

# JOURNAL OF INSTITUTE OF SCIENCE & TECHNOLOGY Institute of Science and Technology

Tribhuvan University Kirtipur, Kathmandu, Nepal



मिति: २०७५/१०/१०

Advisor:

Prof.Dr. Ram Prasad Khatiwada

Dean

Institute of Science and Technology, T.U.,

Kirtipur

Email: ramktd@gmail.com

Chief Editor:

Prof.Dr. Jagadeesh Bhattarai Central Department of Chemistry, T.U.,

Kirtipur

Email: bhattarai\_05@yahoo.com

Editors:

Prof.Dr. Srijan Lal Shrestha Central Department of Statistics, T.U., Kirtipur

Email: srijan\_shrestha@yahoo.com

Prof.Dr. Mohan Prasad Devkota

Department of Botany

Amrit Science Campus

Lainchuar Kathmandu

Email: himalayanforum@gmail.com

Prof.Dr. Nilam Shrestha

Department of Physics

Tri-Chandra M. Campus, Ghantaghar,

Kathmandu

Email: nilamspradhan@gmail.com

Dr. Bal Ram Ghimire

Central Department of Physics, T.U.,

Kirtipur

Email: balramghimire@gmail.com

Technical Editor:

Mrs. Reshma Tuladhar

Central Department of Microbiology, T.U.,

Kirtipur

Email: resutu@gmail.com

Official Secretary:

Mr. Upendra Subedi

Institute of Science and Technology, T.U.

Email: usvool9@gmail.com

बिषय अनुसन्धानम्लक लेख आह्वान गरिएको बारे:

उपर्युक्त सम्बन्धमा यस विज्ञान तथा प्रविधि अध्ययन संस्थान डीनको कार्यालयबाट प्रकाशित हुने अनुसन्धानमूलक पत्रिका Journal of Institute of Science & Technology का लागि विभिन्न केन्द्रीय विभाग/क्याम्पस/निकायमा कार्यरत शिक्षक तथा सम्बन्धित इच्छुक अनुसन्धाताबाट संलग्न गाइडलाइन अनुसारका अनुसन्धानमूलक लेख २०७५ फागुन मसान्तसम्ममा भित्रमा आइपुग्ने गरी यस समितिको इमेल jistiost@gmail.com अथवा jist@tuiost.edu.np मा पठाइदिनहन सम्बन्धित सबैलाई अन्रोध गरिन्छ।

पा.डा. जगदीश भटटराई

प्रा.डा. जगदीश भट्टराइ प्रधान सम्पादक जर्नल समिति



# JOURNAL OF INSTITUTE OF SCIENCE & TECHNOLOGY Institute of Science and Technology

Tribhuvan University Kirtipur, Kathmandu, Nepal



Advisor:

Prof.Dr. Ram Prasad Khatiwada
Dean
Institute of Science and Technology, T.U.,
Kirtipur
Email: ramktd@gmail.com

Chief Editor:

Prof.Dr. Jagadeesh Bhattarai Central Department of Chemistry, T.U., Kirtipur Email: bhattarai 05@yahoo.com

Editors:

Prof.Dr. Srijan Lal Shrestha Central Department of Statistics, T.U., Kirtipur Email: srijan\_shrestha@yahoo.com

Prof.Dr. Mohan Prasad Devkota
Department of Botany
Amrit Science Campus
Lainchuar Kathmandu
Email: himalayanforum@gmail.com

Prof.Dr. Nilam Shrestha
Department of Physics
Tri-Chandra M. Campus, Ghantaghar,
Kathmandu
Email: nilamspradhan@gmail.com

Dr. Bal Ram Ghimire Central Department of Physics, T.U., Kirtipur Email: balramghimire@gmail.com

Technical Editor:

Mrs. Reshma Tuladhar
Central Department of Microbiology, T.U.,
Kirtipur
Email: resutu@gmail.com

Official Secretary:

Mr. Upendra Subedi Institute of Science and Technology, T.U. Email: usvool9@gmail.com 24 January 2019

Subject: Call for research article.

The editorial board of JIST would like to request all the faculties of Central Department/ Campus/ institute and concerned interested researchers to send their research articles for publication in Journal of Institute of Science and Technology published by Office of Dean, Institute of Science and Technology as per the attached guidelines in the email address jistiost@gmail.com or jist@tuiost.edu.np by the 14 March 2019.

Blantaras

Prof.Dr. Jagadeesh Bhattarai Chif Editor Journal committee

# **Author Guidelines**

# Scope

Journal of Institute of Science and Technology (JIST) is a peer-reviewed multidisciplinary science journal published by Institute of Science and Technology (IOST), Tribhuvan University (T.U.), Kathmandu, Nepal. It is published in two issues a year (the first issue: January-June and the second issue: July-December). JIST publishes original research papers, review articles, short communications/reports/notes/comments and letters to the editor on all topics of different subjects of Science and Technology *viz*. botany, chemistry, computer, environment, geology, hydrology/meteorology, mathematics, microbiology, physics, statistics, zoology and allied fields.

Authors are kindly requested to check final paper thoroughly before submitting – that you have fulfilled all requirements stated in the instructions.

# Specific points to note:

- The manuscript should be in grammatically correct English language (preferably British). Text title (12 pt. Uppercase) and subtitles (10 pt. Sentence case) and text 10 pt., table and figure captions 9.5 pt. (Bold) in Times New Roman. Do not give numbers for title and subtitle.
- The length of the paper including tables and figures should preferably not exceeding 5-10 typed pages for original article and 3-4 pages for short communications.
- The manuscript in word file with table(s) and figure(s) inserted in the main text in appropriate position but high quality JPEG or TIFF files should be sent separately.
- The text should be double spaced with margin at least 3 cm in A4.
- Paragraphs should be separated by a blank space.
- Enter the page number on every page.
- Language should be precise, clear without redundant words.
- Binomial names of organisms should be spelled full in the first use.

# **Instructions for preparing manuscripts**

# Manuscripts

A full-length paper should normally be divided into the following parts: Title, Authors' names and corresponding address with email. ABSTRACT (not exceeding 200 words), **Keywords** (not exceeding 5 words), INTRODUCTION, MATERIALS AND METHODS (or MODELS AND DATA), RESULTS, DISCUSSION (or RESULT AND DISCUSSION or APPLICATIONS), CONCLUSION, ACKNOWLEDGEMENTS, REFERENCES and ANNEXURES if any.

**Title:** Titles should indicate the content of the manuscript, serve as a guide to reference librarians, and facilitate communication. It should be concise, meaningful, and clear. Subtitles may be used whenever needed.

**Author(s):** The full name of the author(s) should be written centre aligned, below the title. Authors' list should include only those who have made a substantial contribution to design and execution of the work and the writing of the manuscript. Authors should identify the name and address of the author to whom correspondence should be sent.

**ABSTRACT:** Abstract should be understandable by itself, and briefly explain the main messages of the paper. It must contain experimental question, method, major findings and conclusions briefly not exceeding 200 words.

**INTRODUCTION:** The purpose of your research should appear in the Introduction. Stat the questions you sought to answer, and provide pertinent information of previous findings for those questions.

**MATERIALS AND METHODS:** Provide sufficient information clearly to allow someone to repeat your work. A clear description of your experimental design, sampling procedures, and statistical procedures. Give the model number for equipment used (if any).

**RESULTS:** Results should be stated concisely, do not interpret your findings.

**DISCUSSION:** Differentiate the results of your study from data obtained from other secondary sources. Interpret your results, relate them to the results of previous research, and discuss the implications of your results.

**CONCLUSION:** State clearly the main conclusions of the research and give a clear explanation of the importance and relevance.

**ACKNOWLEDGEMENTS:** Acknowledge only those who have made an important contribution to the study. Many contributions justify acknowledgement such as technical help, financial support, sources of materials, and persons who have contributed intellectually to the development of the manuscript. Do not acknowledge anyone who has no contribution.

**REFERENCES:** List all cited References alphabetically. A blank line should be inserted between two references.

Tables, figures, Pictures, Equations

The tables and figures should be clearly marked with self-explanatory notes and figure legends. Figure and table captions should be given below and above respectively. Figures and illustrations are expected in JPEG/TIFF (at least 300 dpi resolution) format. Each figure and table should be linked with the text. Figure and Table number should be in sequence, using Arabic numerals – i.e. Fig. 1. 2., 3., etc., Table 1., 2., 3., etc.). Equations should be written in Equation Editor/Math Type. They should be clearly numbered. All the new symbols must be clearly explained.

Metric units: for all kind of measurements would be preferred.

**Biological taxonomic treatments:** Scientific names and taxonomic treatments by the concerned author should follow International Code of Nomenclature for algae, fungi, and plants (CN), International Code of Zoological Nomenclature (ICZN), International Code of Nomenclature for Cultivated Plans (ICNCP) and International Committee on Taxonomy of Viruses (ICTV).

#### Citation

Before submitting the manuscript, please check each citation in the text against the References and vice-versa to ensure that the match exactly. Citations in the text should be formatted as follows: Aryal (2002, 2014), Gotelli and Ellison (2004), Budha *et al.* (2011) and use '&' when used in parenthesis (e.g. Bottino & Sharma 1983).

#### References

#### Journal

Surname, Given Name Initial. Second Name Initial (if any). Published Year. Paper Title (sentence case). *Full Journal Name (italics)*. **Volume No. (bold)**(Issue No.): (blank space) xx-xx (page ranges without spacing).

Aryal, T.R. 2014. Population projection under changing fertility conditions. *Journal of Institute of Science and Technology* **19**(2): 86-88.

Budha, P.B., Naggs, F. and Backeljau, T. 2015. Annotated checklist of terrestrial gastropods of Nepal. *Zookeys* **493**: 1-48.

#### Book

Gotelli, N.J. and Ellison, A.M. 2004. *A primer of ecological statistics*. Sinauer Associates, Inc. Publishers Sunderland, Massachusetts, USA, pp. 510.

# **Edited Book**

Sutherland, W.J. (ed). 1996. *Ecological census techniques: a handbook*. Cambridge University Press. Cambridge, United Kingdom. Pp. 336.

# **Book Chapters**

Shrestha, J. 2013. Biodiversity: Fish. *In*: PK Jha, FP Neupane, ML Shrestha and IP Khanal (eds) *Biological diversity and conservation*. *Nepalpedia Series No.2*. Nepal Academy of Science and Technology, Khumaltar, Lalitpur, Nepal, pp.69-81.

#### Report

Bottino, A. and Sharma, A.P. 1983. *Water quality monitoring of Kathmandu city water supply.* Family Planning Association of Nepal/Division of Health Education and Service Project, Kathmandu, Nepal. pp.48.

# Conference paper

Swar, D.B. 2008. History of rainbow trout (*Oncochynchus mykis*) introduction in Nepal. *In*: TB Gurung (ed) *Proceedings of the workshop on scaling up rainbow trout* (*Oncorhynchus mykiss*) *farming strategies in Nepal*, Kathmandu, pp. 21-24.

# Thesis/Dissertation

Aryal, T.R. 2002. Some demographic models and their applications with reference to Nepal. PhD Thesis, Centre for Population Studies, Department of Statistics, Banaras Hindu University, India.

# The manuscript should be sent to the following address (most preferably by email):

Office of the Chief Editor/Editor
Journal of Institute of Science and Technology
Tribhuvan University, Kirtipur, Kathmandu, Nepal

E-mail: <u>jistiost@gmail.com</u>

The reviewer and the correspondence author shall get one copy of the journal free of cost and additional copies of the journal may be provided at reasonable cost.

The decisions of the Chief Editor are final for publishing the articles that have been submitted. The opinions expressed in the articles are the author's own and do not reflect the view of the publisher or the Editorial Board.

Author(s) should declare that the submitted work has not been published and is not being considered for publication, elsewhere. It is expected to suggest the names and full address (with email) of three referees relating to the subject area of the manuscript.

# **Submission Preparation Checklist**

As part of the submission process, authors are required to check off their submission's compliance with all of the following items, and <u>submissions</u> may be returned to authors that do not adhere to these guidelines.

- 1. The submission has not been previously published, nor is it before another journal for consideration (or an explanation has been provided in Comments to the Editor).
- 2. The submission file is in OpenOffice, Microsoft Word, RTF, or WordPerfect document file format.
- 3. Where available, URLs for the references have been provided.
- 4. The text is double-spaced; uses a 12-point font; employs italics, rather than underlining (except with URL addresses); and all illustrations, figures, and tables are placed within the text at the appropriate points, rather than at the end.
- 5. The text adheres to the stylistic and bibliographic requirements outlined in the <u>Author Guidelines</u>, which is found in About the Journal.
- 6. If submitting to a peer-reviewed section of the journal, the instructions in Ensuring a Blind Review have been followed.