



FACULTY
OF MECHANICAL
ENGINEERING
CTU IN PRAGUE



POLYMER COMPOSITES 2019

CONFERENCE PROGRAMME

May 15 - 16, 2019

Tábor, Czech Republic

ASSOCIATION FOR TECHNICAL SUPPORT AND PROMOTION OF POLYMER COMPOSITES

organizes in cooperation with

**CZECH SOCIETY FOR MECHANICS,
expert group
MECHANICS OF COMPOSITE MATERIALS AND SYSTEMS**

and

**CZECH TECHNICAL UNIVERSITY IN PRAGUE,
FACULTY OF MECHANICAL ENGINEERING**

the international conference

POLYMER COMPOSITES 2019

**The conference is organized under the auspices
of the Mayor of Tábor Ing. Štěpán Pavlík**

The aim of the Conference is to enable specialists from research and industry to present actual knowledge and trends in research and development, analyses, materials, technology, manufacturing and applications of composite materials.

HAVEL COMPOSITES CZ s.r.o.



SYNPO a.s.



STTA s.r.o.



ORGANIZATION AND PROGRAMME COMMITTEE

COMMITTEE MEMBERS:

Bronislav Foller, Foller s.r.o., Brno

Josef Křena, Latecoere Czech Republic s.r.o., Prague

Richard Moravec, Havel Composites s.r.o., Svěsedlice

Eva Nezbedová, Polymer Institute Brno

Jan Orlt, consultant – composites, Prague

Zdeněk Padovec, CTU in Prague, Faculty of Mechanical Engineering

Radek Sedláček, CTU in Prague, Faculty of Mechanical Engineering

František Socha, SYNPO a.s., Pardubice

Marek Ščerba, Saertex GmbH & Co. KG

Daniela Varečková, SYNPO a.s., Pardubice

ORGANIZATION INFORMATION

PLACE AND DATE

Hotel Dvořák

Hradební 3037,
Tábor, 390 01

May 15-16, 2019

CONFERENCE LANGUAGES

Czech and English

Simultaneous translation is provided.

ACCOMMODATION

The accommodation is reserved in Hotel Dvořák
(<https://www.lhdvoraktabor.cz>).

However participants are asked to order the overnight directly in this hotel themselves with the use of promo code **PC2019**.

Detailed information:

<http://polymer-composites.cz>

CONFERENCE PROGRAMME

WEDNESDAY, MAY 15, 2019

8:00 – 9:30 REGISTRATION, EXHIBITION AREA SET-UP

9:30 OPENING AND WELCOME

9:45 – 11:15 PLENARY LECTURES

Myths and Reality in the Properties and Applications of Composite Materials in the Mechanical Engineering

Růžička, M., CTU in Prague, FME, Prague, Czech Republic.

Uher, O., CompoTECH Plus, s.r.o., Sušice, Czech Republic

Liquid Composite Molding – A Broad Range of Processing Techniques Being Versatile and Challenging

Schledjewski, R., Hergan, P., Fauster, E., Montanuniversität Leoben, Leoben, Austria

11:15 – 11:45 COFFEE BREAK

11:45 – 12:35 Section: ANALYSIS AND DESIGN

Chairmen: Josef Křena, Zdeněk Padovec

Composite Profiles in Aircraft Constructions

Zámečnicková, T., Padovec, Z., Sedláček, R., CTU in Prague, FME, Prague, Czech Republic.

Křena, J., LATECOERE Czech Republic s.r.o., Prague, Czech Republic

Simulations of Modern Materials in Altair HyperWorks

Kuklík, M., Rulc, V., Purš, H., Advanced Engineering s.r.o., Prague, Czech Republic

12:35 – 13:30 LUNCH BREAK

13:30 – 15:10 Section: TECHNOLOGY AND APPLICATION (part 1)

Chairmen: Bronislav Foller, Jan Orlt

Applications of Precise Winding Technology in the Production of Lightweight Composite Parts

Potěšil, A., LENAM, s.r.o., Liberec, Czech Republic

Militký, J., Petřů, M., Technical University of Liberec, Liberec, Czech Republic

Večerník, J., Večerník s.r.o., Pěnčín, Czech Republic

New Structural MMA Adhesives as Full Technical and Economic Replacement for All Structural and Semi-structural Bonding Operations!

Mayer Ch., *Mayer & Mayer Handels GmbH, Markt Allhau, Austria*

Fast Cure Epoxy Prepreg Systems and Press Molding Processing as Answer to Growing Demand for Speed and Automatization Based on Examples from Automotive Application

Lewandowski, V., *C-M-P GmbH, Heinsberg, Germany*

New Crestafire Intumescent Gelcoat and Resin Systems for Rail

Van der Stok, S., *Scott Bader UK, Wollaston, United Kingdom*

15:10 – 15:40 COFFEE BREAK

15:40 – 16:55 Section: TECHNOLOGY AND APPLICATION (part 2)

Chairmen: Bronislav Foller, Jan Orlt

Epoxy Systems for Electro Applications

Socha, F., Švíglerová, P., Erbenová, M., *SYNPO a.s., Pardubice, Czech Republic*

Newcomers in the European Composites Market: Carbon Fiber Opportunities from Far East

Bosis, N., *Nadalia Consulting, Nembro BG, Italy*

Rheological and Dilatation Behavior of Inorganic Adhesives for High Temperature Resistant Sandwich Structures

Černý, M., *Institute of Rock Structure and Mechanics, v.v.i., ASCR, Prague, Czech Republic*

Chlup, Z., *Institute of Physics of Materials, v.v.i, ASCR, Brno, Czech Republic*

17:00 – 18:00 COMPANY PRESENTATIONS

Zwick Roell CZ s.r.o., Mechanical Testing of Composite Materials

Lontech – surface treatment s.r.o., Pre-preparation of Plastics Using Atmospheric Plasma

MSV STUDÉNKA s.r.o., Recycling of Composite Materials

Walter Mäder AG, (Fire Retardant) Specialities for Transportation

19:30 EVENING PARTY IN “LA CAVE RESTAURANT”

THURSDAY, MAY 16, 2019

9:00 – 10:40 **Section: MATERIALS, PROPERTIES, TESTING (part 1)**

Chairmen: Eva Nezbedová, František Socha

European Composites Market Sentiment and Trends, and New Products for High End Manufacturing

Horak, A., *BlackSun Partners, Fino Mornasco, Italy*

Everything from a Single Source: Saertex Leo Series

Ščerba, M., *Saertex GmbH & Co. KG, Saerbeck, Germany*

Electrospun Fibrous Materials with Integrated Inorganic Particles

Grégr, J., Kozlovská, M., Havlíček, K., Kuželová Košťáková, E., *Technical University of Liberec, Liberec, Czech Republic*

Mészáros, L., *Budapest University of Technology and Economics, Budapest, Hungary*

Fracture Mechanics as a Practical Tool to Estimate the Toughness of Fiber Composite Polymer Indentation

Nezbedová, E., *Unipetrol RPA s.r.o. - Polymer Institute Brno, Brno, Czech Republic*

Lach, R., Grellmann, W., *Polymer Service GmbH, Merseburg, Germany*

10:40 – 11:10 **COFFEE BREAK**

11:10 – 12:00 **Section: MATERIALS, PROPERTIES, TESTING (part 2)**

Chairmen: Eva Nezbedová, František Socha

Indentation Fracture Mechanics of Polymers and Polymer Composites

Lach, R., Grellmann, W., *Polymer Service GmbH, Merseburg, Germany*

Study of Behaviour Fiber Reinforced Polymer Bars Exposed to Alkali Environment

Prokeš, J., *Prefa kompozity a.s., Brno, Czech Republic*

Girgle, F., Bodnárová, L., *BUT, Faculty of Civil Engineering, Brno, Czech Republic*

12:00 – 13:00 **LUNCH BREAK**

13:00 – 14:15 Section: MATERIALS, PROPERTIES, TESTING (part 3)

Chairmen: Eva Nezbedová, František Socha

Derakane Signia, Meet our New Old Friend

Kappenstein, G., *Ashland Technologies GmbH, Kehl, Germany*

Šedivý, M., *Ashland CZ s.r.o., Prague, Czech Republic*

The Measurement of Composite Composition Characteristics

Spodniak, M., Tulipán, P., Ambriško, L., Šmelko M., *TUKE, Faculty of Aeronautics, Košice, Slovakia*

Marasová, D., *TUKE, Faculty of Mining, Ecology, Process Control and Geotechnologies, Košice, Slovakia*

Time to Failure of of Thermoset Polymers Used in Structural Engineering

Vorel., J., *CTU in Prague, Faculty Civil Engineering, Prague, Czech Republic*

Ninčević, K., Boumakis, I., Wan-Wedner, R., *University of Natural Resources and Life Sciences, Vienna, Austria*

14:30

CLOSE OF THE CONFERENCE

POSTER SECTION

Long-term Creep Behavior and Creep-Fracture Mechanics of Polymer Materials

Berthold, A., Langer, B, *Hochschule Merseburg, Germany*

Lach, R., Grellmann, W., *Polymer Service GmbH, Merseburg, Germany*

Application of Numerical and Experimental Modal Analyzes in the Development of Components from Composite Materials

Potěšil, A., *LENAM, s.r.o., Liberec, Czech Republic*

Pustka, M., *VÚTS a.s., Liberec, Czech Republic*

The Influence of Cyclic pH Changes on Ion Exchange Membranes Geometry and Functional Properties

Weinertová, K., Meloun, Z., *MemBrain s.r.o., Stráž pod Rálskem, Czech Republic*

Thin Composite Membranes

Wiener, J., *Technical University of Liberec, Liberec, Czech Republic*

Influence of Carbon Fillers Plasma Treatment on Mechanical Properties of Epoxy Resin Composites

Novotná, J., Grégr, J., Kočib, J., Pechočiaková, M., Šourková, H., Tomková, B., *Technical University of Liberec, Liberec, Czech Republic*

Intelligent Testing

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New materials today face enormous challenges. They must be lightweight and exhibit high strength values at the same time. The AllroundLine is a single testing system that can handle any composites testing challenge with 21 different test types, 115 standards, and a temperature range up to 320° C.

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- **Improved shop efficiency** — Formulated to provide a **no prep** surface, increased secondary bonding and **reduced gassing** for faster consolidation & less process time.
- **low styrene emission** — Prepared with an innovative styrene suppressant system to reduce emissions, extend permits, and provide a low odor environment
- **longer shelf life** — Delivered with extended shelf life to maintain processing characteristics

in the field

- **Identical backbone** — Built with unchanged polymer chemistry to deliver the same corrosion properties, mechanical properties & better processing
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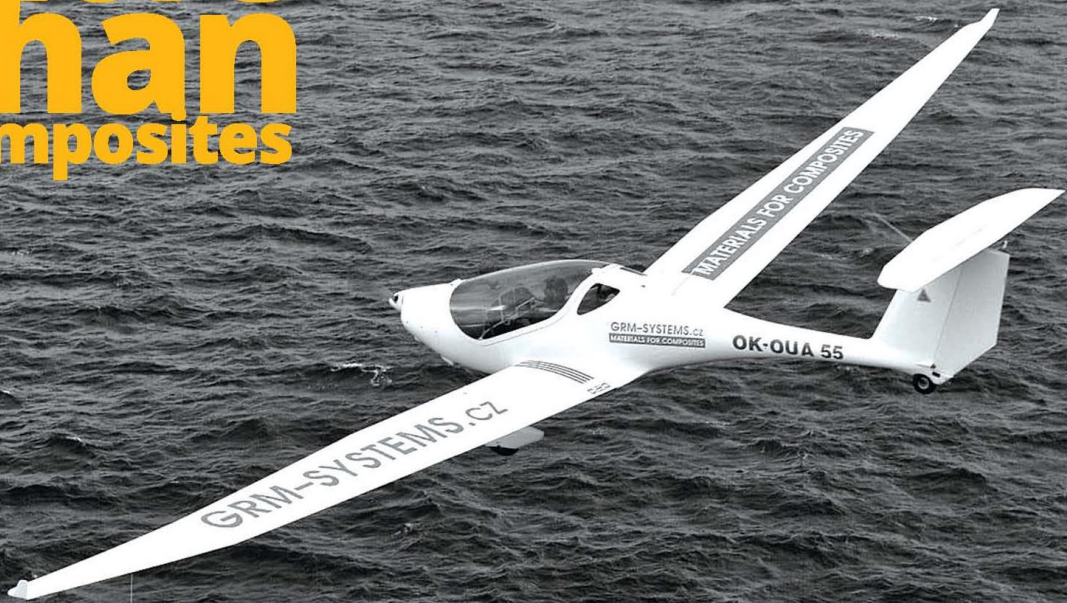
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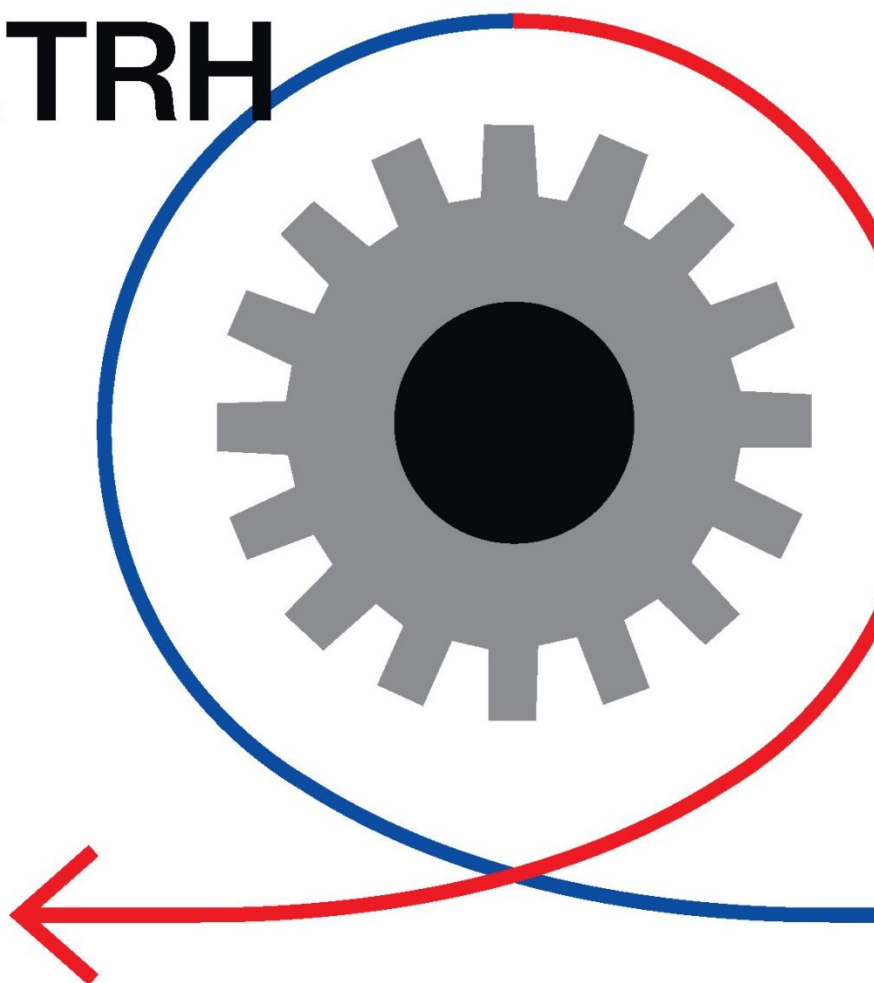
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