

**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	246
Paper title	IoT-Based Environmental Conditions Monitoring of a Sawtooth Greenhouse: A Foundation for Anomaly Detection and Computational Fluid Dynamics
Corresponding Author Name & Surname:	ABDOOL SATTAR CASSIM
Corresponding Author Email Address:	abdoolsattarcassim@gmail.com

## Section B: For Students & Supervisors

Supervisor Name & Surname:	Simon Henry Connell
Supervisor Email Address:	si@mykonos.org.za

**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	✓	
2. I have proof-read the manuscript	✓	
3. I am satisfied that the manuscript is written in appropriate English and is sufficiently free of grammatical and spelling errors	✓	
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	✓	
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	✓	

Student Name & Surname: ABDOOL SATTAR CASSIM

Signature: 

Date: 29/07/2025

Supervisor Name & Surname: Simon Connell

Signature: 

Date: 31/7/2025

## 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	Irvy Gledhill	igle.gledhill@wits.ac.za
Suggested reviewer #2	Alan Matthews	MATTHEWSA@ukzn.ac.za
Suggested reviewer #3	Ernest Van Dyk	Ernest.vanDyk@mandela.ac.za

## Section D: Declaration of Novelty and Use of AI

### How is this submitted manuscript scientifically novel?

The research presented shows the integration of Internet of Things with a sophisticated data analysis technique for double-roofed sawtooth greenhouses. Other researchers do not go into depth on the data analysis used to quantify the thermal behavior of this type of greenhouse. Additionally, this was directly used to assess the temperature suitability of the greenhouse for plants and provide recommendations on more appropriate plants for the greenhouse based on these measurements. They were also integrated with ERA5-land measurements to further bolster the findings in the study.

Please see the Author Guidelines for the AI use policy.

### How was AI used in the generation of this manuscript?

AI such as Grammarly was used for grammer and syntax correction. Deepseek was consulted for assistance in graph generation for pyROOT.

## Section E: Plagiarism

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