Centre for High Performance Computing 2025 National Conference



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Emergent Leadership in Digital Public Infrastructure: A Practice Nexus Approach to Sociotechnical **Transformation in South Africa**

Tuesday, 2 December 2025 11:00 (20 minutes)

Digital transformation in the public sector needs more than just technology; it requires a new understanding of leadership. This presentation examines how leadership is practised within South Africa's Centre for High-Performance Computing (CHPC), a national facility driving the country's digital research agenda.

Building on the Leadership-as-Practice (L-A-P) framework and expanded through the Practice Nexus and Contextual Modulators, this study explores leadership as a collective, relational, and materially mediated activity. Using a qualitative phenomenological case study, it examines how leadership arises through dialogue,

Findings show how AI tools serve as co-constitutive agents, shaping coordination and sensemaking within

improvisation, and the interaction between human and AI actors. The research introduces the concept of bricolage leadership, developed within the context of institutional constraints and technological complexity. national digital infrastructures **Presenting Author Email Student or Postdoc?** Institute Registered for the conference?

CHPC User

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