



DRAFT Programme

Youth Innovators Design Bootcamp 2021

Innovation and Entrepreneurial Opportunities of Emerging Technologies

22– 26 February 2021

Closing date for applications: 18 February 2021

Date: 22-26 February 2021

Venue: Congo (Zoom)

Draft Programme

Online platform registration opens on 24 January 2021	
Monday – 22 February 2021	
09:30-10:30	<p>Opening Session</p> <ul style="list-style-type: none"> • Jean-Paul Adam, Director – TCND, UN ECA • UNESCO Representative (Brazzaville) • Remarks from partners (AMRS, ABEC) <p>Moderator: Victor Konde</p>
10:30-13:00	<p>Introduction to the Bootcamp</p> <p>Overview of the Bootcamp will include organizational and thematic issues, formation of multinational, interdisciplinary and gender-inclusive teams.</p> <ul style="list-style-type: none"> • Meet and greet, formation of groups, assignment of mentors <p>Moderator: Victor Konde, Martiale</p>
13:00 - 14:00	<p>Keynote Addresses on Emerging Technologies and Sustainable and Inclusive Growth and Prosperity</p> <p>This session will feature two speakers that will focus on artificial intelligence (AI) and nanotechnology and their implications for Africa's development. In addition, it will also look at how emerging technologies are transforming the fight against communicable and noncommunicable diseases. They may address: a) what and in which areas are the main career and business opportunities for the future; b) what are the key skills and infrastructure needed to capitalize on the opportunities offered by emerging technologies and c) how can emerging technologies become inclusive and contribute towards shared prosperity?</p> <p>Dr. Godfred Frempong, Ghana Dr. Bitrina Diyamett, STIPRO, Tanzania</p>
14:00-16:00	<p>Introduction to innovation and entrepreneurship</p> <p>For many, Africa does not innovate and is at the bottom of all innovation indices and measures. Yet, as COVID-19 has demonstrated, Africa has brought to market numerous unique products (i.e. goods and services). If necessity is mother of invention, then Africa is the hub of innovation. As such this session will offer the different dimensions of innovation, why some innovations remain and grow successfully in the market while others weather. How does entrepreneurship differ from innovation?</p> <p>Dr. Beatrice Murage, PHILIPS Research and Innovation Hub, Africa</p>

	Dr. Yee Kwang Tang , AdamSmith Business School, University of Glasgow United Kingdom
16:00-18:00	Ideation with mentors
Tuesday – 23 February 2021	
09:30-11:30	<p>Introduction to AI and Robotics for Africa</p> <p>Artificial intelligence (AI) and robotics are not necessarily new but their increased use in industry and society in general is new. It was on 11 May 1997 that IBM's Deep Blue beat the Chess Grand Master - Garry Kasparov and two decades later, computers developed by Google and HNH Entertainment Corp had defeated world champions at Go – a game more complex than chess. Beyond these high-profile events, AI is making its impact in health, manufacturing, education, research and transportation, among others. This is also pushing the boundaries of robotics in health, agriculture, factories, warehouses etc - to perform increasingly sophisticated tasks. Students will learn new developments and applications of AI and robotics and its implication for Africa</p> <ul style="list-style-type: none"> • Dr. Youssoufa Mohamadou, University Institute of Technology, University of Ngaoundere, Ngaoundere, Cameroon • Prof. Francisco Curado Teixeira, Dep. of Electronics and Informatics Engineering (DETI, University of Aveiro (Portugal) • Prof. Ana Guedes, Professor of Statistics & Data Science, Member of the Scientific Board of the Centre of African Studies, University of Porto, Portugal • Prof. Nuno Lau, Professor of Intelligent Robotics, Department of Electronics, Telecommunications and Informatics, University of Aveiro.
11:30-13:00	<p>Hands-on AI and Robotics</p> <p>UNESCO/STEM-Dynamics (Simulation – Vex Robotics)</p>
14:00-15:30	<p>Introduction to Solid Modelling and Rapid Prototyping – 3D Printing Technology</p> <p><i>Prof. Martiale Gaetan Zebaze Kana, UNESCO Regional Office for Southern Africa</i></p>
16:00-18:00	Ideation with mentors on AI, Robotics and Automation
Wednesday, 24 February 2021	
09:30-11:30	Introduction to Nanotechnology and advanced materials

11:30-13:00	<p>This session will provide an overview of nanotechnology – what it is, its potential impact on research and development, its application in some of key sectors such as agriculture, energy, health, transport and water and sanitation as well as its economic, social and environmental implications. It may also address the career and business opportunities for young people.</p> <p>Prof. Malik Maaza, UNESCO UNISA ITL/NRF Africa Chair in Nanosciences & Nanotechnology,</p> <p>Practical applications of nanotechnology in health and wellbeing</p> <p>Dr. Géraldine Dantelle, National Centre for Scientific Research, France Prof. Archana Bhaw-Luximon, Biomaterials, Drug Delivery and Nanotechnology Unit, University of Mauritius, Mauritius Dr. Yolandy Lemmer, Council for Scientific and Industrial Research, South Africa.</p>
14:00-15:00	<p>Practical applications of nanotechnology in food and Agriculture</p> <p>Prof. Anne Globler, North Western University, South Africa Prof Kofi Adu, Chair (Department of Physics), Associate Professor of Physics & Graduate Faculty, Materials Science and Engineering, The Pennsylvania State University-Altoona College, USA</p>
15:00-16:00	<p>Nanotechnology applications in energy</p> <p>Prof. Mmantsae Moche Diale, SARCHI: Clean and Green Energy, Department of Physics, University of Pretoria, South Africa Prof David Dodoo-Arhin, Department of Materials Science and Engineer, University of Ghana, Ghana;</p>
16:00-18:00	<p>Ideation with mentors</p>
Thursday – 25 February 2021	
09:30-11:30	<p>Health Technologies for Improved Healthcare Outcomes</p> <p>This session will provide an overview of health technologies and their potential impact on research and development, application and business development, especially in the face of COVID-19. Opportunities for Africa in research, innovation and manufacturing of different health products and delivery of enhanced health services.</p> <p>Dr. Robert Ridley, Former Director of WHO/TDR and currently Vice-Chancellor, UNICEF University, Malawi Professor Hellen Njenja, University of Nairobi, Kenya Dr Charles Umeh, Lead Medical Doctor at Parkers Mobile Clinic,</p>
11:30-13:00	<p>The theory and practice of Conceive, Design, Implement and Operate (CDIO) in Health Technology Products</p> <p>Mrs. Philippa Ngaju Makobore, Department Head, Instrumentation Division, Uganda Industrial Research Institute (UIRI), Uganda</p>

	Dr. Eng Carmelo De Maria , Research Center, "E. Piaggio" University of Pisa' Pisa, Italy
14:00-15:00	Biomedical Standards and Regulations Prof. Chomora Mikeka , Associate Professor of Physics, University of Malawi
15:00-16:00	Intellectual Property for Healthcare Technologies Prof. Caroline B Ncube , SARChI Research Chair in Intellectual Property, Innovation and Development, Department of Commercial Law, University of Cape Town, South Africa Mr. Wondwossen Belete , President – Society for Technology Studies, Ethiopia Obed Imbahafi , Photo prize winner of the bootcamp on COVID19, Rwanda
16:00-18:00	Ideation with mentors
Friday – 26 February 2021	
10:00-14:00	Final Touches to Concepts and Projects Youths and their mentors will finalize their concepts and ideas for presentations
14:00-16:30	Youth Presentations of concepts and recognizing the top six concepts This session will be combined with the Africa Regional Science, Technology and Innovation Forum 2021.
16:30-18:00	<ul style="list-style-type: none"> - Minister of Higher and Tertiary Education, Innovation, Science and Technology, Zimbabwe, Professor Amon Murwira - The Minister for Scientific Research and Technological Innovation, Republic of Congo, His Excellence Parfait Aimé Coussoud Mavoungou,
	Closing Remarks

Contact:



- Dr. Victor Konde, Officer-in-Charge, Technology and Innovation Section, Email: kondev@un.org
- Martiale Zebaze Kana, Head Science Unit, UNESCO Regional Office for Southern Africa. Email: m.zebaze-kana@unesco.org
- Richard Bouka, *National Professional Officer*, UNESCO Brazzaville; Email: r.bouka@unesco.org

DRAFT