

RAPDASA

RAPID PRODUCT DEVELOPMENT ASSOCIATION OF SOUTH AFRICA

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

Tuesday, 05 November 2019 | Japie van Lill Auditorium, CUT, Bloemfontein

PROGRAMME

Programme Director: Dr Maina Maringa

- 08:30** Registration, Tea and Coffee
- 09:00** Welcoming Address by **Dr Maina Maringa, CUT**
- 09:10** Opening Address by **Mr Sechaba Tsubella**, Acting Director: Advanced Manufacturing Technologies, DSI
- 09:30** Determining the effect of surface roughness and porosity at different inclinations of LPBF parts
M Shange, I Yadroitsava, S Pityana, I Yadroitsev (abstract on page 35)
- 09:50** Dynamic mechanical properties of high speed selective laser melting at 4.5 kW
L Motibane, L Tshabalala, N Mathe (abstract on page 38)
- 10:10** Microstructural influence on tensile and fatigue properties of Ti6Al4V (ELI) produced through direct metal laser sintering
NM Baloyi, P Mendonidis, WB du Preez, API Popoola (abstract on page 41)
- 10:30** **TEA**
- 11:00** Wrought Ti6Al4V as an alloy for high velocity impact applications
TC Moleko, M Maringa, WB du Preez (abstract on page 44)
- 11:20** Optimum process parameters for DMLS in-situ alloying of a Ti-10(60Al40V) powder blend
LA Ramosena, BS Parker, TC Dzugbewu, WB du Preez, DC Blaine (abstract on page 47)
- 11:40** Mandibular implants: numerical simulation and experimental tests with artificial porosity
JA Wessels, I Yadroitsava, J Els, A du Plessis, I Yadroitsev (abstract on page 49)
- 12:00** Tailoring residual stress profiles and surface finish of aeronautical additive manufactured parts by laser shock peening
L Nayager, C Polese (abstract on page 52)
- 12:30** **LUNCH**
- 13:30** Towards the 4th Industrial Revolution commercial readiness of South African additive manufacturing
Prof AF van der Merwe (abstract on page 56)
- 14:00** Innovation and commercialisation opportunities for AM in Sub-Saharan Africa (SSA)
Prof DJ de Beer (abstract on page 59)
- 14:30** Phase 3 of the Collaborative Program in Additive Manufacturing (CPAM)
Prof WB du Preez
- 15:00** **CLOSURE**
- 15:00** **Tours of the CRPM facilities**

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