

Preface

The MATBUD'2020 Scientific-Technical Conference is organised for the 9th time by the Chair of Building Materials Engineering of the Faculty of Civil Engineering at Cracow University of Technology, under the auspices of the Building Materials Engineering Section, part of the Civil Engineering Committee of the Polish Academy of Sciences and Construction Commission of Cracow Branch of Polish Academy of Science.

This is a very special edition of MATBUD because this year the event is organised within the framework of the International Academic Partnership project financed by the Polish National Agency for Academic Exchange (NAWA): EMMAT E-mobility and sustainable materials and technologies (PPI/APM/2018/1/00027). The goal of the project is to develop long-lasting solutions in the field of scientific cooperation, to be implemented as part of International Academic Partnerships.

These MATEC Web of Science Conference Proceedings present the joint effort and activities of six faculties of the Cracow University of Technology: Faculty of Civil Engineering, Faculty of Material Engineering and Physics, Faculty of Architecture, Faculty of Environmental and Power Engineering and Faculty of Mechanical Engineering - aimed at defining priority research directions in the field of sustainable materials and technologies. The conference hosts EMMAT partner organisations from 22 research units worldwide, who actively participate in the sessions and present the results of their research:

Cracow University of Technology, Poland - project coordinator
University of Beira Interior, Portugal
Res. Institute in Civ. and Mechanical Eng., Nantes University - IUT Saint Nazaire, France
Dept. of Civil Engineering, National Ilan University, Taiwan
NTB Interstaatliche Hochschule für Technik Buchs, Switzerland
School of Civil and Environmental Engineering, UNSW, Australia
Institute for Mechanics of Materials, University of Latvia
Reykjavik University, Island
Kalasalingam Academy of Research and Education, India
Malta College of Arts, Science and Technology (MCAST) Malta
University of Porto, Portugal
Ryerson University, Faculty of Engineering and Architectural Science, Canada
Czech Technical University in Prague, Czech Republic
Technical University of CLUJ-Napoca, Romania
HES-SO Valais-Wallis, Institute of Systems Engineering, Sion, Switzerland
Brno University of Technology, Faculty of Mechanical Engineering, Czech Republic

Faculty of Architecture and Urbanism (FAU) University of Chile, Chile
School of Architecture & Design Lebanese American University, Liban
University of Perugia, Department of Engineering, Italy
Ecole Centrale de Lille, France
TUBerlin – Technische Universität Berlin, Germany
National University of Water and Environmental Engineering, Ukraine
Universidad Católica del Uruguay, Uruguay
And other research units that have collaborated with Cracow University of Technology for decades.

On behalf of the organizing committee of MATBUD'2018, we would like to express our gratitude to all participants for their valuable contribution to the conference. Sincere thanks to all members of the Scientific Committee who have accepted papers for review on a voluntary basis as well as provided valuable suggestions during preparation of this conference.

Thank you very much for your assistance in these difficult times affected by COVID-19.

Representatives of MATBUD'2020
Scientific and Organizing Committee
Izabela Hager and Tomasz Tracz