

FIRST ANNOUNCEMENT

# The 23<sup>rd</sup> International Conference on the Teaching of Mathematical Modelling and Applications (ICTMA23)

*Context and Diversity, and its Meaning  
in Mathematical Modelling Education*



## DATES

22-27 August 2027



## HOST INSTITUTION AND ORGANISERS

University of the Witwatersrand,  
Johannesburg, South Africa  
School of Education  
Mathematics Education Division



## LOCATION

Skukuza Camp,  
Kruger National Park,  
South Africa



## CONFERENCE THEME

*"Context and Diversity, and its Meaning  
in Mathematical Modelling Education".*

ICTMA23 brings together researchers, educators, practitioners and students from around the world to advance the teaching and learning of mathematical modelling and its applications across diverse contexts and disciplines.

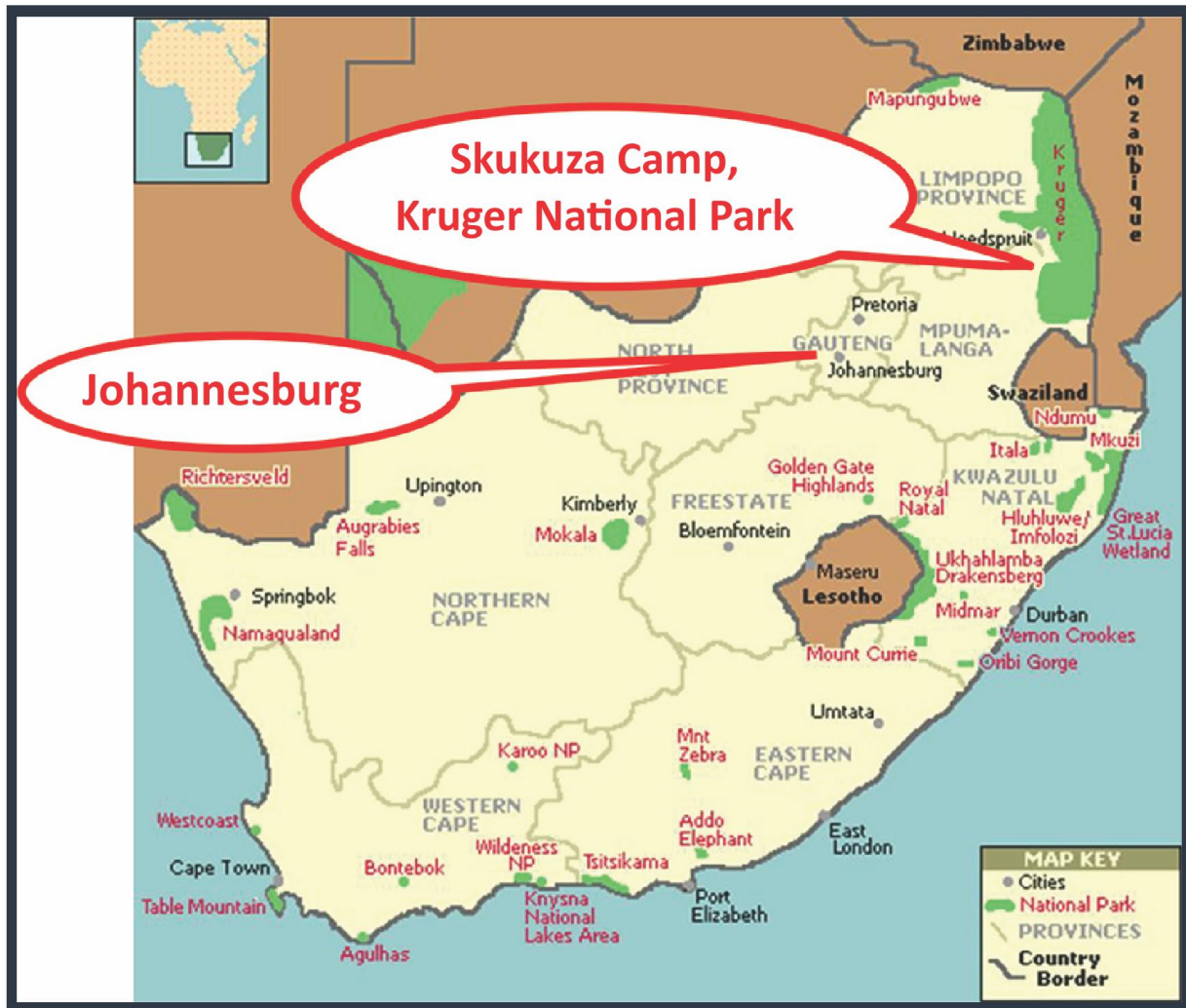
**ICTMA**

UNIVERSITY OF THE  
WITWATERSRAND,  
JOHANNESBURG



**WSoE**  
Wits School of Education

# Welcome to South Africa, Skukuza Camp in the Kruger National Park!



South Africa is a country of remarkable diversity, offering a rich blend of cultures, languages, landscapes, and histories. From vibrant cities to expansive natural environments, it provides a unique setting for intellectual exchange and international collaboration. The southern part of the country previously hosted ICTMA18 in 2017 at Stellenbosch University in Cape Town, providing participants with an opportunity to engage with the South African mathematical modelling community within the distinctive setting of one of the country's best-known cities. Ten years later ICTMA23 moves to the northern part of the country, a different but equally compelling environment, welcoming participants to the heart of the Kruger National Park.

The Kruger National Park is one of Africa's premier conservation areas, renowned globally for its extraordinary biodiversity and opportunities to experience wildlife in its natural habitat. Hosting ICTMA23 in this setting offers participants a rare opportunity to engage with academic discourse while being immersed in an environment where the connection between mathematics, modelling, and the real world becomes vividly tangible.

The conference will be held at Skukuza Camp, the largest camp in Kruger National Park and a gateway to some of the most spectacular wildlife experiences in the region. Skukuza combines modern conference facilities with a unique natural setting along the Sabie River, offering safe, comfortable, and world-class amenities.

# The International Community of Teachers of Mathematical Modelling and Applications

The International Community of Teachers of Mathematical Modelling and Applications (ICTMA) is a membership-based organisation dedicated to promoting the teaching and learning of applications and mathematical modelling across all levels of education, including primary and secondary schooling, as well as colleges and universities.

Since its inception in the early 1980s, ICTMA has convened a series of international conferences that have been held mostly biennially. These conferences have played a central role in shaping the field of mathematical modelling education by providing a platform for scholarly exchange, collaboration, and the dissemination of research.

A record of past ICTMA conferences is provided below:

- ICTMA1 (1983): University of Exeter, England
- ICTMA2 (1985): University of Exeter, England
- ICTMA3 (1987): University of Kassel, Germany
- ICTMA4 (1989): University of Roskilde, Denmark
- ICTMA5 (1991): Freudenthal Institute, Netherlands
- ICTMA6 (1993): University of Delaware, USA
- ICTMA7 (1995): University of Ulster, Northern Ireland
- ICTMA8 (1997): University of Queensland, Australia
- ICTMA9 (1999): University of Lisbon, Portugal
- ICTMA10 (2001): Tsinghua University, Beijing, China
- ICTMA11 (2003): Marquette University, Milwaukee, USA
- ICTMA12 (2005): City University, London, United Kingdom
- ICTMA13 (2007): Indiana University, USA (with a satellite meeting at Kathmandu University, Nepal)
- ICTMA14 (2009): University of Hamburg, Germany
- ICTMA15 (2011): Australian Catholic University, Australia
- ICTMA16 (2013): Universidade Regional de Blumenau, Brazil
- ICTMA17 (2015): University of Nottingham, United Kingdom
- ICTMA18 (2017): University of Stellenbosch, Cape Town, South Africa
- ICTMA19 (2019): University of Hong Kong, Hong Kong
- ICTMA20 (2022): University of Würzburg, Germany
- ICTMA21 (2023): Yokohama National University, Japan
- ICTMA22 (2025): Linköping University, Sweden

## The 23rd International Conference on the Teaching of Mathematical Modelling and Applications (ICTMA23)

**Dates:** 22–27 August 2027

**Location:** Skukuza Camp, Kruger National Park, South Africa

**Website:** <https://ictma23.carlamani.com>; A 'Know-Before-You-Go' document will be shared on the website containing all information about visiting the Kruger National Park.

## Host Institution and Organisers

University of the Witwatersrand, Johannesburg, South Africa  
School of Education, Mathematics Education Division

### Local Organizing Committee (LOC)

Chair: Dr Rina Durandt (Scientific Enquiries: rina.durandt@wits.ac.za)

Members:

Mrs Mukhethwa Chabalala  
Dr Aarifah Gardee  
Dr Brantina Chirinda  
Dr Herman Tshesane  
Prof Judah Makonye  
Dr Sego Matlala  
Dr Sfiso Mahlaba  
Dr Wilmari Morton  
Dr Zaheera Jina Asvat

**Carlamani Conferences:** Mrs Carla de Jager (Logistic and Admin Enquiries: ictma23@carlamani.com)

## Conference Theme

### *“Context and Diversity, and its Meaning in Mathematical Modelling Education”*

Mathematical modelling is inherently rooted in the real world—shaped by context, culture, and human experience. In an era marked by increasing diversity and global complexity, understanding how context influences modelling practices is both a theoretical and pedagogical imperative. ICTMA23 invites the international community to engage critically with how diversity (social, cultural, economic, linguistic, and ecological) shapes the teaching and learning of mathematical modelling. Hosted in the unique setting of the Kruger National Park, the conference foregrounds the deep interconnections between mathematics, society, and the natural world.

This conference provides a space for researchers, educators, and practitioners to share insights, challenge assumptions, and explore inclusive, context-responsive approaches to modelling education.

## Key Dates

<b>Abstract Submissions Open</b>	<b>1 August 2026</b>
<b>Congress Registration Opens</b>	<b>1 December 2026</b>
<b>Abstract Submissions Close</b>	<b>1 February 2027</b>
<b>Abstract Outcome Notification to Authors</b>	<b>15 February 2027</b>
<b>Early-bird Registration Closes</b>	<b>1 April 2027</b>
<b>SANPARKS Accommodation Bookings (Bungalows) Close</b>	<b>22 February 2027</b>
<b>Skukuza Safari Lodge Accommodation Bookings Close</b>	<b>15 May 2027</b>
<b>Regular Registration Bookings Close</b>	<b>1 June 2027</b>
<b>Provisional Programme</b>	<b>1 July 2027</b>
<b>Final Programme</b>	<b>1 August 2027</b>
<b>Conference dates</b>	<b>22 – 27 August 2027</b>

### Conference Aims

- To advance research on the role of context in mathematical modelling education
- To explore inclusive and equitable practices in diverse educational settings
- To strengthen connections between theory, practice, and real-world applications
- To foster international collaboration across disciplines and regions

### Contribution to Research

Two outputs, as a contribution to research, will follow from the conference; a book in the ICTMA Springer series and a Special Issue in the African Journal of Teacher Education and Development. More details will be available in the Second Announcement and on the website.

### Conference Strands (sub-themes)

Contributions are invited around (but not limited to) the following strands and applicable to all levels of education:

#### *Contextualising Mathematical Modelling*

- o Local, cultural, and socio-economic influences on modelling
- o Indigenous knowledge systems and modelling

#### *Equity, Diversity, and Inclusion*

- o Access and participation in modelling education
- o Language, identity, and power in modelling classrooms

#### *Modelling in Practice*

- o Classroom implementation and task design
- o Assessment and evaluation of modelling competencies

#### *Teacher Education and Professional Development*

- o Developing a modelling mindset in teachers
- o Pre-service and in-service teacher education

#### *Technology, AI, and Modelling*

- o The role of artificial intelligence in modelling
- o Digital tools and simulation environments

#### *Interdisciplinary and Real-World Applications*

- o Modelling in science, engineering, health, and finance
- o Sustainability and environmental modelling

#### *Students' Thinking and Learning*

- o Cognitive and affective aspects of modelling
- o Collaboration, problem posing, and problem solving

#### *Critical Perspectives*

- o Modelling for critical citizenship
- o Ethnomathematical dimensions of modelling
- o Ethical dimensions of modelling

### Programme Overview

ICTMA23 will feature a rich academic and social programme with several activities.

# Academic Programme

## Keynote and Plenaries

Keynote (75 minutes): Prof Hans-Stefan Siller (Julius-Maximilians Universität, Germany)

Plenary 1 (60 minutes): Prof Zehavit Kohen (Technion – Israel Institute of Technology, Israel)

Plenary 2 (75 minutes):

Part 1 – Prof Renuka Vithal (University of Fort Hare, South Africa)

Part 2 – Prof Matsuzaki Akio (Saitama University, Japan)

Plenary 3 Combined presentation (75 minutes):

Prof Irene Ferrando (Universitat de València, Spain)

Prof Berta Barquero (Universitat de Barcelona, Spain)

Plenary 4 (75 minutes): Prof Bavesh Kana (University of the Witwatersrand, South Africa)

Commentary to Plenary 4: Prof Gabriele Kaiser (University of Hamburg, Germany; East China Normal University, China)

## Panel Discussion

Theme: *“Context and Diversity, Reimagining Meaning in Mathematical Modelling Education”*

Panel chair: Prof Duncan Mhakure (University of Cape Town)

Panel members:

Dr Brantina Chirinda (University of the Witwatersrand, South Africa)

Prof Mustafa Çevikbaş (Vrije University Brussels, Belgium)

Prof Carolina Guerrero Ortiz (Pontificia Universidad Católica de Valparaíso, Chile)

Dr Ben Galluzzo (Consortium for Mathematics and its Applications (COMAP), USA)

Prof Stanislaw Schukajlow (University of Münster, Germany)

## Long and Short Oral Presentations

Long (30 + 15 minutes) and short (20 + 10 minutes) oral presentations will be organised in seven parallel sessions. Contributions may be empirical, theoretical, philosophical, or methodological, and may report on ongoing or completed research in mathematical modelling and its applications.

## Poster Presentations

The conference program comprises a designated slot(s) for poster presentations.

## Working Groups

ICTMA23 will include two Working Groups, each meeting twice during the conference. One Working Group will focus on Contextualising Mathematical Modelling in relation to the conference theme, while the second will focus on Teacher Education and Professional Development in Mathematical Modelling. These sessions will provide opportunities for discussion, collaboration, and the exchange of ideas on current challenges and emerging directions in mathematical modelling education.

## Early Career Researchers' (ERC) Meeting

Organiser: LOC Member

Presenters:

Prof Gloria Stillman (retired from Australian Catholic University, Australia)

Prof Werner Blum (University of Kassel, Germany)

Prof Tony Essien (University of the Witwatersrand, South Africa)

ICTMA23 Programme Outline

Time	Sunday 22 August 2027	Monday 23 August 2027	Tuesday 24 August 2027	Wednesday 25 August 2027	Thursday 26 August 2027	Friday 27 August 2027
Morning	Arrival	Conference Opening Keynote address Morning Tea/Coffee Parallel Session 1	Plenary 2 (Part 1 & 2) Morning Tea/Coffee Parallel Session 3	Plenary 3 (Combined presentation) Morning Tea/Coffee Parallel Session 5	Plenary 4 & Commentary Morning Tea/Coffee Parallel Session 7	Departure
Afternoon	Early Career Researchers' Meeting ICTMA Executive Committee Meeting Registration	Lunch	Lunch	Lunch & Conference Photo	Lunch	
Late Afternoon & Evening	Welcome Function under the Baobab Tree	Plenary 1 Afternoon Tea/Coffee & Poster Presentations Parallel Session 2	Working Group 1 or 2 Afternoon Tea/Coffee Parallel Session 4	ICTMA Business Meeting (including ICTMA24 presentation & information on conference output) Afternoon Tea/Coffee Parallel Session 6	Working Group 1 or 2 Afternoon Tea/Coffee Panel Discussion	
		Dinner at Kruger Station	Game Drive & Bush Braai	Free Evening	Gala Dinner under the Stars, Award Ceremony & Closing	

Note: Posters will be displayed in the foyer from Monday lunchtime and will remain available for viewing throughout the conference. Further programme details, including information about invited speakers, will be provided in the Second Announcement and on the conference website.



The Big 5 of Kruger

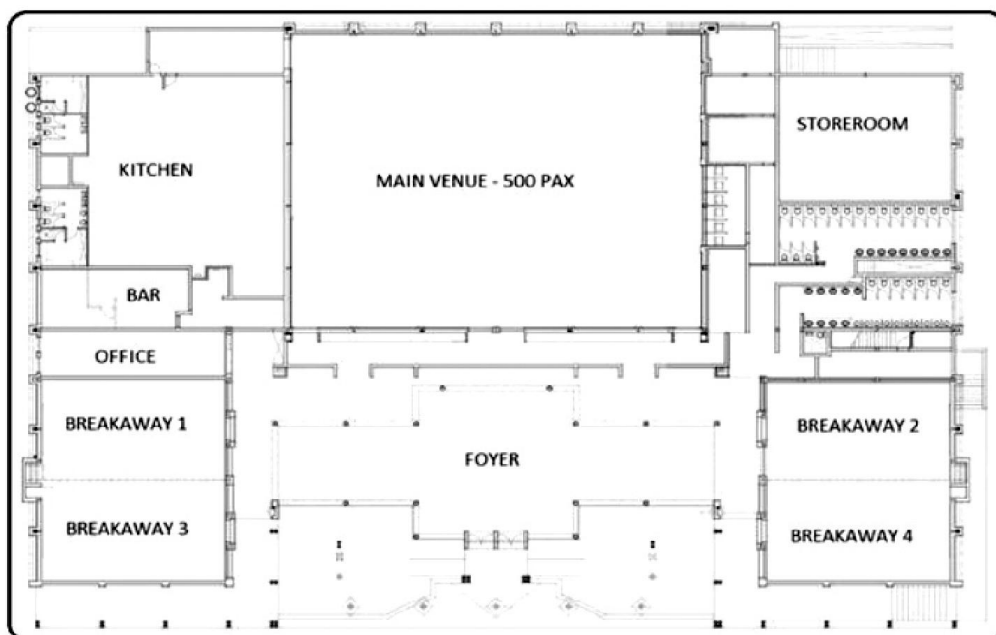
## Conference Venue

ICTMA23 will be hosted at the Nombolo Mdhuli Conference Centre in Skukuza Camp. The venue provides a unique setting for academic exchange within one of Africa's most celebrated natural environments. Additional information about the venue is available at <https://skukuzalodge.com/conferencing>.

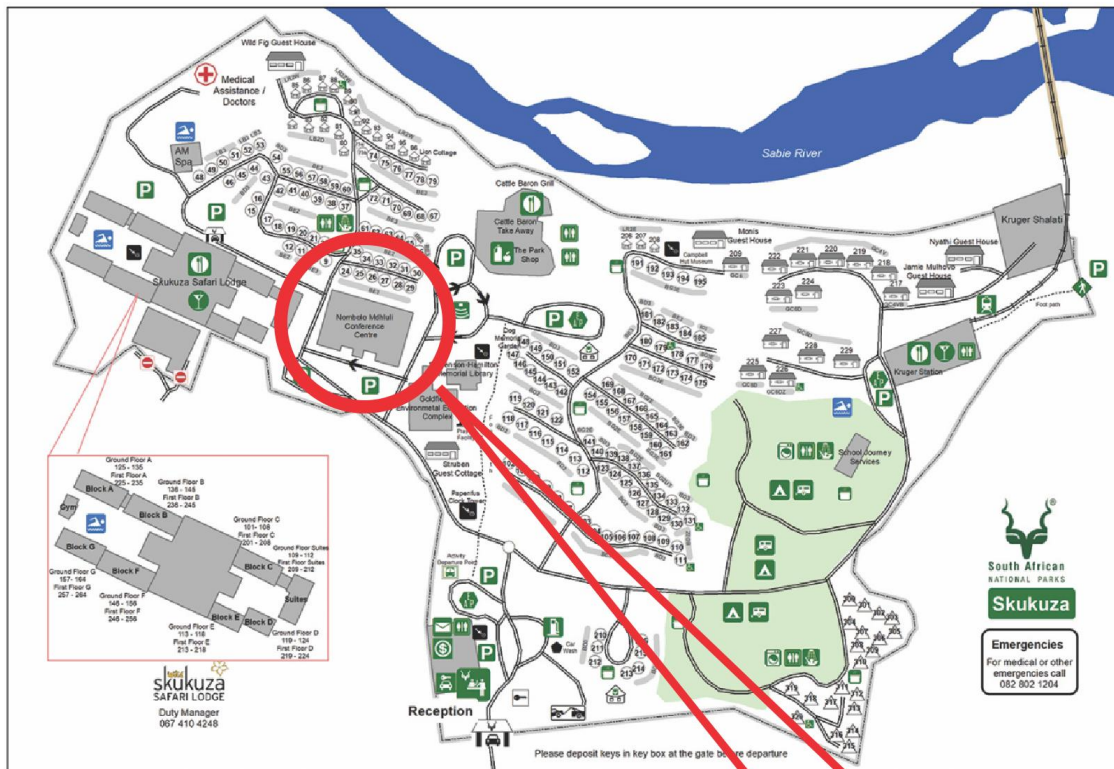
The venue is secure and safe, and a well-established destination with modern conference facilities. The conference facilities include a large plenary venue, four breakaway rooms to accommodate the academic programme, and a spacious foyer area for networking and exhibitions. All venues are equipped with modern presentation and audio-visual facilities to support conference activities.



*The foyer area of the Nombolo Mdhuli Conference Centre*



*Site plan of the Nombolo Mdhuli Conference Centre*



Site plan of Skukuza Camp

**Conference Venue**

## Social Programme and Excursion

The social programme at ICTMA23 includes several activities:

### Welcome Function under the Baobab Tree (Sunday 22 August 2027)

The Welcome Function will take place under the magnificent baobab tree at Skukuza Safari Lodge. The tree was originally planted by James Stevenson-Hamilton, the first warden of Kruger National Park.



*The baobab tree*

## Dinner at Kruger Station (Monday 23 August 2027)

Located in Skukuza Camp along the historic Selati railway line, Kruger Station offers visitors a distinctive experience that combines the heritage of the Kruger National Park with contemporary hospitality. Inspired by the history of the original railway station and early visitor gatherings in the park, the precinct reflects an important part of South Africa's cultural and conservation history. Dinner on the first conference day will take place at Kruger Station. The environment provides a welcoming space for delegates to connect, share ideas, and experience the unique atmosphere and natural beauty of the Kruger National Park (see <https://www.krugerstation.com/>).



*Kruger Station*

## Game Drive & Bush Braai (Tuesday 24 August 2027)

The ICTMA23 conference excursion will offer participants an opportunity to experience the unique environment of the Kruger National Park through a sunset safari and traditional bush braai. The excursion will include an afternoon game drive, unique viewing of the African sunset, and an authentic South African barbecue enjoyed under the night sky. This experience is intended to provide opportunities for informal networking while enjoying the natural beauty and wildlife of one of Africa's most renowned conservation areas.



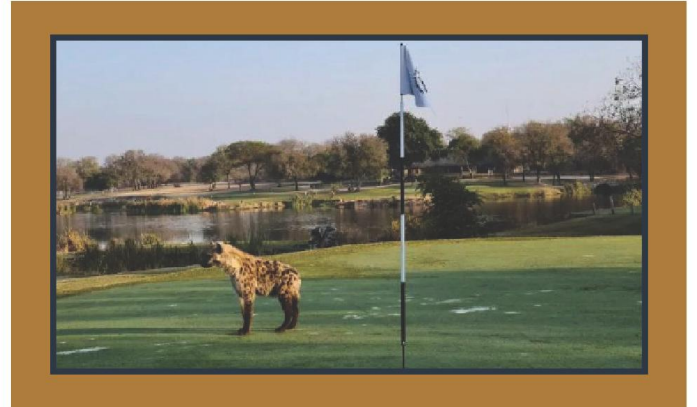
*Safari*



*Sunset over the Sabie River*

## Gala Dinner under the Stars (Thursday 26 August 2027)

The ICTMA23 Conference Dinner and Award Function will be held under the stars at the Skukuza Golf Club. Participants will enjoy an evening of fine dining and collegial celebration in a unique open-air setting overlooking the golf course and surrounding bushveld. Hosted in the club's atmospheric outdoor spaces, the evening will provide opportunities for networking and reflection while experiencing the distinctive natural environment and hospitality of Skukuza. Since ICTMA23 focuses on context and diversity, the dinner will intentionally celebrate the international and cultural diversity of the participants in a light and engaging way.



*Hyena spotted on the Skukuza golf course*

### **Additional Activities** (not part of the official conference social programme)

Participants and accompanying persons will have opportunities to enjoy a range of activities within and around Skukuza Camp during their stay in the Kruger National Park. Bookings can be made on arrival at the camp.

- Wildlife Experiences – Visitors may explore the park through guided morning, sunset, and night game drives, guided bush walks, and birdwatching at the renowned Lake Panic Bird Hide. Wildlife films are also regularly screened in the camp's outdoor amphitheatre.
- Leisure and Cultural Attractions – Skukuza offers several leisure and cultural experiences, including the Skukuza Golf Course, the AM Spa Kruger, the Stevenson-Hamilton Memorial Library, the historic Campbell 1929 Hut Museum, and the Skukuza Indigenous Nursery.
- Recreation and Amenities – Participants can enjoy riverside walks along the Sabie River, swimming facilities, and shopping within the camp.

Participants planning to join guided bush walks may wish to bring hiking shoes or boots.

### **What to Pack?**

August is the dry winter season in the Kruger National Park, with cool mornings and evenings and pleasantly warm daytime temperatures. Participants are advised to pack comfortable, layered clothing suitable for temperatures ranging from approximately 10°C in the early morning and evening to around 26°C during the day.

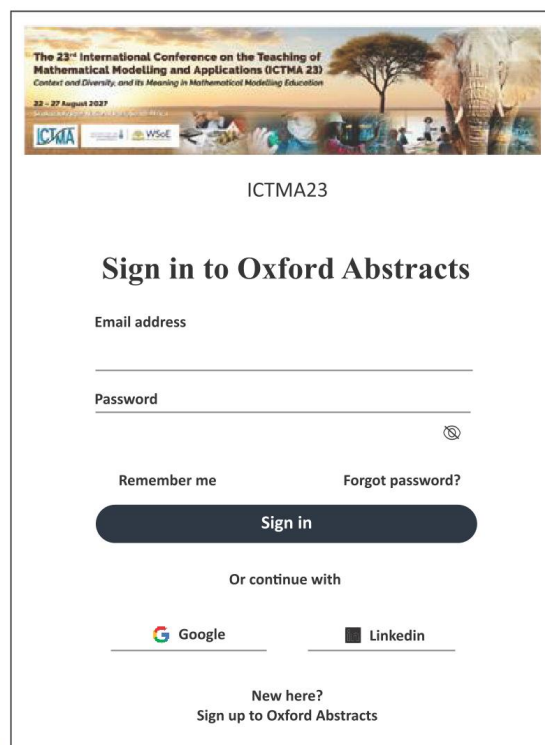
Recommended items include:

- A warm jacket or fleece, beanie, and scarf for early morning and evening game drives.
- Comfortable daytime clothing.
- Long trousers and long-sleeved shirts for cooler evenings.
- A hat, sunglasses, and sunscreen for protection from the African sun.
- Insect repellent and any personal medications.
- Comfortable walking shoes, as well as sandals or casual footwear for use in camp.
- Binoculars and a camera for wildlife viewing and photography.
- A reusable water bottle and a small flashlight or headlamp.

## Abstract Submission and Registration

Abstract submission will open on 1 August 2026 and will close on 1 February 2027. Submissions will be done via a link on the website. All presenters, including Keynote, Plenaries, Oral presentations, Working Groups and Poster presentations should submit an abstract. More information will follow in the Second Announcement.

**Registration will open on 1 December 2026** and will be done via the website. Early-bird registration will close on 1 April 2027, and regular registration will close on 1 June 2027 (see earlier section on Key Dates).



The screenshot shows the sign-in page for ICTMA23 on the Oxford Abstracts website. At the top, there is a banner for 'The 23rd International Conference on the Teaching of Mathematical Modelling and Applications (ICTMA 23): Context and Diversity, and its Meaning in Mathematical Modelling Education' with dates '22 - 27 August 2027' and logos for ICTMA, WSE, and others. Below the banner, the text 'ICTMA23' is centered. The main heading is 'Sign in to Oxford Abstracts'. There are input fields for 'Email address' and 'Password'. Below the password field is a 'Remember me' checkbox and a 'Forgot password?' link. A dark blue 'Sign in' button is prominent. Below this, there is a section for 'Or continue with' featuring 'Google' and 'Linkedin' login options. At the bottom, there is a link for 'New here? Sign up to Oxford Abstracts'.

## Conference Fees (final fees to be announced by the 1st of November 2026)

### What is included in the Registration Fee?

- Access to the conference venue and all sessions, name tag and goody bag.
- Conference certificate.
- Morning Tea/Coffee on four conference days.
- Afternoon Tea/Coffee on four conference days.
- Lunch on four conference days.
- Welcome Function under the Baobab Tree (Sunday 22 August 2027), including dinner and a drink.
- Dinner at Kruger Station (Monday 23 August 2027), including a drink.
- Game Drive & Bush Braai (Tuesday 24 August 2027), including a drink and Sundowner-pack for the game drive.
- Dinner voucher on the free evening (Wednesday 25 August 2027).
- Gala Dinner under the Stars (Thursday 26 August 2027), including a drink.
- An opportunity for presenters to have their research work published as a chapter in the next book in the ICTMA Springer series – provided the chapter(s) qualify and pass the review process that will take place after the conference. More details on this publication opportunity will follow later.
- A copy of the Open Access Springer book stemming from the conference.
- An opportunity for presenters to have their research work published as a paper in a Special Issue of the African Journal of Teacher Education and Development – provided the paper(s) qualify and pass the review process that will take place after the conference and an additional publication fee (determined by the journal) is paid. More details on this publication opportunity will follow later.

## Conservation Fees

Conservation fees are park entry fees charged by SANParks to support wildlife conservation and park management; while they represent an additional cost, they are generally modest relative to international national park entrance fees and contribute directly to preserving the unique biodiversity of the Kruger National Park. Conservation fees are not included in the conference registration fee or accommodation costs and must be paid separately.

Specific payment arrangements will depend on the accommodation selected:

- Guests staying at Skukuza Safari Lodge will have the applicable conservation fees included on their accommodation invoice.
- Guests staying in SANParks accommodation (bungalows) will be required to pay the conservation fees directly to SANParks before entering the Park (at the gate or at the airport).

Further details regarding conservation fees and payment procedures will be provided closer to the conference dates on the website.

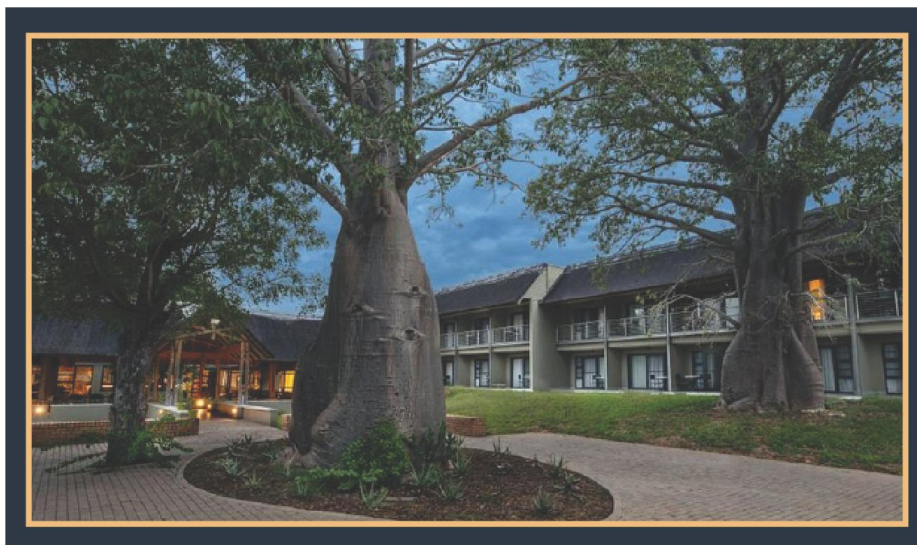
## Registration Cancellation Policy

See Registration Terms and Conditions: ICTMA23 document on the website.

## Accommodation

Group accommodation will be secured for ICTMA23, and all bookings and payments will be made with SANParks through the conference organisers on the website. Two options for accommodation are available, and all accommodation is comfortable, safe and secure.

Stay at the Skukuza Safari Lodge (see <https://skukuzalodge.com/>) located next to the conference venue. The lodge offers modern and world-class tourism facilities for local and international visitors. Accommodation bookings in the lodge include breakfast.



*Skukuza Safari Lodge*

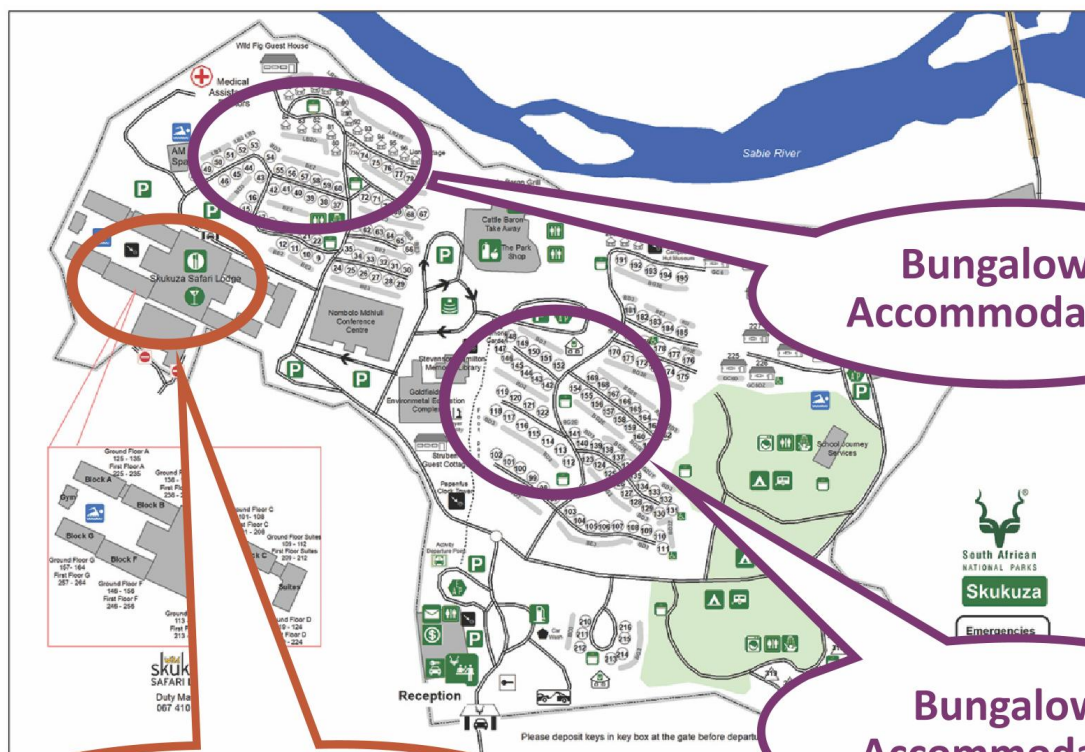
An alternative, with self-catering facilities, is Bungalows accommodation situated within the Skukuza camp area and 5 to 10 minutes walking distance from the conference venue. Bungalows bookings do not include breakfast; however, breakfast can be enjoyed at the lodge or the restaurants at additional cost.



*Bungalows (old style)*



*Bungalows (new style)*



**Bungalows  
Accommodation**

**Bungalows  
Accommodation**

**Skukuza Safari Lodge**

# Travel Information

## By Air

The most convenient option is to fly from Johannesburg's OR Tambo International Airport to Skukuza Airport (SZZ), located approximately 8 km from the conference venue. Transfers between Skukuza Airport and Skukuza Camp will be arranged by the conference organisers and can be booked through the conference website (at an additional cost).

Alternatively, participants may fly from Johannesburg to Kruger Mpumalanga International Airport (MQP) in Mbombela (Nelspruit), approximately 101 km from Skukuza Camp.

Car rental services are available at both airports for travel to the conference venue. Please note that the drive from MQP Airport to Skukuza takes approximately two hours. Delegates should take this travel time into account, particularly with regard to the gate closing times of the Kruger National Park.

## By Road

Many participants may choose to drive from Johannesburg to Skukuza Camp. Rental vehicles are available from major airports, and a standard passenger vehicle is suitable for the route. The route takes you through the stunning Mpumalanga province.

### *Self-Drive Travel Tips from Johannesburg*

To ensure a safe and enjoyable trip, participants are advised to:

- Travel during daylight hours and avoid driving at night.
- Use major routes, including the N12 and N4 via eMalahleni (Witbank) and Mbombela (Nelspruit).
- Plan fuel and refreshment stops at established service stations along the route. The Alzu Petroport and the Millys stops are highly recommended, safe places to stretch your legs, grab coffee, or get something to eat.
- Keep valuables out of sight and ensure vehicles are securely locked when stopping.
- Allow sufficient time to arrive at the Park before gate closing times.
- Carry a printed or electronic map and confirm directions before departure.
- Participants travelling by car may also wish to explore the scenic Panorama Route, one of South Africa's most spectacular landscapes, before or after the conference. You can visit sights like the Blyde River Canyon and God's Window.

### *Route Overview from Johannesburg to Skukuza Camp*

Johannesburg → eMalahleni (Witbank) → Middelburg → Machadodorp → Mbombela (Nelspruit) → Hazyview → Kruger National Park (Kruger Gate) → Kruger National Park (Skukuza Camp)

Approximate distance: 464 km

Approximate travel time: 5½–6 hours

## Self-Driving in the Kruger National Park

Self-driving is one of the most popular ways to experience the Kruger National Park. Participants who plan to explore the park before or after the conference are encouraged to keep the following guidelines in mind:

- Drive slowly and adhere to all park speed limits (typically 50 km/h on tar roads and 40 km/h on gravel roads). Ideal speed for game watching is 30 km/h.
- Allow extra travel time, as wildlife sightings often slow traffic and may lead to unexpected delays.
- Always remain inside your vehicle, except at designated rest camps, picnic sites, and approved viewing areas.
- Carry sufficient drinking water, snacks, and a charged mobile phone.
- Keep binoculars and cameras readily accessible for wildlife viewing.
- Check gate opening and closing times before setting out and ensure that you return to camp before gates close.
- Be patient and respectful around wildlife, maintaining a safe distance and never feeding animals.
- Fill your fuel tank, when possible, particularly before longer drives through the park.
- Consider carrying a printed map of the park, although maps are available at entrance gates and camps.

August is one of the best months for wildlife viewing in the Kruger National Park, as the dry winter conditions make animals easier to spot around rivers, waterholes, and open grasslands.

## Gate Opening and Closing Times (August 2027)

Please note that during August 2027, all gates of the Kruger National Park open at 06:00 and close at 18:00.

Delegates are strongly advised to arrive at the entrance gate (Kruger gate) no later than 17:00 to allow sufficient time for entry procedures and registration. Please also consider that the drive from the nearest gate (Kruger Gate) to Skukuza is approximately 25 minutes.

When planning flights, transfers, and self-drive travel, participants should ensure that their arrival times allow for entry into the Park, before gate closure.