



**DeSTE connect**

Bridging the gap in  
Science, Technology,  
ICT, and  
Sustainability  
Education

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**DeSTE Connect  
Conference 2024**

**CONFERENCE THEME:**

**Navigating Future Horizons in Science,  
Technology, ICT, and Education for  
Sustainable Development**

**DATE: 17 – 20  
SEPTEMBER 2024**

**VENUE: KRUGER NATIONAL PARK (Mopani Rest  
Camp)**

**Tentative programme**

**16<sup>th</sup> September 2024 Monday**

|                       |  |
|-----------------------|--|
| 14:00 PM-<br>18:00 PM | <b>ARRIVAL AND REGISTRATION AT CONFERENCE VENUE</b>  |
| 18:30 PM-<br>18:45 PM | <b>Opening Ceremony</b><br><b>Venue: restaurant</b><br><b>Introduction and overview of the conference: LOC</b> |
| 18:45 PM              | Dinner   |

**Day 1: 17<sup>th</sup> September 2024 Tuesday****Venue: Main Hall**

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| 7:30<br>AM  | Breakfast  |
| 8:30<br>AM  | <b>Welcome</b><br><b>Venue: Main Hall</b><br><b>Opening of Conference: Welcome: Prof Msezane</b><br><b>Chair: LOC</b>                              |
| 9:00<br>AM  | <b>Plenary Session 1</b><br><b>Guest Speaker</b><br>Prof Busisiwe Alant<br><b>Title: TBC</b><br><b>Chair: LOC</b>                                  |
| 10:30<br>AM   | Break  |
| <b>Theme 1: Current trends and innovation in Science Education</b><br><b>Chair:</b> |  |
| 11:00<br>AM   | MK Madavha - Utilising Tshivenda scientific language register for teaching Physical Sciences   |
| 11:20<br>AM   | MN Khwanda, AV Mudau, EN Mazibe - An inquiry-based teaching framework for contexts with limiting factors: a case of FET physical sciences teachers |
| 11:40<br>AM   | MV Chuene & AV Mudau - Transitioning from traditional to ICT based approaches in Chemistry education   |
| 12:00<br>PM   | EN Mazibe -Exploring the development of pre-service teachers' pedagogical content knowledge about electrostatics through educative mentorship      |

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| 12:20 PM  | F Abudu and AV Mudau - Enhancing Chemistry Education in Ghana through the development and application of scientific language register in Asante-Twi: a focus on Acids and bases |
| 12:40 PM  | IF Mokgabudi & EN Mazibe- The role of pedagogical content knowledge on teachers' assessment practices: a case study of chemical equilibrium                                     |
| 13:00 PM  | RH Mabitla, P Photo & AV Mudau- Implementing Curriculum Support for Senior Science Educators: A Case Study in Sekhukhune East District  |
| 13:20 PM  | MA Phifadi & EN Mazibe -Exploring Science Teachers' Planned and Enacted Strategies for Addressing Student Misconceptions about Electric Circuits                                |
| 13:40 PM  | Lunch   |
| <b>Theme 2: Current trends and innovation in Technology Education</b> |   |
| <b>Chair:</b>   |   |
| 14:30 PM  | HM Ngakane & MT Gumbo - Female teachers' challenges in the teaching of Civil Technology in technical high schools   |
| 14:50 PM  | PE Motha, P Blose & MT Gumbo – Assessing Challenges Faced by Teachers in Teaching the Design Process: A Case Study in the Ehlanzeni District                                    |
| 15:10 PM  | D Muzu, MT Gumbo & P Blose - Indigenisation of the teaching and learning of design in Technology Education  |
| 15:30 PM  | NM Nyangiwe, MP Rankhumise & TDT Sedumedi- The Effect of Technology Integration in Teaching and Learning of Electricity Concepts  |
| 14:50 PM  | Closing   |

**Day 2: 18<sup>th</sup> September 2024 Wednesday**

**Venue: Main Hall**

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| 7:30 AM  | Breakfast  |
| 8:30 AM  | <b>Plenary session 2</b><br><b>Guest Speaker</b><br><b>Prof Jo Anna Reed Johnson</b><br><b>Title: TBC</b><br><b>Chair: LOC</b> |
| <b>Theme 3: Education for Sustainable Development and Climate Change Education</b> |  |
| <b>Chair:</b>  |  |
| 10:00 AM   | Kreush & SB Msezane- The influence of climate change on learners' behaviour and academic performance                           |

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| 10:20 AM  | MM Ramulumo - Empowering Tomorrow's Global Citizens: EcoKids' Climate Education Adventure  |
| 10:40 AM  | H Myeni - Exploring climate change teaching strategies in schools  |
| 11:00 AM  | Kreusch & SB Msezane - The primary obstacles that educators encounter due to climate change  |
| 11:20 AM  | KR Munasi- Assessing Education for Sustainable Development Integration in the Life Sciences Curriculum: A Case Study of Vhembe East District   |
| 11:40 AM  | Break  |
| 12:10 PM  | NP Shabalala- Global Citizenship Education in Secondary Science Curriculum: A Comparative Analysis of National Policies and Practices  |
| 12:30 PM  | P Ngeleka & P Blose - Implementing Solid Waste Management Strategies: A Practical Approach in Economics and Management Sciences for Grade 7 learners in the UGU District KwaZulu Natal |
| 12:50 PM  | R De Beer & SB Msezane - The influence of EE on Nature Conservation in South Africa: Conservation factors that affect effective EE in South Africa                                     |
| 13:10 PM  | PF Mzobe - Understanding and teaching climate change in the secondary education Geography curriculum in KwaZulu-Natal  |
| 13:30 PM  | I Muller - Project-based learning - linking ESD with contextualised learning at educational institutions   |
| 13:40 PM  | BP Mkhonto -EcoVibes: Unveiling Grade 7's Recycling Perceptions to Promote School Environment Policies in South Africa   |
| 14:00 PM  | Lunch  |
| <b>Theme 4: Indigenous Knowledge Systems in Education</b> |  |
| <b>Chair:</b>   |  |
| 14:40 PM  | OL Phalandwa- Developing of Tshivenda scientific language register for teaching Agricultural Sciences  |
| 15:00 PM  | MT Gumbo- Doing indigenous research: Centring the researcher   |
| 15:20 PM  | P Blose & MT Gumbo- The role of indigenous knowledge in addressing Technology Education teachers' challenges in teaching sustainable development                                       |
| 15:40 PM  | L Masuvhe, MM Ramulumo & MT Gumbo- A systematic review of indigenous knowledge in grade 7 Natural Sciences education   |
| 16:00 PM  | AV Mudau, NP Netshivhumbe, L Sikhosana, T Mokuku, S Oyoo & TG Ntuli- Developing and using the scientific language register for Natural Sciences in some African indigenous languages   |
| 16:20 PM  | Closing  |

**Day 3: 19<sup>th</sup> September 2024 Thursday**

**Venue: Main Hall**

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|---|---|
| 7:30 AM   | Breakfast   |
| 8:30 AM   | <p style="text-align: center;"><b>Plenary session 3</b><br/> <b>Guest Speaker</b><br/> <b>Prof Lesley Le Grange</b><br/> <b>Title: TBC</b><br/> <b>Chair: LOC</b></p> |
| <b>Theme 5: Digitalisation/ Digitisation in Education</b> |   |

| <b>Chair:</b>  |  |
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| 10:00 AM   | EO Mashile - Determinants of prescriptive analytics: An ODeL case study  |
| 10:20 AM   | MV Chuene, S Mampa and P Photo - Examining Peer Assessment Implementation in a Large Online Module: Reflections from ODeL lecturers  |
| 10:40 AM   | J Broadhurst & AV Mudau - Exploring Learning Management System Adoption Among Science Teacher Educators in South African Distance Education  |
|  | A Barnard- Exploring the challenges grade 11 Life Sciences educators experience when integrating ICT Tools in education  |
|  | AR Molotsi & N Gcabashe -Exploring strategies adopted by secondary school teachers to overcome technology integration challenges in rural areas in Bojanala District                                   |
| 11:00 AM   | Break  |
| <b>Theme 6: Innovations in Life Sciences, Agricultural Sciences, and ICT Education</b> |  |
| <b>Chair:</b>  |  |
| 11:30 AM   | XP Mathevula and J Broadhurst - Investigating Grade 12 Learners' and Teachers' experiences of Human Reproduction Education in Johannesburg North District, Gauteng Province: The Impact of Visual Aids |
| 11:50 AM   | M Mc Knight - Life Sciences Teachers' Insights Regarding the Fourth Industrial Revolution (4IR): Implications for their Teaching Practice  |
| 12: 10 PM  | T Sakala and J Broadhurst -Exploring the teaching practices of grade 12 Life Science teachers in Gauteng   |
| 12:30 PM   | Lunch  |