

RAPDASA

RAPID PRODUCT DEVELOPMENT ASSOCIATION OF SOUTH AFRICA

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



Tuesday 8 November 2022
Lord Charles Hotel, Somerset West



science & innovation
Department:
Science and Innovation
REPUBLIC OF SOUTH AFRICA

Hosted by Central University of Technology, Free State
Supported by the Department of Science and Innovation

PROGRAMME

Programme Director: **Dr Kobus van der Walt**

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8:30 – 9:00	Registration	
9:00 – 9:10	Welcoming Address	<u>Dr Kobus van der Walt, CUT</u>
9:10 – 9:30	Opening Address	<u>Ms Unathi Munyai</u> Deputy director: Technology Localisation, DSI
9:30 – 9:50	As-built fracture toughness of Ti6Al4V produced by laser powder bed fusion	<u>D Louw</u> , M Neaves, T Becker
9:50 – 10:10	A numerical approach for designing functionally stiff triply-periodic-minimal-surface structures	<u>MA Blackwell</u> , M van Rooyen, TH Becker
10:10 – 10:30	Influence of selective laser melting process parameters on the characteristics of SiC/Ti6Al4V(ELI) single tracks	<u>M Thamae</u> , M Maringa, W du Preez
10:30 – 10:50	Reduced order topology optimisation of a planar honeycomb defined by a linear elastic Ti6Al4V (ELI) material model	<u>MI Chibinyani</u> , TC Dzogbewu, M Maringa, AM Muiruri
10:50 – 11:20	Tea	
11:20 – 11:40	Developing a Ti6Al4V specimen to induce residual stress deformations and cracks for use in metal additive manufacturing online monitoring	<u>K Moore</u> , D Louw, D Kouprianoff
11:40 – 12:00	Optimized body-centred cuboid unit cell for bone reconstruction	<u>M Heynemann</u> , J van der Merwe, TH Becker
12:00 – 12:20	Investigation of the microstructure evolution of TiC/Ti-6Al-4V composite manufactured by laser melting deposition	BH Nomqonde, PM Mashinini, P Lekoadi, <u>BN Masina</u>
12:20 – 12:40	In process optical tomography validation	<u>GJ Booyesen / I Adam</u>
12:40 – 12:50	Closure	<u>Dr Kobus van der Walt</u>
12:50 – 14:00	Lunch	