

Industry ABSTRACTS RAPDASA 2021 **Wednesday 3 November 2021**

Please check regularly at <https://site.rapdasa.org/conference-programme/> for changes to the programme and abstracts

Time	Company and Title	Abstract	Presenter	Email address
11:30	CSIR: Welcome and Opening of the Industry Sessions	The CSIR welcomes all physical and online participants and delegates to the RAPDASA industry sessions.	Hencharl Strauss	hstrauss@csir.co.za
11:40	EPIC: Introduction to the European Photonics Industry Consortium	EPIC is the industry association that promotes the sustainable development of organisations working in the field of photonics in Europe. Our members encompass the entire value chain from LED lighting, Photovoltaic solar energy, Photonics Integrated Circuits, Optical components, Lasers, Sensors, Imaging, Displays, Projectors, Optic fiber, and other photonic related technologies.	Auri Ripoll	auri.ripoll@epic-assoc.com
11:50	Elogium: The Role of Super Polymers to Improve the OEE of Operations	Overall equipment effectiveness or OEE is a measurement of manufacturing productivity of production facilities. OEE is a systemic measurement focussing on the reduction of the three key losses in a plant. The three losses can be defined as equipment availability loss, performance loss and quality loss. The use of super polymers for spare part provisioning can have a positive impact on the improvement of OEE and the reduction of the three losses due to a reduction in weight, corrosion and chemical resistance and improved heat tolerance in harsh environments. The most important impact of super polymers on the improvement of OEE is the replacement of metal spare parts with DfAM super polymer spare parts.	W. H. Harmse	henk@elogium.co.za
12:00	HH industries: HH Industries aiding companies with research and development, production, process improvements, and training in AM.	HH Industries (Pty) Ltd was established in February 2020 by Devon Hagedorn-Hansen, with the aim of aiding companies on their journey to becoming smart, sustainable, and future proof through assisting with research and development, production and process improvements, and training specifically around Additive Manufacturing (3D Printing). Our main collaborators are SME's and Large Enterprises looking to improve their operations and mitigate future risks through utilising our services. HH Industries leverages its vast network of academic and industry experts to solve pressing technological and scientific challenges for companies with various needs. We help these business leaders make better R&D, product development and corporate development decisions by providing them with research support services.	Devon Hagedorn-Hansen	devonh@h-h.co.za
12:10	CSIR: OCT as a tool for quality assurance or surveillance	Optical coherence tomography (OCT) is a versatile non-invasive 3D imaging technique that can serve as an invaluable quality control/surveillance tool applicable for different industries such as manufacturing, food, agriculture, security, precious gems. OCT can be an invaluable quality control tool for industry for surface images or structural representation.	Ann Singh	ASingh1@csir.co.za
12:20	Akhani3D: The Disruption of Economies of Scale	Boasting a comprehensive in-house toolset, Akhani 3D offers a turnkey AM Print-to-Product workflow and serial-production service that includes CAD design, Additive Manufacturing optimisation, 3D printing and finishing.	Nik Ivanovic	nik@akhani3d.com

12:30	SIMTEQ: 18 costly challenges of Additive Manufacturing and how to prevent them.	Although Additive Manufacturing offers new opportunities to consolidate and design better and lighter products, due to far more design freedom over traditional manufacturing methods, it also poses many more unforeseen and costly challenges to overcome. This presentation will show how these problems can be prevented and resolved much faster and less costly through simulation using Simufact Additive.	Paul Naude	Paul@simteq.co.za
14:00	Mintek: Powder Metallurgy at the Physical Metallurgy Group at Mintek	The Physical Metallurgy Group is within the Advanced Materials Division at Mintek. It hosts the Precious Materials and Ferrous Materials Development Networks of the Advanced Materials Initiative of the DSI. The group has two atomisers for production of metal powders, namely a water atomiser and a gas atomiser.	Hein Möller	HeinM@mintek.co.za
14:10	NECSA: Metal, alloy and ceramic powders for Additive Manufacturing produced by Thermal Plasma Spheroidisation	Plasma Spheroidisation provides satellite-free powders of high purity, narrow particle size distribution and high density required by powder Additive Manufacturing methods. The 15 kW Tekna plasma system provides flexibility for the treatment and/or manufacturing of metals, alloys and ceramic powder due to operability in inert, oxidising and reducing atmosphere.	Hertzog Bissett	hertzog.bissett@necs.co.za
14:20	NWU: Comprehensive control measures to reduce AM operators to possible health risks	Our laboratory hosts a Malvern Morphologi microscope for powder characterization which includes morphology and size evaluation analysis of virgin and used powders. We invite all parties interested to become involved in research projects involving metals or polymers and in return we can provide comprehensive control measures to reduce AM operators to possible health risks	Sonette du Preez	dupreezsonette@nwu.ac.za
14:30	Aerosud: Identify the correct tool to solve your problem	Aerosud OCTi's approach to dealing with a client's problem is to first understand what the root cause of problem really is. Using the correct tools to solve the root cause problem allows businesses access to 4IR space in an agile manner	Frederik Steyn	f.steyn@aerosud.co.za
14:50	Ultimate Partner: Ultimate Partner: Leveraging data to improve manufacturing	We partner with leading engineering technology companies to help our customers become industry leaders... "simplifying the complex while delivering the best solutions & excellent services" covering the entire product life cycle process across all industries. We offer the following solutions: product design, simulation, manufacturing and supplying the tools to manage, integrate and track products through its complete lifecycle.	Jonathan Krusekopf	Jonathan@ultimatepartner.co.za
15:00	Multitrade 3D Systems: Authorised sales for GE Additive AM machines in South Africa	Multitrade 3D Systems is the authorised sales representative for GE Additive in South Africa. This includes the Laser Powder Bed Fusion (LPBF)/Direct Metal Laser Melting (DMLM) machines from Concept Laser and the Electron Beam Melting (EBM) machines from Arcam. Both of these technologies are Additive Manufacturing or 3D printing technologies used to manufacture complex metal components that cannot often be produced through conventional techniques. Metal Additive Manufacturing technologies have been widely adopted and accepted by the Aerospace, Dentistry, Jewelry, Medical and Tooling industries. Multitrade 3D Systems has the expertise to service these and many of the other industries in South Africa that can benefit from utilising Metal Additive Manufacturing in their operations.	Devon Hagedorn-Hansen	devonh@h-h.co.za
15:10	AMTC: Additive Manufacturing 2.0: The future of metal manufacturing starts now with Desktop Metal	It's increasingly clear: The way we make things is changing As more companies realize the advantages that come with additive manufacturing – like tooling-free manufacturing, ability to create highly complex parts, assembly consolidation and more – the technology has grown dramatically in recent years.	Roscher van Tonder	roscher@amtcsa.co.za

		With part costs, build speeds, accuracy, surface finish and material properties finally rivalling traditional manufacturing methods, 3D printing is becoming a viable alternative to casting, forging, machining, and metal injection molding (MIM). Are you benefiting from AM 2.0?		
15:20	BunnyCorp: Rapid Product Development and training for automotive, implants and jewellery	BunnyCorp is a Rapid Product Development Company in South Africa, focusing on Medical Products for Animals and Humans, working closely with medical specialists to create them. With almost two decade's worth of experience in Additive Manufacturing (3D Printing), we consult and specialise in design for high-end additive manufacturing (SLS processes) as well as advanced cad modelling & digital sculpting for various applications from automotive, implants to jewellery. As leaders in organic modelling, we also provide CAD training internationally for Rhino3D to Universities and various design industries, with a range of online courses launching soon.	Philip van der Walt	bunnycorp@gmail.com
15:30	CSIR: Locally developed high power laser solutions for advanced manufacturing systems	The CSIR has developed several high-power laser source, delivery and beamshaping solutions which offer unique capability, cost and local support advantages to the South African manufacturing industry. This talk will give an overview of the technological progress the CSIR made as well as the opportunities for local value creation and collaboration with both industry and academia.	Cobus Jacobs	Cjacobs@csir.co.za
16:00	Simufact, Germany: A brief display of the different product lines Simufact has to offer in the virtual prototyping environment	Simufact offers 3 product lines for forming, welding and additive manufacturing process development. The software provides manufacturers and researchers with the capability to virtually experiment with manufacturing procedures to gain the best results without costly trial-and-error exercises. This presentation is a practical display of the user interface and capabilities.	Michel Pereme	michel.pereme@hexagon.com
16:20	MerSETA Viro-Vent: merSETA Viro-Vent Innovation Challenge: An engineering response to the pandemic	A consortium of universities has been awarded the merSETA Viro-vent Project, with a key focus of developing local capacity to manufacture a functional Bi level ventilator unit. The presentation will highlight the consortium's efforts to respond to the pandemic, supporting local skills and product development	Robert Malatsi	robertm1@vut.ac.za

Industry ABSTRACTS RAPDASA 2021 Thursday 4 November 2021

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11:40	Aditiv Solutions: Hyrax: South African Developed Commercial Metal 3D printer	Aditiv Solutions is a South African based tech start-up which develops and manufactures high quality and affordable additive manufacturing equipment. With extensive in-house experience in the development of high-end AM systems, our focus is to provide cost-effective metal 3D printing solutions.	Marius Vermeulen	marius@aditiv.co.za
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12:00	WORKSHOP by AEROSUD What does it take to build a successful business in South Africa? What does it take to be an entrepreneur or an intrapreneur?	Join Mike Struthers to get a little more insight on this important subject Mike is a seasoned Business Executive, with a successful track record. He has built many businesses over the course of his 37year business career. He has had an extensive corporate career in the Information Technology & Knowledge Management Industries, having served as Managing Director of American based, Lotus Software SA in the 90ties and then as an Executive Board Member of the then JSE listed company, Unihold Limited. Following the merger with Siemens Business Solutions, he was appointed Chief Operating Officer, where he served up until 2004. Mike then launched a Business Consulting Practice and established a Leisure Business. His speciality is in building capacity in executive teams that accelerate business growth. His dynamic and progressive leadership approach drives growth even in the toughest markets	Mike Struthers	michaelglynstruthers@gmail.com
14:00	CSIR: Showing industry the benefits of using Additive Manufacturing	More industries are investigating using Additive Manufacturing (AM) in some of their activities for instance the production of spare parts. At the CSIR, we have many capabilities in AM, which grows continuously. Some of these capabilities include Metal AM (MAM), Design for AM (DfAM), and part post processing. Part of the CSIR's strategy is to assist industry and this presentation is to show how they can do that with the use of all that AM offers.	Duwan Bester	dbester@csir.co.za
14:10	Weartech: Weartech's product range including visual and audio inserts	Weartech offers a comprehensive range of products for the use in wear, corrosion and hardfacing applications as well as maintenance and fabrication. Our experienced staff can recommend the best-suited products to meet customers individual needs.	Simon Wintle	simon@weartech.co.za
14:20	SIMTEQ: The end-to-end solutions Hexagon Manufacturing bring to the additive manufacturing world with its Design and Engineering software (MSC Software)	Hexagon is a global company focussed on leveraging data from real world and virtual environment to enable smart manufacturing and autonomy. Bringing knowledge of various fields and disciplines together, including design and engineering, production and metrology, the company is in the epic centre of smart manufacturing for global enterprises, small businesses and research institutions especially for additive manufacturing and rapid prototyping.	Zak Fourie	zak@simteq.co.za
14:40	CUT: Overview of the Centre for Rapid Prototyping and Manufacturing	The Centre for Rapid Prototyping and Manufacturing (CRPM) is a commercial enterprise that was established at the Central University of Technology, Free State (CUT) in 1997. The CRPM was formed by the research and development committee in the Department of Mechanical Engineering. The mission and vision of the CRPM, is to assist different industries within South Africa in the supply of quality Additive Manufactured or 3D Printed products. Since the establishment of the CRPM in 1997, the organisation has offered 3d printing services for metal and plastic 3d printing to a broad spectrum of industries. These industries supported by the CRPM include and does not limit to; Aerospace, Automotive, Architectural, Consumer Products and Electronics, Commercial Marine Products, Medical and Dental Products. In 2016, the CRPM was the first academic entity to be certified for ISO 13485, which is a Quality Management System that qualifies a business to manufacture medical devices, whereby the CRPM is currently the pioneer and an aspired market leader in the additive manufacturing of titanium and cobalt chrome medical devices in South Africa.	Letsoalo Letsoalo	Lletsoalo@cut.ac.za
14:50	VUT: Technologies and services available at the Vaal University of Technology	The VUT Southern Gauteng Science and Technology Park houses The VUT's plastics AM facility, employing 11 industrial 3D printers and laser sintering machines. This facility is augmented by a capable design centre and toolroom, which collectively offer clients a total product development solution. Also housed within the Science Park is the FabLab, incorporating the Idea to Product (I2P) lab	David Mauchline	davidma@vut.ac.za

15:00	Reach 3D: The effect of material quality with print settings on FDM printers	FDM Printing is a center point for the 3D Printing enthusiast. Unique material types engineered with different properties. Each product additively manufactured for a function. How we utilise our FDM printers largely determines the effectivity of filament quality.	Cornelius van der Steenhoven	cornelius@ruach3d.org
15:10	CALDEAZ: CALDEAZ Manufacturing Equipment Can Offer You the Equipment To Do Rapid Product Development	CALDEAZ was formed already in 2007 and in 2015 the owner left CUT and went fulltime into equipment supply to the manufacturing industry. The first international agency Caldeaz got was the Envisiontech in 2007 and then KREON3D in 2015, Aberlink in 2017, WIIBOOX in 2018, PEOPOLY 2020 and THOR3D in 2021. Through this CALDEAZ can offer you Measuring arms with laser scanners for your reverse engineering or measurement from KREON 3D in France or a CMM from ABERLINK out of the UK. Then a full range of 3D Printers and handheld scanners from WIIBOOX or PEOPOLY or THOR3D. These 3D Printers range from the normal FDM type printer, Resin Printers, SLS printers or Metal Laser Sintering printers. A few of the manufacturers updated their product offerings during lockdown to supply better equipment.	Ludrick Barnard	ludrick@caldeaz.co.za
15:20	CSIR: High power laser 3D printer development at the CSIR	The CSIR is simultaneously developing a number of high power laser (SLS) 3D printer platforms. Both the Aeroswift and Hummingbird machines are high laser power, large volume printers. The newest generation is designed to integrate with the latest laser source, beam delivery and monitoring technologies. This talk will give an overview of the technological progress the CSIR made as well as the opportunities for local value creation and collaboration with both industry and academia.	Darryl Naidoo	DNAidoo3@csir.co.za
15:30	Ultimate Partner: Ultimate Partner: Convergent Technology - A key enabler for the efficient design of AM products	Obstacles prevent businesses from taking full advantage of additive manufacturing (AM) Disconnected DfAM processes and uncontrolled workflows makeup the most impactful of the obstacles. Meanwhile, Ultimate Partner advise that Convergent Modelling and Product Lifecycle Management are the two key technologies that can solve those challenges and therefore lead businesses to the competitive advantages promised by AM. "	Nicholas Minnaar	Nicholas@ultimatepartner.co.za