
17:40-19:00	Panel debate:	Panel moderator: Birger Schneider	
	How will artificial intelligence change the work of test engineers?		



# Wednesday, November 29th, 2023

Time	Titles	Speakers or additional info	
08:30-10:00	Session 4: Structural test II	Chairman: Erik Larsson	
08:30-09:00	4.1Tracking down the error devil! Inline X-Ray inspection of solder joints.	Andreas Türk, GÖPEL electronic GmbH	
09:00-09:30	4.2 The Fast Electrical Fusion Testing with EFx Technology	Frank Grossmann, ATEip GmbH	
09:30-10:00	4.3 Flying Probe solutions	Alessandro Beiletti, Seica	
10:00-10:45	Coffee Break / Exhibition		
10:45-12:15	Session 5: Industrialization and handling	Chairman: Mattias Ericsson	
10:45-11:15	5.1 Industrialization - key to success	Mads Dahl, Virinco Technology	
11:15-11:45	5.2 SPRINTAffordable in-circuit function test plat- form	Fredrik McKibben, Elprint	
11:45-12:15	5.3 Building on top of the OpenTAP open-source test automation framework	Göran Johnsson, GJC Test & Software	
12:15-13:30	Lunch		
13:30-15:00	Session 6: Fixturing and test interfaces	Chairman: Mads Klarholm	
13:30-14:00	6.1. Signal fidelity starts with probes. Welcome to innovative probing technology.	William Baars, CN Rood	
14:00-14:30	6.2 The superprobe technology patented by Equip- Test	Szabó Dóra, Equip-Test	
14:30-15:00	6.3 How the Right Interconnection Method is Critical in Helping Achieve Common Core ATE Goals	Gary Clayton, MacPanel	
15:00-15:10	Closing Session: TestForum concluding remarks	Knut Båtstoløkken Kitron	

## **Exhibition**

As part of TestForum 2023, a mini exhibition takes place in frames of the TestForum event. Here, test equipment and solution vendors as well as other essential suppliers to the test community present their tools and methodologies related to production test.

Exhibitors can make arrangements with NTF about exhibition space. If no special requirements have been requested, a table of about 60x120 cm, as well as space for posters or similar material will be provided.

Every exhibitor will be given approximately 3-minute slot, depending on the number of exhibitors, in the beginning of the official program for a brief introduction with maximum 3 slides. We call it the "elevator speech", where the presenter in the time of a normal elevator ride has to get the essentials of a company's offerings across to the attendee community.



## Registration and hotel booking

The **Conference Fee** is **EUR 625 for NTF members**, **EUR 345 for students** and **EUR 720 for others**. The fee includes participation, food and refreshments from Tuesday morning to Wednesday afternoon as well as forum proceedings on a USB memory stick. **Exhibitors pay EUR 1125**, which also includes the participation of a single person.

Credit card is the preferred payment method. Alternatively, the seminar fee may be invoiced directly to the organization, from which the participant comes. In the event of cancellation after the final registration date, or in the event of failure to appear, the entire fee is still due. On request, another person from the same organization can participate instead.

## Registration deadline:

We accept registrations up to Thursday November 23th, 17:00 CET.

Registration for TestForum 2023 can be done through the NTF website by using the following link.

https://testforum.nemtilmeld.dk/4/

Alternatively, you can contact the TestForum secretariat at

Att.: Jytte Schneider Tel.: +45- 2579 1120

E-Mail: jytte.schneider@nordictestforum.org

Please indicate, whether you register as:

•	NTF member	EUR 625
•	A non-member	EUR 720
•	A student (with valid student ID	EUR 345
•	An exhibitor, i.e., want to exhibit in the small exhibition	EUR 1125

All fees are inc. VAT

## **Booking of hotel rooms**

The hotel rooms are booked through the conference hotel. Best Western Hotel, Vilnius, directly on their website: The room rate is paid directly by each participant to the hotel (i.e., not included in the seminar fee). Room rates are:

- 65 EUR/night Standard room including breakfast.
- 75 EUR/night Upgraded room including breakfast.

When making the booking on the Best Western Hotel for granted participation price reservations should be send to the email: <a href="mailto:hotel@vilniushotel.eu">hotel@vilniushotel.eu</a> and make the reservation before November 14<sup>th</sup> to receive the preferred rate at the hotel.

Booking of rooms at the conference hotel is **not** mandatory for participation at the seminar. If you are unable to get a room at the conference hotel, there are several other hotels in the vicinity of the venue.



## Best Western, Vilnius, Lithuania

TestForum 2023 will take place at Best Western, which is centrally located in Vilnius center.



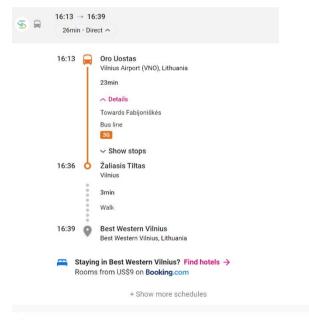
More details about the hotel at:

https://www.bestwestern.com/en\_US/book/hotels-in-vilnius/best-western-vilnius/propertyCode.91401.html?gclid=Cj0KCQjwgNanBhDUARIsAAelcAspjHP-mopG26\_r5QCov1V6hH5DnRdH1Amth2J1zl92UeGVcmzSHAg0aAlFSEALw\_wcB

## How to get to the Best Western Hotel

Hotel is located in Vilnius center about 10 km from Vilnius airport:

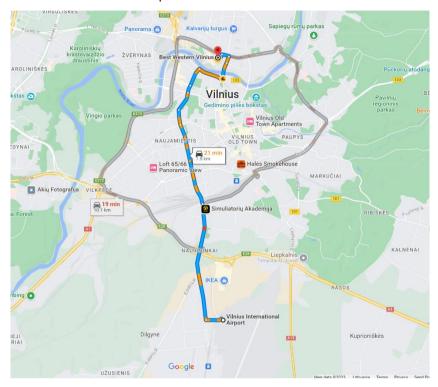
By bus: Take 3G bus from Airport







By car or taxi: Takes from 10 to 30 minutes depends on traffic.



**Welcome to Nordic Test Forum in Vilnius 2023**