

PRE-CONFERENCE SEMINAR ON DESIGN AND ADDITIVE MANUFACTURING OF TITANIUM AND PLATINUM GROUP METALS PARTS



Monday 30 October 2023
CSIR International Convention Centre, Pretoria
Hosted by the Central University of Technology, Free State
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PROGRAM

Program Director: Dr Kobus van der Walt

8:30 – 9:30	Registration	
9:30 – 9:40	Welcoming Address	Dr Kobus van der Walt, CUT
9:40 – 10:00	Opening Address	Ms Mmamose Seloane , Director : Technology Localisation, DSI
10:00 – 10:20	Mechanical performances of Ti-6Al-4V biomimetic porous cervical fusion cages produced by selective laser melting: numerical study	Oumayma Bougadouha , M Frija, R Fathallah, FJ Moolman & M Khodja
10:20 – 10:40	Additive manufacturing of patient-specific temporomandibular joint prostheses: a literature review	Sizwe Ntimane , GJ Booyesen & JG van der Walt
10:40 – 11:00	Comparative Analysis of Traditional and Additive Manufacturing-Based Interbody Fusion Cages: A Study on Subsidence	Frans Moolman , C-J Kat, A du Plessis & M Khodja
11:00 – 11:30 Tea		
11:30 – 11:50	Topological optimization strategy of medical implants obtained by additive manufacturing	Maryem Mabrouk , M Frija, R Fathallah & M Khodja
11:50 – 12:10	Investigating the fatigue life of high temperature annealed DMLS Ti6Al4V(ELI) at elevated temperatures	Tumelo Moloji , T Dzogbewu, M Maringa & A Muiruri
12:10 – 12:30	Establishment of platinum group metals additive manufacturing capabilities at Mintek	Hein Möller , M Phasha, A Mwamba & J Moema
12:30 LUNCH		
13:30 – 14:00	Keynote address: Recent developments of additive manufacturing of PGMs	Michela Ferraro
14:00 – 14:30	Keynote address: Powder manufacturing and additive manufacturing of platinum alloys	Ulrich E Klotz & Frank R König
14:30 – 14:50	Structural and elastic properties of binary FCC Pt-Rh alloys – a first-principles study	H Möller, Maje Phasha , J Moema, W du Preez & M Maringa
14:50 – 15:00	Closure	Dr Kobus van der Walt
15:00	Coffee	