

October 2026, document also available at GALESSS website, www.galeless.org



Information Pack 1 GALESS Conference South Africa 2027

Introduction

Welcome to the 6th edition of the GALESS TiltShift Challenge, research domain: *AI for Sustainable Solutions*.

With this document, we send you more information about the GALESS Tiltshift Conference “*AI for Sustainable Solutions*” to be held in Johannesburg, South Africa, from July 4, 2027 till July 8, 2027. The organizing school is:

African Leadership Academy

Location: Johannesburg, South Africa

Local Project Leader : Veronica Orege : vorege@africanleadershipacademy.org

The TiltShift Challenge includes a period for research efforts followed up by physical conference. The research period is starting October 1, 2026 and will be ended on June 23, 2027. During this period the GALESS Helpdesk and the local organizing team in Johannesburg are available for possible questions regarding this TiltShift Challenge.

Questions about the research activities should be directed directly to the GALESS Helpdesk.
(info@galeless.org)

The research activities are meant to be set in a school environment, in a school team of 4 students and max two guiding teachers. Reference contacts from your school, local community and region, who may serve as living libraries, are also requested. ***We ask you, in this case in particular, to include the voice of the people working already with AI (being subject of your research activities) into your research report.***

In week 25 of the year 2027 , a written report and a concept PowerPoint-presentation to be used in a “challenge setting” are part of the required deliveries. The presentation of the report will take place during the conference in Johannesburg.

This TiltShift Challenge addresses an effort to contribute to awareness about complex questions in the domain “*AI for Sustainable Solutions*”, looking for sustainable and responsible answers from our young generation in each part of the world.



Research Setting: a timetable is included, website information provided and information about delivery, including judging/assessment aspects are added as well in three Information Packs during the research period. Certificates for each team participating in the TiltShift Challenge will be part of the full concept and will be awarded at the end of the challenge.

In whatever circumstances, our efforts will always be connected to our GALESS mission to motivate students towards global sustainability.

GALESS Research Setting

TiltShift Challenge

The TiltShift Challenge is meant to enthuse students to undertake action to 'catch their future' through a process of contemplation, research and creativity. Students are asked to complete academic assignments or tasks and will then be presented with group challenges among various schools all over the world. We invite students to engage in the larger problems facing them, their school, their community and beyond borders, thus enticing them to extend their learning boundaries beyond their classroom-walls, with challenges that are invariably more complex.

Structure of TiltShift Challenges

There are three basic features that characterize these challenges:

- The challenge presents the task, the question (thesis), or the issue which the students will address and contribute to solve. The challenge is presented by either a well-known politician, a specialist/a scientist/a researcher or a practitioner, or an expert team connected to the organizing school.
- In groups of 4, the students will complete the task guided by a Teacher-Mentor. Either a well-known politician or specialist/a scientist/a researcher or a practitioner from your immediate local living environment, whose function can be described as a 'living library' is available for advice and consultation.
- The solutions or completed tasks will be presented twofold. First, there must be a written description of the solution or task completed in a research-report. Secondly, the solution/task needs to be presented in a challenge situation with other teams during a conference. A group of experts will act as critical jury-panel (CP), judging the



contributions. The CP consists of a local jury-team and the GALESS Jury Board. The research reports of all teams, involved in the same challenge during the calendar-year, will be published in a Challenge yearbook as well as on the GALESS website.

“Artificial Intelligence for Sustainable Solutions”

Thesis description Conference South Africa

Agriculture:

- Citizen science: How can we use AI tools for early detection and treatment of agricultural disease ?
- Feeding the planet: How AI is key to unlocking the planet’s agricultural potential ?
- How AI can bring data-driven precision to agriculture and resource use ?

Education:

- Beyond the four walls: How can we use AI to break down educational barriers in low-income communities ?
- How can AI end the textbook shortage ?
- How can students use AI to improve literacy and home language resources ?

We advise research teams to pick one subject (Agriculture or Education) and pick one of the three Thesis statements as the base of your research report.



General Research requirements

Written Report

- Word length 2500-5000
- References and all other sources must be acknowledged
- Word length of the written report must be shown clearly on the report. Reports that are **10% over** the permitted word length will not be accepted. *See attachment 1 for further Report Layout Requirements*

Information gathering and application

Sufficient breadth and depth of pertinent information; information extends beyond local context to regional context. Identifies the dilemma, including pertinent facts; states what course of action must be decided

Analysis of Arguments

Determines stakeholders involved and Identify 2-3 arguments and evaluates their consequences effectively.

Weighing and Balancing Arguments

Arguments are *sufficiently* evaluated. Identifies and applies at least one appropriate theoretical or ethical framework for evaluating alternatives.

Formulation of Conclusion

Identifies and explains an appropriate conclusion, and proposes a plan for implementing it. Linkage between content and global sustainability issues or threats is *sufficient; significance at a global level is sufficient*.



Step-by-step Guide for Dealing with Ethical Dilemmas

Phase 1: Explore dilemma

Make an inventory of the questions and try to find an answer. The goal is to get a complete picture of the situation by gathering facts. You ask questions such as: Is the issue clear? What factual information is still missing? What does the situation look like from different angles and perspectives? What else do we need to know? Which studies still need to be done?

When you work out the dilemma in a conversation, you involve the different disciplines involved in /connected to this case. Try to empathize with the viewpoints of the different disciplines. In this phase, it is important to focus on the facts -there is no room for your own opinion (yet).

Phase 2: Identification

Identification of those involved and analysis of their arguments. Identify who is involved in the situation, what their responsibilities are and what arguments the parties involved have. Pay attention to the moral substantiation of the arguments such as underlying values and norms.

Phase 3: Weighing arguments

This phase is the most important one. Here you compare the pros and cons of the various arguments. This is preferably done as systematically as possible. Important: it is about valuing the arguments to make a proper assessment for this specific case. Weighing and balancing arguments is perhaps the most important phase in the roadmap, but it also is the most difficult. Ethics is never of paramount importance. Sometimes consensus can be reached, though not always possible. It is about valuing the arguments and weighing up what is most important in the case in question. Ethical theories can be helpful here. It can also help to consider ethical concepts such as subsidiarity and proportionality. In addition, it can sometimes be useful to apply thought experiments to the case. For example, by hypothetically changing certain facts, you may better highlight the relevant aspects in the case presented. In addition, you can clarify and balance the arguments better.

Phase 4: Formulating the conclusion

At the end of the thinking process you formulate the conclusion. Here you have to consider whether and how you can minimize the negative impact that may arise from the conclusion.

Final Team-Registration



Details for final team-registration will be collected by the GALESS front-desk : January 15, 2027.

We require at that time :

- full school name
- students' name details, gender and date of birth
- guiding teacher name(s) & contact details
- name(s) of living library/ (ies)
- name reserve stand-by student

(Data only to be used for GALESS Certificate production)



Timetable road to conference South Africa:

September 30, 2026	Information Pack 1 (IP1) Final registration GALESS CA fee Billing (EUR 50,- pp)
December 1, 2026	Call for Research Abstracts
January 15, 2027	Information Pack 2 (IP2)
March 1, 2027	ALA participation fee. Billing (USD 550,-pp)
June 15, 2027	Information Pack 3 (IP3)
June 20, 2027	Call for final research-reports.
July 4-8, 2027	GALESS Conference Johannesburg
December 2027	Publication GALESS Yearbook 2027: AI for sustainable solutions – publication research reports from 3 conferences

Provisional Agenda Conference South Africa.

The provisional agenda for the conference week will be published in Information Pack 2 (Final agenda in Information Pack 3). The local organization team will provide more information about accommodation for students and for guiding staff during the conference at the school campus at that time as well.

Attachment 1

Research Report *Layout* Requirements



Your research results should be published in a document with a standard format setting.

Page 1

THE THESIS,

Highlighting the research location/region/country and your social/cultural setting of the thesis's in the challenge

Team: FirstName1 LastName1, FirstName2 LastName2

Some Institute, Country, Corresponding Email of teacher ic

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Summary - Abstract

Your summary should be inserted here (max 200 words).

Keywords

keyword1, keyword2, keyword3 (max of 5 keywords)

Introduction

Before you start writing your paper, first read the following instructions regarding manuscript preparation in order to have a uniform layout throughout the proceedings.

Your manuscript file should be in PDF format,

Basic formatting instructions

Page layout

The page size must be standard **A4** (210 mm wide and 297 mm high). MS Word users should first declare so to the printer connected to their computer by clicking on printer options, paper size. Then, under MS Word, click on file, page layout, and size. Units should be set in centimeters (one inch equals 2.54 cm). To do so under MS Word, click on "Tools", then "Options", then "General.

Do not insert page numbers!

All four margins (left, right, top and bottom) must be set to 1.5 cm. To do so under MS Word, click on file, page layout, margins.

The text should be written in two columns, 1 cm apart from each other, and 8.5 cm wide. Exceptions may occur when writing long equations or inserting wide graphs or pictures.

The whole text should be typed using the Times New Roman font, with a size as specified in Table1.

Paragraph formatting

The body of the paper (style **Normal** in MS Word) should be aligned justified and not indented. 10 pt font should be used. A vertical spacing of 4 pt should be inserted between paragraphs.

Sections, subsections

Both levels of sections (**Heading 1-2** styles in MS Word) should be left aligned. The vertical spacing before and after section marks is given in Table 1.

Tables

Tables should be centered in the column (or page, if the size of the table makes it necessary), followed by a 9 pt font caption placed **above** the table. They should be separated from the text by a 12 pt spacing.

Table 1: Paragraph formats

Paragraph style	Font size	spacing		
		Above	Below	align
Title	14 pt	0 pt	12 pt	center
Authors	12pt	0 pt	0 pt	center
Address	10pt, italic	4 pt	0 pt	center
Heading 1	14 pt	21 pt	12 pt	left
Heading 2	13 pt	12 pt	12 pt	left
Normal	10 pt	4 pt	0 pt	justified
Reference Heading	14 pt	21 pt	12 pt	left

Figures

Figures should be centered in the column using a 9 pt font. (or page, if the size of the figure makes it necessary), followed by a caption, as shown in Fig.1. They should be placed below the figure.



Figure 1: Your figure here.

Equations

Equations should be centered and identified by a number, as following:

$$\lim_{x \rightarrow a} \frac{1}{(x-a)^2} = +\infty \quad (1)$$

Refer to equation number 1 as Eq.(1).

Please use the International System of Units.

Content

The scope of the investigation

Please clearly explain local versus more general considerations in coherence and consistency regarding the thesis.

Method of the investigation

Please clearly explain the way you included your environmental resources in the report (including way of consulting), step by step development in a process-description/thinking, timing of the research-efforts, referential aspects etc

Please clearly explain your own contribution to the investigation with arguments, considerations etc.

Results of investigation

Conclusion(s)

Thank you for following these instructions. It will be good to conclude with some recommendations of future works that can be done.

Acknowledgements

References & further resources

The reference section should not be numbered (please use the style **Reference heading**).

Quotes in the text should be given by numbers enclosed in bracket [1], in the order that appears in the text. Multiple quotes should be written together, separated by commas [1, 2] or [1-5] for quotes that contain more than 3 references.

- [1] Doyle, Arthur Conan (1893). *The Original illustrated 'Strand' Sherlock Holmes* (1989 ed.). Ware, England: Wordsworth. pp. 354–355.
- [2] Rowling, J.K. (1997). *Harry Potter and the Philosopher's Stone*. Bloomsbury. pp. 109–113.