

Paper Submission Form - SAIP2025 Proceedings

Sections A, C, D, and E must be completed by all authors (including students) who submit papers. Section B is compulsory for students who submit manuscript(s).

Section A: Paper Submission Information

Paper/Abstract ID	295
Paper title	Identification of Cosmic Filaments using the Simba-C simulation and DisPerSE Filament Finder
Corresponding Author Name & Surname:	Jaydon Durow
Corresponding Author Email Address:	jaydondurow@gmail.com

Section B: For Students & Supervisors

Supervisor Name & Surname:	Renier Timothy Hough
Supervisor Email Address:	renierht@gmail.com

For this paper, the supervisor must agree/disagree with the following statements.

	Yes	No
1. I am aware that the above-mentioned paper is being submitted for possible publication in the Proceedings of the SAIP Conference. I am satisfied that the presented work is that of the listed authors. I hereby give consent to the submission	X	
2. I have proof-read the manuscript	X	
3. I am satisfied that the manuscript is written in appropriate English and is sufficiently free of grammatical and spelling errors	X	
4. I am familiar with the required manuscript format ("House Style"), and I am satisfied that this manuscript meets the criteria. I am aware that manuscripts not conforming with House Style may be desk rejected	X	
5. I am satisfied that the scientific content of this manuscript is of sufficient standard for it to be considered for publication in the Proceedings of the South African Institute of Physics Conference Proceedings	X	

Student Name & Surname: Jaydon Durow Signature: Date: 31/07/2025

Supervisor Name & Surname: Renier T. Hough Signature: Date: 31/07/2025

Section C: Suggested Reviewers

Obtaining the two referee reports necessary for DHET subsidy is an onerous task.

Please provide the names and contact details of three qualified South African and/or international referees. Referees should have a PhD and expertise in the relevant area of Physics. Do not recommend referees who have co-authored a work with any of the authors on the manuscript within the past five (5) years. Manuscripts without three recommended referees may be subject to desk rejection.

Suggested Reviewers in your Research Field (Both local & international)		
	Reviewer Names & Surname	Reviewer's Email Address(es)
Suggested reviewer #1	Sean February	sfebruary@csir.co.za
Suggested reviewer #2	Furen Deng	frdeng@bao.ac.cn
Suggested reviewer #3	Daniele Sorini	daniel.sorini@durham.ac.za

Section D: Declaration of Novelty and Use of AI

How is this submitted manuscript scientifically novel?

Other cosmological simulation suites have identified large scale structures in their simulations. These structures are called filaments, clusters and voids and are composed of galaxies, dark matter, gas and stars. The Simba-C cosmological simulation suite also contains these structures. The identification of these structures would help in the study of these structures and what they are made of. We used the Disperse software to identify these structures, particularly the filaments in a Simba-C simulation. This software worked well and can potentially help in the future to study these large scale structures and their constituents.

Please see the Author Guidelines for the AI use policy.

How was AI used in the generation of this manuscript?

AI was used in searching for and understanding some topics.

Section E: Plagiarism

	Yes
I am aware that plagiarism detection software may be used on my manuscript.	X