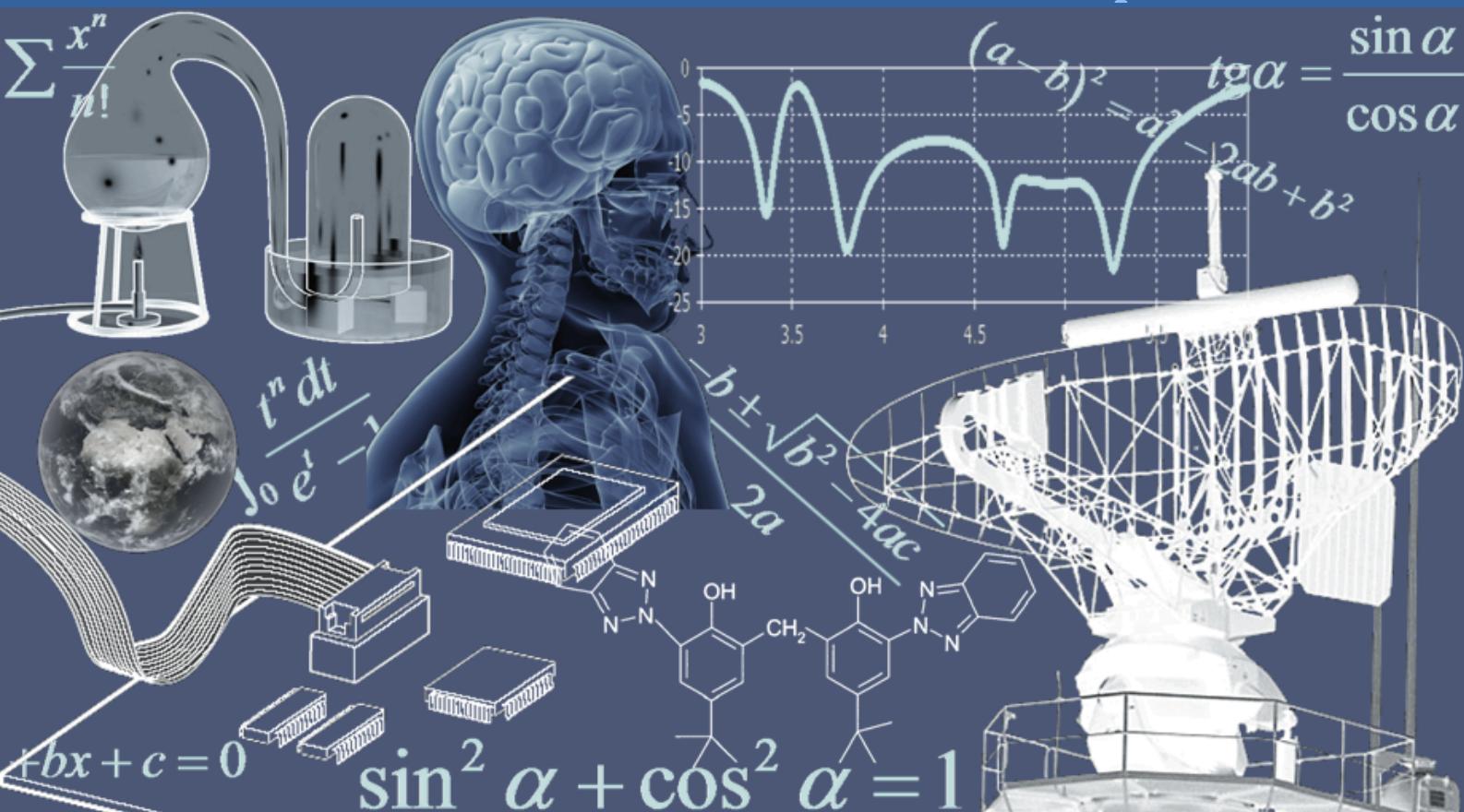


INTERNATIONAL JOURNAL OF INNOVATION AND APPLIED STUDIES

Vol. 37 N. 2 September 2022



International Peer Reviewed Monthly Journal



International Journal of Innovation and Applied Studies

International Journal of Innovation and Applied Studies (ISSN: 2028-9324) is a peer reviewed multidisciplinary international journal publishing original and high-quality articles covering a wide range of topics in engineering, science and technology. IJIAS is an open access journal that publishes papers submitted in English, French and Spanish. The journal aims to give its contribution for enhancement of research studies and be a recognized forum attracting authors and audiences from both the academic and industrial communities interested in state-of-the art research activities in innovation and applied science areas, which cover topics including (but not limited to):

Agricultural and Biological Sciences, Arts and Humanities, Biochemistry, Genetics and Molecular Biology, Business, Management and Accounting, Chemical Engineering, Chemistry, Computer Science, Decision Sciences, Dentistry, Earth and Planetary Sciences, Economics, Econometrics and Finance, Energy, Engineering, Environmental Science, Health Professions, Immunology and Microbiology, Materials Science, Mathematics, Medicine, Neuroscience, Nursing, Pharmacology, Toxicology and Pharmaceutics, Physics and Astronomy, Psychology, Social Sciences, Veterinary.

IJIAS hopes that Researchers, Graduate students, Developers, Professionals and others would make use of this journal publication for the development of innovation and scientific research. Contributions should not have been previously published nor be currently under consideration for publication elsewhere. All research articles, review articles, short communications and technical notes are pre-reviewed by the editor, and if appropriate, sent for blind peer review.

Accepted papers are available freely with online full-text content upon receiving the final versions, and will be indexed at major academic databases.

Editorial Advisory Board

- Amir Samimi**, Ph.D. of Science in Chemical engineering, Process Engineer & Risk Specialist of Oil and Gas Refinery Company, Iran
- Mahsa Ja'fari**, Department of Chemical Engineering, Abadan Faculty of Petroleum, Petroleum University of Technology, Abadan, Iran
- Alin Velea**, Paul Scherrer Institute, Switzerland
- Kamyar Hasanzadeh**, Aalto University, Finland
- Ogbonnaya N. Chidibere**, University of East Anglia, United Kingdom
- Oumair Naseer**, University of Warwick, United Kingdom
- Wei Zheng**, University of Texas Health Science Center at San Antonio, USA
- Hu Zhao**, University of Southern California, USA
- Haijian Shi**, Kal Krishnan Consulting Services, Inc, USA
- Syed Ainul Abideen**, University of Bergen, Norway
- Malika Maataoui**, Mohammed V University, Morocco
- Fabio De Felice**, University of Cassino and Southern Lazio, Italy
- Giovanni Leonardi**, Mediterranea University of Reggio Calabria, Italy
- Siham El Gouzi**, Instituto Andaluz de Ciencias de la Tierra, Spain
- Mohamed KOSSAÏ**, European Business School EBS Paris, France
- Mustafa Batuhan AYHAN**, Marmara University, Turkey
- Andrzej Klimczuk**, Warsaw School of Economics, Poland
- Corinthias P. M. Sianipar**, Tokyo University of Science, Japan
- Irfan Jamil**, Sinohydro Engineering, China
- Sukumar Senthilkumar**, Chonbuk National University, South Korea
- Bratu (Simionescu) Mihaela**, Bucharest University of Economic Studies, Romania
- Mirela Maria Codescu**, National Institute for R&D in Electrical Engineering ICPE-CA, Romania
- Milen Zamfirov**, St. Kliment Ohridski Sofia University, Bulgaria
- Svetoslava Saeva**, Neofit Rilski South-West University, Bulgaria
- Dimitris Kavroudakis**, University of the Aegean, Greece
- Vaitsa Giannouli**, Aristotle University of Thessaloniki, Greece
- Nataša Pomazalová**, Mendel University in Brno, Czech Republic
- Hazem M. Shaheen**, Damanhour University, Egypt
- Shalini Jain**, Manipal University Jaipur, India
- Amin Jula**, National University of Malaysia, Malaysia
- Mahdi Moharrampour**, Islamic Azad University, Buin zahra Branch, Iran
- Ricardo Rodriguez**, Technological University of Ciudad Juarez, Mexico
- Yuniel E. Proenza Arias**, Universidad de las Ciencias Informáticas, Cuba
- Elizabeth Bissell Miller**, University of Missouri, Columbia
- Bertin Désiré SOH FOTSING**, University of Dschang, Cameroon
- Antonella Petrillo**, University of Cassino and Southern Lazio, Italy
- Hong Zhao**, The Pennsylvania State University, USA
- Jianjun Chen**, The University of Chicago, USA
- Shaju George**, Royal University for Women, Kingdom of Bahrain
- Chandrasekaran Subramaniam**, Kumaraguru College of Technology, India
- Ilango Velchamy**, New Horizon College of Engineering, India
- M. Kumaresan**, M.P.N.M.J. Engineering College, India
- Mohammad Valipour**, University of Tehran, Iran
- Mohameden Sidi El Vally**, King Khalid University, KSA
- Mona Hedayat**, Boston Children's Hospital, Harvard Medical School, USA
- Suresh Kumar Alla**, Advanced Medical Technologies, BD Technologies, USA
- Ahmed Hashim Mohaisen Al-Yasari**, Babylon University, Iraq
- Aziz Ibrahim Abdulla**, Tikrit University, Iraq
- Khalid Mohammed Shaheen**, Technical College of Mosul, Iraq
- Baskaran Kasi**, Kuala Lumpur Infrastructure University College, Malaysia
- Nurul Fadly Habidin**, Universiti Pendidikan Sultan Idris, Malaysia
- Adnan Riaz**, Allama Iqbal Open University, Pakistan
- Syed Noor Ul Abideen**, KPK Agricultural University, Pakistan
- Arab Karim**, M'Hammed Bougara University of Boumerdes, Algeria
- Zoubir Dahmani**, UMAB University of Mostaganem, Algeria
- Mohsen Brahmi**, Sfax University, Tunisia
- Mongi Besbes**, University of Carthage, Tunisia
- Mai S. Mabrouk**, Misr University for Science and Technology, Egypt
- Olfat A Diab Kandil**, Misr University for Science and Technology, Egypt

Munir Ahmed G. Timol, Veer Narmad South Gujarat University, India
Saravanan Vasudevan, Arunai Engineering College, India

Table of Contents

Error analysis in the essays of engineering students: A comparative taxonomy <i>Antonio Daniel Juan Rubio and Isabel María García Conesa</i>	225-237
Análisis de los productos ofertados por instituciones financieras para el desarrollo económico de los emprendimientos en la provincia del Guayas año 2021 <i>Lisette Gabriela Salazar Ronquillo, Estela Judith Romero Rodriguez, Jonathan Alexander Morán Álvarez, and Mabel Elizabeth Barriga Pizarro</i>	238-249
Analyse des facteurs de risques professionnels dans la teinture artisanale à Bamako <i>Armandine Eusebie Roseline Diatta, B. B. Diedhiou, A. M. Tamboura, M. C. Gaye Fall, and M. Ndiaye</i>	250-254
Quantification de la perte en sol par usage du modèle RUSLE dans un SIG: Cas du bassin versant d'Affon-Donga <i>Fousséni Ghadamassi, Maman-Sani Issa, Imorou F. Ouorou Barre, Luc Adetona, Amrouche Alhaji, Yahiri Léto Christian, and Jean Bosco Vodounou</i>	255-268
Eligibility and Barriers to Promotion: A Perspective <i>Gassim H. Dohal</i>	269-273
Déploiement d'un multiplex R1 de la TNT à haute définition (DVB-T2/TNT-HD) suivant les normes DVB-S2/T2 <i>Mibweyele Madeko Hylaire</i>	274-280
Méthode de compensation de l'énergie réactive d'une installation industrielle: Application à l'entreprise CONGO OIL dans la ville de Boma, en RD Congo <i>Ready Khiekie Ngembo</i>	281-291
Physico-chemical quality assessment of the waters and sediments of the M'Badon bay in the south of Côte d'Ivoire <i>Amenan Evelyn Kouassi, Abou Traore, Louan Odile Ble, and J. Biemi</i>	292-304
Traitemen t à domicile, un défi à relever chez les enfants de 0 à 59 mois avec paludisme: Cas du Centre Hospitalier de Lwiro (Bukavu, Est RD Congo) <i>Nkonzi Karazo Pacifique, Ciribagula Nkulwe, Mirindi Kulondwa, Luna Ngama, Kasole Bujiriri, Baganda Ntahuma, Mbije Badibanga, Vema Mihigo, ZIHINDULA RUKENGWA, Alexis Galibwa, Zambali Masirika, Famille Bisengi, Murhabazi Bashombwa, and Malengera Kavira</i>	305-312
Changement climatique et disponibilité alimentaire chez les Adjoukrou dans le département de Dabou (Côte d'Ivoire) <i>Ahouyao Jacob, Amani Yao Célestin, and Bouafou Kouamé Guy Marcel</i>	313-322
Esquisse des causes des échecs massifs aux examens d'Etat en section pédagogique dans la chefferie de Watalinga <i>Mwanan'ese Lumande Vérité and Kahindo Semwayyo Jackson</i>	323-330
Quantification saisonnière et scénarios de gestion des déchets solides ménagers de la ville de Grand-Bassam, Côte d'Ivoire <i>Téva Koffi Basile, Effebi Kokoh Rose, Gbossou Koudou Christophe, and Ayavi Ayi Gavriel</i>	331-346
Facteurs explicatifs de mariage précoce chez les adolescentes dans l'Aire de Santé Balaw dans Zone de Santé de Budjala en RDC <i>Marie Jose Damose Ngandio and Daniel Matili Widobana</i>	347-355
Evaluation de la qualité des consultations prénatales au centre de Santé Salongo 1 dans la zone de santé de Gemena en RDC <i>Marie Jose Damose Ngandio and Daniel Matili Widobana</i>	356-367
Diversité de la culicidofaune et risques potentiels de maladies dans le parc national de Loango au Gabon <i>Boris Kevin Makanga, Aubin Armel Koumba, Patrice Makouloutou, James Wilfrid Mougoubi, Christophe Roland Zinga-Koumba, and Jacques Francois Mavoungou</i>	368-377
Déterminants de stress chez les infirmiers: Cas de l'Hôpital Général de Référence de Mbaya en RDC <i>Jean Bosco YOATILE BENAGO and Daniel Matili Widobana</i>	378-386

Cultural Heritage in Imghranes Massif (Drâa-Tafilalet Region, Morocco): An Optimist's Contribution and opportunity for the local people and Sustainable Tourism	387-391
<i>Asmae Aichi, Sarrah Ezaidi, Mohamed Abiouï, and Abdelkrim Ezaidi</i>	
Effet du mode d'extraction sur les paramètres biochimiques et sensoriels du jus de banane plantain musa paradisiaca (variété Corne)	392-406
<i>Mohamed Anderson Yeo, Arthur Martin Affery, Ernest Kouadio KOFFI, and Lacina Coulibaly</i>	
Sélection participative des variétés pour la résistance à la striure brune du manioc en Province du Sud-Kivu, République Démocratique du Congo	407-415
<i>Ugentho Ukeny Henry, Clérisse M. Casinga, Nzama Djaimbu, Tuombemungu Baguma Robert, Bashizi Kalinga Benoit, and Bisimwa Bunani Rughen</i>	
Caractérisation morphologique du groupe variétal « Folou » ou « Flado » des ignames appartenant à l'espèce <i>D. alata</i> au Burkina Faso	416-423
<i>Siédou Sory, Renan Ernest Traore, Djakaridja Tiama, Mariam Kiebre, and Pauline BATIONO KANDO</i>	