



**JOURNAL OF
MECHANICAL ENGINEERING,
AUTOMATION AND CONTROL SYSTEMS**

JUNE 2020 | VOLUME 1 | ISSUE 1 | ISSN ONLINE 2669-1361

Editor in Chief

Algaży Zhaıyt Almaty University of Power Engineering and Telecommunications, Kazakhstan ali84jauit@mail.ru

Assistant Editor

Janat Musayev Kazakh Academy of Transport and Communications M. Tynyshpaev, mussayev75@yandex.kz

Editorial Board

M. Zh. Adambayev Almaty University of Power Engineering and Telecommunications, Kazakhstan adambaev_m@mail.ru

S. E. Bekzhanova Kazakh Academy of Transport and Communications named after M. Tynyshpayev, Kazakhstan s.bekzhanova@bk.ru

T. M. Buzauova Karaganda State Technical University, Kazakhstan toty_77@mail.ru

M. B. Izmambetov Satbayev University, Kazakhstan myrza_62@mail.ru

M. Ya. Kuashnin Kazakh Academy of Transport and Communications named after M. Tynyshpayev, Kazakhstan kvashnin_mj55@mail.ru

M. S. Kulgildinov Kazakh Academy of Transport and Communications named after M. Tynyshpayev, Kazakhstan mursap@mail.ru

N. M. Makhmetova Kazakh Academy of Transport and Communications named after M. Tynyshpayev, Kazakhstan makhmetova_n1958@mail.ru

S. A. Mashekov Satbayev University, Kazakhstan mashekov.1957@mail.ru

G. Solonenko Kazakh Academy of Transport and Communications named after M. Tynyshpayev, Kazakhstan v.solonenko@mail.ru

Y. S. Temirbekov Kazakh National University named after Al-Farabi, Kazakhstan temirbekove@mail.ru

K. T. Tergemes Almaty University of Power Engineering and Telecommunications, Kazakhstan tergemes@mail.ru

JMEACS Journal of Mechanical Engineering, Automation and Control Systems

Aims and Scope

JMEACS publishes a wide range of original research and review articles. The journal Editorial Board welcomes manuscripts in both fundamental and applied research areas, and encourages submissions which contribute novel and innovative insights to the field of mechanical engineering. All submitted articles considered suitable for JMEACS are subjected to rigorous peer review to ensure the highest levels of quality. Original papers which provide an important contribution to the development of mechanical engineering and report on significant developments in the field are encouraged. The review process is carried out as quickly as possible to minimize any delays in the online publication of articles. JMEACS aims to advance the understanding of mechanical engineering by providing a platform for the publication of unique contributions in the field of mechanical engineering across a variety of topics, including.

The list of principal topics:

- Mechanical engineering
- Materials science
- Mechatronics
- Rotor dynamics
- Applied mechanics
- Controls and dynamics
- Machine design
- Design theory and methodology
- Dynamic traffic signal control
- Transportation and logistics
- Railway engineering
- Bridge engineering
- Tunnel engineering
- Urban rail construction
- Engineering machinery
- Industrial robotics
- Intelligent control systems
- Automation, CNC machines and robotics
- Mechanics of materials
- Dynamics of machines, vehicles and flying structures
- Mechanisms, mechanical transmissions and machines
- Manufacturing engineering
- Intelligent transportation systems and traffic control
- Haptics and human-machine-interfaces
- Robotics, mechatronics and micro-machines
- Intelligent systems
- Computational mechanics
- Electronics, information and control systems
- Intelligent control systems
- Mechatronics and robotics
- Robotics and robot applications
- Robotic and control systems
- Kinematics, dynamics, and control of mechanical systems

All published papers are peer reviewed and crosschecked by plagiarism detection tools.

More information is available online <https://www.jvejournals.com>

The journal material is referred:

GOOGLE SCHOLAR: <https://scholar.google.com>

CROSSREF: <https://www.crossref.org>

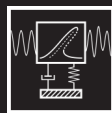
Internet: <https://www.jvejournals.com>

E-mail: publish@jvejournals.com

Publisher: JVE International Ltd., Geliu ratas 15A, LT-50282, Kaunas, Lithuania

Contents

CONTROL PERFORMANCE OF SUSPENSION SYSTEM OF CARS WITH PID CONTROL BASED ON 3D DYNAMIC MODEL	1
MEI TIAN, VANLIEM NGUYEN	
DESIGN AND CALCULATION OF DOUBLE ARM SUSPENSION OF A CAR	11
DAVID JEBARAJ B, SHARATH PRASANNA R	
FLOW BEHAVIOUR ON AEROFOILS USING CFD	26
AKHIL YUVARAJ MANDA, JITHENDRA SAI RAJA CHADA, SAMBHU PRASAD SURAPANENI, SATISH GEERI	
QUALITIES OF A VIBRATOR, THE ELASTIC ELEMENT OF WHICH HAS DIFFERENT COEFFICIENTS OF STIFFNESS IN THE TWO INTERVALS OF DISPLACEMENTS, IN A SEPARATE CASE	37
K. RAGULSKIS, B. SPRUOGIS, M. BOGDEVIČIUS, A. MATULIAUSKAS, V. MIŠTINAS, L. RAGULSKIS	
SUMMARY AND OUTLOOK OF 4D TRACK PREDICTION METHODS	46
CHAOYUE LIU, QI ZHENG, JINCAI CHANG, YINFENG LI	



JVE INTERNATIONAL