Dear Ladies and Gentlemen, Dear Colleagues,

RubberCon 2017 with the theme “Rubber products for automotive” will be focused on topics which might be of interest to people from rubber, automotive and related industries, from R&D organizations, testing laboratories and educational institutions. This event reflects the rising importance of automotive industry which is apparent not only in the Czech-Slovak region.

The conference itself gives an opportunity to bring together people from different professions around the world. It is not by chance that Prague was chosen as the conference venue. With its location at the heart of Central Europe, it is easily accessible by all means of transportation.

We wish all participants fruitful professional discussions and a pleasant time in Prague as well as in the Czech Republic.

Vratislav Ducháček
Chairman of the Rubber Division of the Czech Society of Industrial Chemistry

Ivan Hudec
Chairman of the Rubber Division of the Slovak Society of Industrial Chemistry

Antonín Kuta
Chairman of Programme Committee
# Program Overview

**Tuesday, May 23, 2017**

<table>
<thead>
<tr>
<th>12:00–18:00</th>
<th>Registration</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:00</td>
<td>Opening session</td>
</tr>
<tr>
<td>13:00–15:00</td>
<td>Plenary session</td>
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<tr>
<td>15:00–15:30</td>
<td>Coffee break</td>
</tr>
<tr>
<td>15:30–17:00</td>
<td>Plenary session</td>
</tr>
<tr>
<td>17:00–18:00</td>
<td>Welcome reception, Exhibition and Poster session</td>
</tr>
</tbody>
</table>

**Wednesday, May 24, 2017**

<table>
<thead>
<tr>
<th>08:30–17:00</th>
<th>Registration</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00–10:20</td>
<td>Parallel sessions</td>
</tr>
<tr>
<td>10:20–10:50</td>
<td>Coffee break / Exhibition and Posters</td>
</tr>
<tr>
<td>10:50–12:35</td>
<td>Parallel sessions</td>
</tr>
<tr>
<td>12:35–13:45</td>
<td>Lunch</td>
</tr>
<tr>
<td>13:45–15:05</td>
<td>Parallel sessions</td>
</tr>
<tr>
<td>15:05–15:35</td>
<td>Coffee break / Exhibition and Posters</td>
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<tr>
<td>15:35–16:50</td>
<td>Parallel sessions</td>
</tr>
<tr>
<td>19:00</td>
<td>Gala dinner</td>
</tr>
</tbody>
</table>

**Thursday, May 25, 2017**

<table>
<thead>
<tr>
<th>08:30–13:00</th>
<th>Registration</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00–10:30</td>
<td>Plenary session</td>
</tr>
<tr>
<td>10:30–11:00</td>
<td>Coffee break / Exhibition and Posters</td>
</tr>
<tr>
<td>11:00–12:30</td>
<td>Plenary session</td>
</tr>
<tr>
<td>12:30–12:45</td>
<td>Closing session</td>
</tr>
</tbody>
</table>
## Wednesday, May 24, 2017

<table>
<thead>
<tr>
<th>Time</th>
<th>Session A – Raw materials – rubbers, additives, TPE</th>
<th>Session B – Rubber testing</th>
<th>Session C – Manufacturing processes, machinery and raw materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:50–12:35</td>
<td>A4 Improved Automotive Components with Liquid Rubber</td>
<td>B4 Smart predicative methodology for testing of tire behaviour in lab scale</td>
<td>C4 Effect of oil content in cross-link density of unfilled E-SBR</td>
</tr>
<tr>
<td></td>
<td>Marcel Gruendken</td>
<td>Radek Stoček</td>
<td>Beatriz Basterra-Beroiz</td>
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</tr>
<tr>
<td>11:20–11:45</td>
<td>A5 Selecting the Right Plasticiser: Naphthenic Rubber Process Oils for Tyre and Rubber Applications</td>
<td>B5 Application of optical strain measurement in the calculation of tearing energy of filled rubber</td>
<td>C5 Zinc Oxide Order of Addition Effect on NXT Z* 45 Compounds</td>
</tr>
<tr>
<td></td>
<td>Kamyar Alavi</td>
<td>Fei Xiang</td>
<td>Daria Sitnikova</td>
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</tr>
<tr>
<td>11:45–12:10</td>
<td>A6 Tuning Coloured Special Elastomer Compounds by New Processing Additives</td>
<td>B6 Investigation of deformation fields near crack tips in notched planar elastomer sheets</td>
<td>C6 Industry 4.0 for rubber injection machine</td>
</tr>
<tr>
<td></td>
<td>Volker Börger</td>
<td>Annegret Schulze</td>
<td>Matthieu Wolff</td>
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</tbody>
</table>
### Registration

- Room Prague B: Session A – Raw materials – rubbers, additives, TPE
- Room Prague C: Session B – Rubber testing
- Room Prague D: Session C – Manufacturing processes and machinery

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Room Prague B</th>
<th>Room Prague C</th>
<th>Room Prague D</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00–10:20</td>
<td>A1</td>
<td>Rabindra Mukhopadhyay</td>
<td>Shib Shankar Banerjee</td>
<td>Robert Schuster</td>
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<tr>
<td></td>
<td>Chairmen</td>
<td></td>
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<tr>
<td>09:00–09:30</td>
<td>B1</td>
<td>Thomas Rauschmann</td>
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<tr>
<td></td>
<td></td>
<td>Existing and advanced measurements on Polymers and Rubber Compounds</td>
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<td></td>
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<tr>
<td>09:30–09:55</td>
<td>A2</td>
<td>Suriyakamon Montha</td>
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<td></td>
<td></td>
<td>In situ silica filled natural rubber as a new material for rubber industry</td>
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<tr>
<td>09:55–10:20</td>
<td>A3</td>
<td>Alicia Rul</td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Emergence of NC7000TM Carbon nanotube into Tire and Rubber products / Release assessment from matrix containing-MWCNT along the lifecycle</td>
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</tr>
<tr>
<td>10:00–10:20</td>
<td>B2</td>
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<tr>
<td></td>
<td></td>
<td>B2 Improvement of a biaxial testing system for high static and dynamic loading of elastomers and its applications</td>
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<tr>
<td>10:20–10:50</td>
<td>A4</td>
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<tr>
<td>10:50–11:20</td>
<td>A3</td>
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</tr>
</tbody>
</table>
### Lunch

- Room Prague B: A4 Improved Automotive Components with Liquid Rubber
- Room Prague C: B4 Smart predicative methodology for testing of tire behaviour in lab scale
- Room Prague D: C4 Effect of oil content in cross-link density of unfilled E-SBR

### Coffee Break, Exhibition and Posters

- Room Prague B: A4 Improved Automotive Components with Liquid Rubber
- Room Prague C: B4 Smart predicative methodology for testing of tire behaviour in lab scale
- Room Prague D: C4 Effect of oil content in cross-link density of unfilled E-SBR

### Room Prague B

- **A1** Existing and advanced measurements on Polymers and Rubber Compounds
- **A2** In situ silica filled natural rubber as a new material for rubber industry
- **A3** Emergence of NC7000TM Carbon nanotube into Tire and Rubber products / Release assessment from matrix containing-MWCNT along the lifecycle

### Room Prague C

- **B1** Optimizing the continuous final mixing of rubber compounds
- **B2** Improvement of a biaxial testing system for high static and dynamic loading of elastomers and its applications
- **B3** The dynamic ageing of vulcanizates – DMA method

### Room Prague D

- **C1** Non-isothermal CFD Analysis of a Rubber Extrusion Die used in the Production of Automotive Charge Air Line Hoses
- **C2** Laser technology dedicated to mold cleaning
- **C3** Laser technology dedicated to mold cleaning

### Wednesday, May 25, 2017

10:50–12:35

- **Session A – Raw materials – rubbers, additives, TPE**
- **Session B – Rubber testing**
- **Session C – Manufacturing processes, machinery and raw materials**

10:50–11:20

- **A4** Improved Automotive Components with Liquid Rubber
- **B4** Smart predicative methodology for testing of tire behaviour in lab scale
- **C4** Effect of oil content in cross-link density of unfilled E-SBR

11:20–11:45

- **A5** Selecting the Right Plasticiser: Naphthenic Rubber Process Oils for Tyre and Rubber Applications
- **B5** Application of optical strain measurement in the calculation of tearing energy of filled rubber
- **C5** Zinc Oxide Order of Addition Effect on NXT Z* 45 Compounds

11:45–12:10

- **A6** Tuning Coloured Special Elastomer Compounds by New Processing Additives
- **B6** Investigation of deformation fields near crack tips in notched planar elastomer sheets
- **C6** Industry 4.0 for rubber injection machine

12:10–12:35

- **A7** The Role of the Accelerators
- **B7** Temperature Dependent Shear Viscosity of Unvulcanized Rubber Compounds used under the Hood Applications
- **C7** Adhesion of Rubber on Smooth and Rough Surfaces

12:35–13:45 **Lunch**
<table>
<thead>
<tr>
<th>Time</th>
<th>Session A – Raw materials – rubbers, additives, TPE</th>
<th>Session B – Rubber testing</th>
<th>Session C – Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:45–15:05</td>
<td>Chairman: Marcel Gruendken</td>
<td>Chairman: Franky Puype</td>
<td>Chairman: Seiichi Kawahara</td>
</tr>
<tr>
<td>13:45–14:15</td>
<td>A8 From master curves for the mechanical reinforcement of rubber based nanocomposites to lightweight materials for automotive Maurizio Galimberti</td>
<td>B8 Determination of Thermal Conductivity of an Industrial Rubber Compound: Challenges, Problems and Comparison of Different Test Methods Roman Christopher Kerschbaumer</td>
<td>C8 Development of Mechano-adaptive Elastomers by the Exploitation of Filler Structure Amit Das</td>
</tr>
<tr>
<td>14:15–14:40</td>
<td>A9 Polybutadiene Ricon and metallic salt Dymalink to enhance rubber compound properties Fabien Salort</td>
<td>B9 Characterisation of degradation and determination of end-of-lifetime criterion for O-ring seals Matthias Jaunich</td>
<td>C9 Strontium ferrite filled rubber composites cured with different curing systems Ján Kruželák</td>
</tr>
<tr>
<td>14:40–15:05</td>
<td>A10 An alternative antioxidant for natural rubber: Henna Bagdagul Karaagac</td>
<td>B10 Gel in natural rubber – evaluation methods and influence on processability Drahomír Čadek</td>
<td>C10 Towards a wider application of phenolic resin curing systems David Mann</td>
</tr>
<tr>
<td>15:05–15:35</td>
<td>Coffee break, Exhibition and Posters</td>
<td></td>
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</tr>
<tr>
<td>15:35–16:05</td>
<td>Chairman: Maurizio Galimberti</td>
<td>Chairman: Radek Stoček</td>
<td>Chairman: Amit Das</td>
</tr>
<tr>
<td>15:35–16:05</td>
<td>A11 Preparation and properties of high-performance thermoplastic elastomers by electron-induced reactive processing Shib Shankar Banerjee</td>
<td>B11 Characterization of dynamic changes of filler network in rubber vulcanize from electrical conductivity during uniaxial or cyclic deformation Ivan Chodák</td>
<td>C11 Development of Self-healing natural rubber/bromobutyl rubber blends Sakrit Hait</td>
</tr>
<tr>
<td>16:05–16:30</td>
<td>A12 New NORDEL EPDM Developments for Automotive Sealing Applications Varun Thakur</td>
<td>B12 Identification of temperature scanning stress relaxation (TSSR) behaviour of new grade EPDM elastomers Bagdagul Karaagac</td>
<td>C12 Reinforcement effect of ice crystals in hydrophilic rubber matrix Tamil Selvan Natarajan</td>
</tr>
<tr>
<td>16:30–16:50</td>
<td>A13 Crosslinking peroxides protected against air’s oxygen inhibition Alfredo Defrancisci</td>
<td>B13 Possibilities with thermal hyphenated techniques to GC-MS as an analytical tool for rubber analysis Franky Puype</td>
<td>C13 Viton™ FKM for Turbo Charger Hoses Matthias Lückmann</td>
</tr>
<tr>
<td>19:00</td>
<td>Gala dinner – Velká klášterní restaurace</td>
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</tbody>
</table>
POSTERS

The Poster Session is located in the room Prague A on the first floor.

Poster Session Timing

The Poster Session will be officially open on Tuesday, May 23 at 17:00 during the Welcome Reception. Posters will be displayed until Thursday, May 25, 12:45.

<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Characterization of silica-filled EVA compounds: Bound rubber and crosslink density</td>
<td>Sung-See Choi</td>
</tr>
<tr>
<td>2</td>
<td>On the relationship between melting temperature depression and crosslink density</td>
<td>Beatriz Basterra-Beroiz</td>
</tr>
<tr>
<td>3</td>
<td>Change of Thermal Conductivity within an Injection Molded Rubber Part due to Local Differences in Filler Condition</td>
<td>Roman Kerschbaumer</td>
</tr>
<tr>
<td>4</td>
<td>Formulation of EPDM Rubber Compounds and Important Factors Influencing Their Properties</td>
<td>Jakub Kadlčák</td>
</tr>
<tr>
<td>5</td>
<td>The Fouling of Mold Cavities</td>
<td>Dana Šejbalová</td>
</tr>
<tr>
<td>6</td>
<td>Preparation and Mechanical Properties of Ionic Thermoplastic Elastomer based on Functionalized Ethylene-propylen-diene Terpolymer</td>
<td>Jongwoo Bae</td>
</tr>
<tr>
<td>7</td>
<td>Determination of crosslink density for NR and EPDM by using various techniques</td>
<td>Burak Kıilic</td>
</tr>
<tr>
<td>8</td>
<td>The properties of rubber compounds with natural fillers</td>
<td>Petra Holíčková</td>
</tr>
<tr>
<td>9</td>
<td>Rheological properties of rubber blends measuring by capillary rheometer</td>
<td>Martina Matvejová</td>
</tr>
<tr>
<td>10</td>
<td>RPA 2000 Fast, precise quality control analysis of TPE’s</td>
<td>Wilfried Emunds</td>
</tr>
<tr>
<td>11</td>
<td>Correlations of Rubberised Wire Thickness with Wire Speed in Tyre Bead Production</td>
<td>Pavol Melus</td>
</tr>
<tr>
<td>12</td>
<td>Influence of NR/BR and SBR/BR blends formulation on the course of vulcanization and properties of the vulcanizates</td>
<td>Alena Kadeřábková</td>
</tr>
<tr>
<td>13</td>
<td>New Apparatus for Chip-Chunk Resistance Testing</td>
<td>Aleš Mizera</td>
</tr>
</tbody>
</table>

PROCEEDINGS

The proceedings will be distributed on USB in electronic version. Full papers will be published on the conference website as well as on the Gumarenska skupina Zlin website http://gsz.ft.utb.cz/.
REGISTRATION

Registration Desk
The Registration Desk is located on the first floor of the Vienna House Diplomat Prague Hotel – Foyer Prague.

Opening Hours
The Registration Desk is open at the following times:

<table>
<thead>
<tr>
<th>Day</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuesday, May 23</td>
<td>12:00–18:00</td>
</tr>
<tr>
<td>Wednesday, May 24</td>
<td>08:30–17:00</td>
</tr>
<tr>
<td>Thursday, May 25</td>
<td>08:30–13:00</td>
</tr>
</tbody>
</table>

Name Badge
Participants will receive a name badge. Everyone is requested to wear this badge for all conference activities including lunches and coffee breaks. Please note that there will be a 30 EUR charge to replace lost badges.

Payment
On-site payment for registration should be made at the Registration Desk in cash or by credit card.

Registration Fee Includes
Members, Non-members and Students
- Admission to the Conference Scientific Sessions
- Admission to the Exhibition & Poster Area
- Conference Materials
- Abstracts (electronic version)
- Welcome Reception on May 23
- Coffee Breaks
- Lunch on May 24

Accompanying Person
- Welcome Reception on May 23, 2017
- Prague Sightseeing Tour on May 24

EXHIBITION

The Exhibition Area is located in the room Prague A on the first floor.

Exhibition Hours:
- Tuesday, May 23, 2017: 12:00–18:00
- Wednesday, May 24, 2017: 08:30–17:00
- Thursday, May 25, 2017: 08:30–13:00

SOCIAL EVENTS

Welcome Reception
The Welcome Reception takes place in the connected rooms Prague A+B+C in the Vienna House Diplomat Prague hotel on Tuesday, May 23, 2017 at 17:00 and we cordially invite you there.

Gala Dinner
Price: 45 EUR
Time: Wednesday, May 24, 2017 at 19:00
Venue & Address: Velká klášterní restaurace, Strahovské nádvoří 302, Prague 1

How to get there
No organised transfer for the Gala Dinner is provided. From the conference venue Vienna House Diplomat Prague Hotel go to metro Dejvická station (green line) and take 2 stops to the station Malostranská. At Malostranská tram station take tram 22 (direction Vypich) and take 4 stops to the station Pohořelec. From the tram station Pohořelec walk 4 min to the restaurant Velká Klášterní.

Czech food and drinks will be served, and Czech cimbalom orchestra will accompany the evening.
**BASIC INFORMATION**

**Conference Venue**
Vienna House Diplomat Prague****
Evropská 15, 160 41 Prague 6

**WiFi**
WiFi will be available in the exhibition foyer.
**Username:** Diplomat By Vienna House

**Public Transport**
Prague has a very sophisticated subway, tram and bus transport system. The Prague underground is quite new and efficient. At peak times, trains run every 2 or 3 minutes, and during off-peak hours at least every 8–10 minutes.


<table>
<thead>
<tr>
<th>Ticket Type</th>
<th>Price (CZK/EUR)</th>
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<tbody>
<tr>
<td>24-hour pass</td>
<td>110/4.20</td>
</tr>
<tr>
<td>3-day pass (72 hours)</td>
<td>310/11.60</td>
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</tbody>
</table>

Only properly validated tickets are valid.

**Taxi Service**
We recommend you use following taxi companies:

- **P**rofi Taxi: +420 261 314 151 or +420 844 700 800
- **AAA** Taxi: +420 222 333 222 or +420 2211 0 2211

**Insurance**
The Organizers of the Rubbercon 2017 conference does not accept liability for any injury, loss or damage, arising from accidents or other situations during, or as a consequence of the conference. Participants are therefore advised to arrange insurance for health and accident prior to travelling to the Conference.

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**MAP OF THE VENUE**

First floor

*Room Prague A*
*Room Prague B*
*Room Prague C*
*Room Prague D*

Posters and Exhibition

Registration

Speakers’ Room

Loreta I

Lunch

Coffee Break
WELCOME TO PRAGUE