

CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE



8th International Conference on Trends in Agricultural Engineering 2022

**Proceeding of the 8th International Conference on
Trends in Agricultural Engineering 2022**

September 20th 2022 – September 23rd 2022

Prague

Czech Republic

Editor in chief: David Herák

An online version is available at <http://proceedings.tae-conference.cz/>

ISBN 978-80-213-3207-2

8th International Conference on Trends in Agricultural Engineering 2022

September 20th 2022 – September 23rd 2022

The 8th International Conference on Trends In Agricultural Engineering is organized on the occasion of the 70th anniversary of the Faculty of Engineering, Czech University of Life Sciences Prague.

The conference's objective is focused on the research in engineering and physical sciences that represent advances in understanding or modelling the performance of biological and physical systems, bioproduction processes and the food chain, logistics systems in agriculture, manufacturing, and material systems in the design of agriculture engineering.

Conference venue:

Faculty of Engineering, Czech University of Life Sciences Prague, Kamýčká 129, Praha 6, Prague, 16521, Czech Republic

The 8th TAE conference is organized under the auspices of the dean of the Faculty of Engineering **doc. Ing. Jiří Mašek, Ph.D.**

Chairman of the conference: David Herák, Czech Republic

Scientific committee:

Vigen Arakelyan – France

Feto Berisso - Ethiopia

Jiří Blahovec - Czech Republic

Roberto D'Amato - Spain

Luis Caicedo - Ecuador

Richard Godwin - UK

Gurkan Gurdil - Turkey

Rostislav Chotěborský - Czech Republic

Jaime Janairo - Philipine

Vytenis Jankauskas - Lithuania

Algirdas Jasinskas - Lithuania

Marián Kučera - Slovakia

František Kumhála - Czech Republic

Martin Libra - Czech Republic

José Machado - Portugal

Alessandro Ruggiero – Italy

Naufal B M Saad – Malaysia

John Schueller - USA

Riswanti Sigalingging - Indonesia

Willi Toisuta - Australia

Sotos Voskarides - Cyprus

Stavros Yanniotis - Greece

Vladislav Zubko - Ukraine

All manuscripts in conference proceedings have been reviewed by the peer review process.

Reviewers:

Z. Aleš, V. Arakelyan, C. Demirel, O. Dajbych, G. Gurdil, D. Herák, A. Horas, P. Hrabě, R. Chotěborský, V. Jurča, A. Kabutay, A. Kešner, M. Kroulík, F. Kumhála, J. Kumhalová, M. Libra, M. Linda, J. Mašek, Č. Mizera, M. Müller, R. Napitupulu, P. Neuberger, S. Pandiangan, M. Petrů, K. Selvi, R. Sigalingging, M. Simanjuntak.

Warm Welcome to Trends in Agriculture Engineering 2022

The progressive prestige that the Trends in Agriculture Engineering International Conference has reached during the last three decades has made it as a world-wide reference about fast development of agriculture from its engineering point of view, and the meeting point for professionals with responsibilities in the improvement of this essential area of whole nations. 69 scientific papers have been selected for TAE 2022 through the Scientific Committee of the conference to be presented in a wide thematic spectrum, to promote and to share the newest and the most relevant aspects of agricultural engineering area. Trends in Agriculture Engineering conference become the scientific hub of the global agricultural engineering research and a forum for the future of agri-food production.

This year conference TAE is organized also on the occasion of the seventieth anniversary of the Faculty of Engineering. Since its establishment in 1952, the faculty has continuously been evolving and responding to technical progress and the needs of practice in its curricula. Throughout its history, the faculty has contributed to technical development in agriculture engineering and, more recently, in other areas in line with accredited study programmes.

The Faculty of Engineering, Czech University of Life Sciences Prague, organizer of this 8th TAE conference, welcomes you to this event. Prague, the capital and the largest city of the Czech Republic, welcomes you with its cordiality for making your stay with us the most pleasant possible.

Sincerely

assoc. prof. Ing. Jiří Mašek, Ph.D.
Dean of Faculty of Engineering
Czech University of Life Sciences Prague