Transmathematica 2019 - The 2nd International Conference On Total Systems

James A.D.W. Anderson
j.anderson@reading.ac.uk
Department of Computer Science
The University of Reading
England
RG6 6AY

Tiago S. dos Reis
tiago.reis@ifrj.edu.br
Federal Institute of Education, Science and Technology
of Rio de Janeiro
Brazil
27215-350

Walter Gomide
waltergomide@yahoo.com
Department of Philosophy
Federal University of Mato Grosso
Brazil
78060-900

Abstract

We describe the proceedings of Transmathematica 2019 - The 2nd International Conference on Total Systems, which was held in Reading, UK on 1st July 2019. We describe how to cite Transmathematica journal papers and announce Transmathematica 2021 - The 3rd International Conference on Total Systems.

1   Introduction

The Transmathematica society organises a biannual series of conferences. Transmathematica 2019 - The 2nd International Conference on Total Systems was held in Reading, UK on 1st July 2019. It was preceded by the conference known as Transmathematica 2017.

The Transmathematica 2019 conference made heavy use of the online journal Transmathematica. Every aspect of the conference was publicised via the journal, including the Call for Papers and Programme and the publication of the papers themselves.

All and only the members of the conference's editorial board appear as co-authors of the present paper. The lead author, Anderson, was the local organiser.

2   Call for Papers and Programme

The Call for Papers and Programme is linked from the Transmathematica journal's website, transmathematica.org. It is a single document that provides all of the information that conference attendees need, including payment methods.

3   Citing Transmathematica Papers

Transmathematica is an online only journal. Papers are published continuously within annual volumes. The order papers appear in the web site's user interface can change. Typically, papers appear in chronological order, as soon as they are ready for publication but, in a conference year, papers are re-organised to reflect the conference programme. In years with an annual review, papers may be re-organised, at the end of the year, to reflect the order they appear in the annual review. The annual review, if any, reviews all papers that appeared in Transmathematica, in the current calendar year, as well as transmathematics papers that appeared elsewhere. Papers that appeared elsewhere may be reviewed in a later annual review if their existence was not known in time to be included in the current year.

The first paper published was:

T. S. dos Reis, "Transreal Integral", Transmathematica, ISSN 2632-9212, pp 1-10, 25 June 2019, https://doi.org/10.36285/tm.v0i0.13

Other papers appeared later the same day. Initially, this paper appeared first in chronological order of acceptance but was soon re-ordered to reflect the running order of the conference.

Papers were initially published with limited biographical details, before an International Standard Serial Number (ISSN) and the Digital Object Identifier (DOI) were added. The issuing authorities for ISSNs and DOIs require that there are a minimum number of published articles before issuing identifiers so such bootstrapping is unavoidable. Bootstrapping was completed by the end of 2019 so the above form of citation

should be used in all Transmathematica articles from 2020 onward. The ISSN and DOI may be omitted if they are not known for articles that appear elsewhere. Citations to Transmathematica articles that appear in other journals should, of course, use the citation formats required by those journals.

The citation, just given, has the form: ⟨authors⟩, "⟨title⟩", Transmathematica, ISSN 2632-9212, pp ⟨pages⟩, ⟨date⟩, ⟨DOI⟩. Note that the pages field gives the number of pages in the published article so all articles are numbered from one. There are no page numbers associated with an issue, which allows articles to be re-ordered within an issue. The DOI is a Uniform Resource Locator (URL), made up of "https://doi.org/" followed by the Transmathematica journal's DOI Prefix, "10.36285" followed by an article identifier. Here the article identifier is "tm.v0i0.13" where "tm" is the TransMathematica journal's initials "TM" and "v0i0.13" ends with the article's sequence number, "13." The sequence number is used throughout the publication process to identify an article from first submission to publication. Later in the year, the article identifier was simplified to the form "tm.s" where "s" is the sequence number. Thus, in the recent form, the article identifier would be "tm.13" see examples below.

Logically the Transmathematica journal's initial should be just "T" but this is confusable with the common abbreviation of "Transactions." Employing the second initial "M" avoids this confusion and may be compatible with future journals, such as the putative "Transphysica" (TP).

If the citation itself appears in an online source, it may contain hyperlinks. Here the title, in the citation, links to a publication record, in the Transmathematica journal. The publication record gives: the main text of the paper; any supporting files, such as presentations, computer programs, data, images, videos or whatever else; the publication date in the order yyyy-mm-dd; copyright and licence notices. The publication date in the publication record is critical. This is the date that should appear in citations. Readers can use the Transmathematica journal's search facilities to search for papers published on a particular date so the date provides a very quick and accurate way of finding a publication by hand. Here the word "Transmathematica," in the citation, links to the journal's home: transmathematica.org. Authors may like to link their names to biographical web sites or their institutional addresses to institutional web sites.

Within a Transmathematica paper, text in maroon is a hyperlink within the paper and text in light blue is a link outside the paper. The title of each paper is shown in light blue and links to a bibliographical record in the Transmathematica journal. This record lists all of the digital assets associated with the main paper and may contain notes, such as errata or other notices.

4 Proceedings and Papers

Dr Anderson gave the welcome address. He outlined the local arrangements for the conference, demonstrated the online Transmathematica journal, gave orientation notes on each of the papers, and gave a brief

introduction to transreal arithmetic.

The papers were presented in the following order:

J. A. Bergstra, "Division by Zero - A survey of options", Transmathematica, ISSN 2632-9212, pp 1-20, 25 June 2019,
https://doi.org/10.36285/tm.v0i0.17

J. A. Bergstra, "Dual Number Meadows", Transmathematica, ISSN 2632-9212, pp 1-18, 25 June 2019, https://doi.org/10.36285/tm.v0i0.11

Professor dos Reis gave the Keynote Lecture on the transreal and transcomplex integrals. The transcomplex paper appears in a later conference by another organisation.

T. S. dos Reis "Transreal Integral", Transmathematica, ISSN 2632-9212, pp 1-10, 25 June 2019, https://doi.org/10.36285/tm.v0i0.13

T. S. dos Reis, and J. A. D. W. Anderson, "Integral on Transcomplex Numbers", Lecture Notes in Engineering and Computer Science: Proceedings of The World Congress on Engineering 2019, 3-5 July, 2019, London, U.K., pp 90-94.

Dr Anderson gave a presentation on the Two Couriers Problem, in the place of Mr William Gilreath who was unable to attend the conference in person or virtually.

W. F. Gilreath "The Two Couriers Problem", Transmathematica, ISSN 2632-9212, pp 1-6, 25 June 2019, https://doi.org/10.36285/tm.v0i0.7

W. Gomide "Thought Experiment as a Logical Transformation in Transreal Logical Space – Re-Examining the Einstein, Podolsky and Rosen Paradox", Transmathematica, ISSN 2632-9212, pp 1-11, 25 June 2019, https://doi.org/10.36285/tm.v0i0.15

S. F. K. Leach, "Slipstream Transcomputation of the Fast Fourier Transform", ISSN 2632-9212, pp 1-16, 24 December 2019, https://doi.org/10.36285/tm.29

J. A. D. W. Anderson "Foundations of Transmathematics", Transmathematica, ISSN 2632-9212, pp 1-11, 28 June 2019, https://doi.org/10.36285/tm.v0i0.23

Professor Gomide gave the closing address, including announcing Transmathematica 2021 - The 3rd International Conference on Total Systems.

5   Conclusion

We describe the proceedings of Transmathematica 2019 - The 2nd International Conference on Total Systems, which was held in Reading, UK on 1st July 2019. We describe how to cite Transmathematica journal papers and announce Transmathematica 2021 - The 3rd International Conference on Total Systems.