

<i>Mech. Eng. Sci. J.</i>	Vol.	No.	pp.	Skopje
	42	2	71–136	2024
<i>Маш. инж. науч. спис.</i>	Год.	Број	стр.	Скопје

**MECHANICAL ENGINEERING – SCIENTIFIC JOURNAL
МАШИНСКО ИНЖЕНЕРСТВО – НАУЧНО СПИСАНИЕ**

Published by
Faculty of Mechanical Engineering, Ss. Cyril and Methodius University in Skopje, North Macedonia
Издава
Машински факултет, Универзитет „Св. Кирил и Методиј“ во Скопје, Северна Македонија

Published twice yearly – Излегува два пати годишно

INTERNATIONAL EDITORIAL BOARD – МЕЃУНАРОДЕН УРЕДУВАЧКИ ОДБОР

Slave Armenski (Faculty of Mechanical Engineering, Ss. Cyril and Methodius University in Skopje, Skopje, North Macedonia), **Aleksandar Gajić** (Faculty of Mechanical Engineering, University of Belgrade, Belgrade, Serbia), **Čedomir Duboka** (Faculty of Mechanical Engineering, University of Belgrade, Belgrade, Serbia), **Maslina Daruš** (Faculty of Science and Technology, National University of Malaysia, Bangi, Malaysia), **Robert Minovski** (Faculty of Mechanical Engineering, Ss. Cyril and Methodius University in Skopje, Skopje, North Macedonia), **Wilfried Sihm** (Institute of Management Science, Vienna University of Technology, Vienna, Austria), **Ivan Juraga** (Faculty of Mechanical Engineering and Naval Architecture, University of Zagreb, Zagreb, Croatia), **Janez Kramberger** (Faculty of Mechanical Engineering, University of Maribor, Maribor, Slovenia), **Karl Kuzman** (Faculty of Mechanical Engineering, University of Ljubljana, Ljubljana, Slovenia), **Clarisse Molad** (University of Phoenix, Phoenix, Arizona, USA), **Todor Neshkov** (Faculty of Mechanical Engineering, Technical University of Sofia, Sofia, Bulgaria), **Zlatko Petreski** (Faculty of Mechanical Engineering, Ss. Cyril and Methodius University in Skopje, Skopje, North Macedonia), **Miroslav Plančak** (Faculty of Technical Sciences, University of Novi Sad, Novi Sad, Serbia), **Remon Pop-Iliev** (Faculty of Engineering and Applied Science, University of Ontario, Institute of Technology, Oshawa, Ontario, Canada), **Predrag Popovski** (Faculty of Mechanical Engineering, Ss. Cyril and Methodius University in Skopje, Skopje, North Macedonia), **Dobre Runčev** (Faculty of Mechanical Engineering, Ss. Cyril and Methodius University in Skopje, Skopje, North Macedonia), **Aleksandar Sedmak** (Faculty of Mechanical Engineering, University of Belgrade, Belgrade, Serbia), **Ilija Ćosić** (Faculty of Technical Sciences, University of Novi Sad, Novi Sad, Serbia), **Rolf Steinhilper** (Faculty of Engineering Science, University of Bayreuth, Bayreuth, Germany)

Editor in Chief Одговорен уредник
Prof. Mite Tomov, Ph.D. Проф. д-р Мите Томов
Co-editor in Chief Заменик одговорен уредник
Prof. Taško Rizov, Ph.D. Проф. д-р Ташко Ризов
Secretaries Секретари
Doc. Marija Lazarević, Ph.D. Доц. д-р Марија Лазаревиќ
Doc. Simona Domazetovska, Ph.D. Доц. д-р Симона Домазетовска

Proof-reader Коректор
Alena Georgievska Алена Георгиевска

Technical editor Технички уредник
Blagoja Bogatinoski Благоја Богатиноски

UDC: "St. Kliment Ohridski" Library – Skopje УДК: НУБ „Св.. Климент Охридски“ – Скопје

Copies: 300 Тираж: 300

Price: 520 denars Цена: 520 денари

Address Адреса
Faculty of Mechanical Engineering Машински факултет
(Mechanical Engineering – Scientific Journal) (Машинско инженерство – научно списание)
Editor in Chief Одговорен уредник
P.O.Box 464 пошт. факс 464
MK-1001 Skopje, Republic of North Macedonia МК-1001 Скопје, Република Северна Македонија

Mech. Eng. Sci. J. is indexed/abstracted in INIS (International Nuclear Information System)
www.mf.ukim.edu.mk