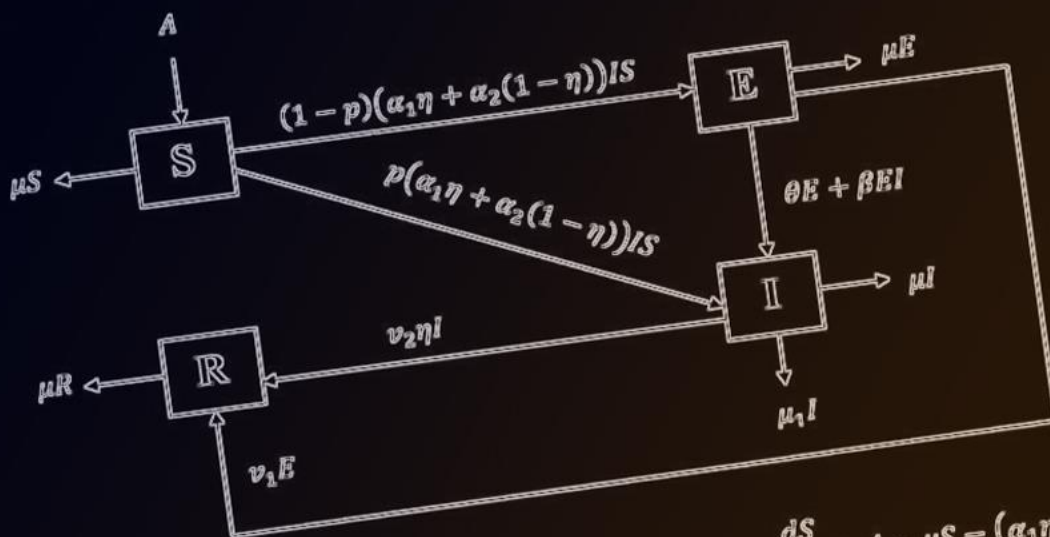


MATHEMATICAL SCIENCES AND APPLICATIONS

JOURNAL



$$\begin{aligned} \frac{dS}{dt} &= A - \mu S - (\alpha_1 \eta + \alpha_2 (1 - \eta)) IS \\ \frac{dE}{dt} &= (1 - p)(\alpha_1 \eta + \alpha_2 (1 - \eta)) IS - \beta EI - (\mu + v_1 + \theta) E \\ \frac{dI}{dt} &= p(\alpha_1 \eta + \alpha_2 (1 - \eta)) IS + \beta EI - (\mu + \mu_1 + v_2 \eta) I + \theta E \\ \frac{dR}{dt} &= v_1 E + v_2 \eta I - \mu R \end{aligned}$$



Department of Mathematics
Universitas Jambi

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We are delighted to present the latest edition of the Mathematical Sciences and Applications (MSA) Journal, following a brief hiatus due to several challenging issues, including the global pandemic. In the face of these difficulties, our commitment to sharing original research in the realms of mathematics and statistics remains steadfast. This edition showcases six articles contributed by scholars from diverse regions, addressing topics ranging from mathematical modeling, cryptography, to statistics.

The Mathematical Sciences and Applications (MSA) Journal stands as a peer-reviewed publication devoted to the fields of mathematics and statistics. It is proudly overseen by the Department of Mathematics, Faculty of Science and Technology, Universitas Jambi, Jambi, Indonesia. The journal maintains a biannual publication schedule, releasing issues every April and October. We enthusiastically invite a wide spectrum of manuscript submissions, including research articles spanning the disciplines of mathematics and statistics, comprehensive review articles, and Communications (by invitation from the Editors).

We extend our deep gratitude to all the authors, reviewers, and dedicated team members who have made invaluable contributions to the success of the MSA Journal. Their unwavering commitment, especially in these trying times, has been pivotal. We wholeheartedly appreciate our forthcoming readers, whose support drives us to maintain our commitment to excellence in mathematical and statistical research dissemination.

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Editor in Chief of MSA Journal
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Faculty of Science and Technology
Universitas Jambi
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EDITORIAL ADDRESS

Department of Mathematics
Faculty of Science and Technology
Universitas Jambi
Kampus Pinang Masak, Jambi
Jambi, Indonesia
Email : msa_admin@unja.ac.id
Website: <https://online-journal.unja.ac.id/msa>

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