Time, Thought, Materiality: Africa and the Fourth Industrial Revolution

School of Tourism and Hospitality, Auckland Park.
Monday, 2 to Wednesday, 4 September 2019.

PROGRAMME

https://www.humanities.uj.ac.za/
Monday, 2 September 2019
Venue: Conference Room 2, School of Tourism and Hospitality, Bunting Road Campus, University of Johannesburg

17H00–19H00: KEYNOTE ADDRESSES: AFRICA AND THE FOURTH INDUSTRIAL REVOLUTION

Opening Remarks: Prof. Dumisani Moyo – University of Johannesburg
Dr. René Smith, Executive Dean – Durban University of Technology, and South African Humanities Deans’ Association (SAHUDA) President
Prof. Sarah Mosoetsa, Associate Professor, University of the Witwatersrand (WITS), and Chief Executive Officer (CEO) – National Institute for the Humanities and Social Sciences (NIHSS)

Keynote Speaker: Prof. Hopeton Dunn – University of the West Indies and University of Botswana
To Reflect, Imagine and Co-create in Africa and Its Diaspora: Humanities Demands from the Fourth Industrial Revolution

Discussants: Prof. Alex Broadbent, Executive Dean, Faculty of Humanities, and Prof. Jane Duncan, Head of Department of Journalism, Film & TV – both University of Johannesburg

19h00–20h30 CONFERENCE DINNER, The Bistro, School of Tourism and Hospitality
**Tuesday, 3 September 2019**  
**Venue: Protea Auditorium, School of Tourism and Hospitality, Bunting Road Campus, University of Johannesburg**

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<th>Time</th>
<th>Session I: Ethics, Personhood, and Morality in the Fourth Industrial Revolution</th>
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| 08h30–10h00 | Chair: Dr. Asheel Singh – University of Johannesburg  
Speakers:  
Prof. Emma Ruttkamp-Bloem – University of Pretoria - Virtual Persons: Rethinking Human Value  
Dr. Motsamai Molefe – University of Fort Hare - Personhood, Animals, and Robots in African Philosophy  
Mr. Samuel Segun – University of Johannesburg - Making Afro-ethics Computational  
Dr. Mpho Tshivhase – University of Pretoria - On the Unique Personhoods of Robots |

| 10h00–10H15 | Coffee and Tea Break |

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<th>Time</th>
<th>Session II: Uncertainty in the Anthropocene: Possibilities for a New Humanism in the Fourth Industrial Revolution</th>
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| 10h15–12h30 | Chair: Prof. Joost Fontein – University of Johannesburg  
Speakers:  
Prof. Fraser McNeill – University of Pretoria - Posthumanism and the New Politics of Difference  
Dr. Hylton White – University of the Witwatersrand - The Non-Identical Human  
Dr. Gcobani Qambela – University of Johannesburg - A boy is not a person that you would have to tend: Towards a Humane Anthropology of Boyhoods  
Ms. Kharnita Mohamed – University of Cape Town - Reanimating Archives in the Now: Frankensteinian Logics, Inheritances and Fictive Commensurabilities  

| 12H30–13H30 | Lunch – School of Tourism and Hospitality |

**Time, Thought, Materiality:**  
Africa and the Fourth Industrial Revolution
13h30–15h00 SESSION III: SPACE, DESIGN, AND ECOLOGY
Chair: Prof. Simon Connell – University of Johannesburg
Speakers:
Dr. Martin Cook – The Choice Architects - The Digital Twin In Industry: Enhanced Safety And Performance In Aerospace, Mining And Industry
Dr. Wesley Doorsamy – University of Johannesburg - Data – The Invisible Hand: Technological Impacts On Society
Mr. Anthony Kaziboni – University of Johannesburg - Achieving Water Security In The 4IR: Possibilities For South Africa
Ms. Thandile Ntumba – City of Johannesburg Metropolitan Municipality - The Rise In The Staging Of Sacred Intercessions By Traditional Healers On Digital Spaces

15H00 –15H15 COFFEE AND TEA BREAK

15H15–17H30 SESSION IV: TECHNOLOGY, CULTURE, AND THE FOURTH INDUSTRIAL REVOLUTION
Chair: Prof. Kammila Naidoo – University of Johannesburg
Speakers:
Ms. Cassi Gewer – University of Johannesburg - Neuroscience, Psychology And Machine Learning: Decoding Both Human And Artificially Simulated Brains Within The Scope Of Humanities’ Study
Ms. Ruvimbo Samanga – University of Pretoria - Space Applications: How The Use Of Satellite Technology Will Promote Access To Data And Information In The Fourth Industrial Revolution
Prof. Maria Frahm-Arp – University of Johannesburg - Why In The Fourth Industrial Revolution Are Miracle Churches Attracting So Many People?
Ms. Tsholofelo Masetshaba Mosala – Independent Consultant - Online Church: The Impact Of Technology And Religion In The Digital Age
Dr. Phefumula Nyoni and Ms. Vuyiswa Sokutu – both University of Johannesburg - Kinship Obligations, Capital And Forms Of Belonging Among Africa's Farming Communities In The Fourth Industrial Revolution

18h00–19h00 SAHUDA Closed Meeting
Venue:
Conference Room 2, School of Tourism and Hospitality, Bunting Road Campus, University of Johannesburg
**Wednesday, 4 September 2019**  
**Venue:** Protea Auditorium, School of Tourism and Hospitality, Bunting Road Campus, University of Johannesburg

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| 08H30–10H30 | **SESSION V: CITIZENS, STATES, AND THE FUTURE OF WORK**  
Chair: Prof. Lauren Graham – University of Johannesburg  
Speakers:  
- Prof. Pragna Rugunanan and Ms. Celine Meyers – both University of Johannesburg - *Graduate Employability, Human Development And The Fourth Industrial Revolution: Tracing The Career Paths Of Sociology Alumnus At The University Of Johannesburg*  
- Mr. Lynford Dor and Prof. Carin Runciman – both University of Johannesburg - *The Fractured Labour Process And Responses To It*  
- Prof. Tapiwa Chagonda – University of Johannesburg - *The Indispensable Nature Of 'Illegal' And Deportable Migrants Within The South African Labour Market: Migrant Workers In South Africa In The Age Of The Fourth Industrial Revolution*  
- Mr. Ashraf Patel – Institute for Global Dialogue (IGD) - *Towards An Inclusive 4IR For South Africa Impact On Labour, Youth And Communities In South Africa* |
| 10H30 – 10H45 | **COFFEE AND TEA BREAK** |
Time, Thought, Materiality: Africa and the Fourth Industrial Revolution

10H45–13H00: PARALLEL SESSIONS VI AND VII:

SESSION VI: Politics, Power, And Participation
Venue: Protea Auditorium, School of Tourism and Hospitality, Bunting Road Campus, University of Johannesburg
Chairs:
Prof. Sarah Chiumbu and Prof. Suzy Graham – both University of Johannesburg
Speakers:
Dr. Admire Mare – University of Namibia
Politics On Steroids? Algorithms, Bots And Automated Propaganda In Africa
Mr. Kyle Bester – University of Stellenbosch
The Relevance Of The Fourth Industrial Revolution In The South African National Defence Force: Adapt Or Be Hacked
Prof. Joey Janse van Vuuren – Tshwane University of Technology; and Dr. Anna-Marie Janse van Vuuren – University of Johannesburg
With Great Access Comes Great Responsibility: Proposing A Cybersecurity Implementation Framework For South Africa
Dr. Hali Healy, and Mr. Materechera Dalitso – both University of Johannesburg.
Mapping Environmental Injustice With The Ejatlas: Tool Or Trap?

SESSION VII: Literature, Cinema, and African Futures
Venue: Conference Room 2, School of Tourism and Hospitality, Bunting Road Campus, University of Johannesburg
Chair:
Prof. Pier Paolo Frassinelli – University of Johannesburg
Speakers:
Dr. Oswelled Ureke – University of Johannesburg
South Of South: Audio-Visual Technology And The San Of Zimbabwe
Mr. Sanjin Muftic – University of Cape Town
Reimagining African Histories Through Digital Arts
Dr. Victoria Collis-Buthelezi – University of Johannesburg
African Futurity In Contemporary Caribbean Fiction
Prof. Ronit Frenkel – University of Johannesburg
African Futurity And Nnedi Okorafor’s Binti Series
Prof. Thabisani Ndlovu – Walter Sisulu University
African Literature And Human Rights In The Fourth Industrial Revolution

13H00–14H00  LUNCH – SCHOOL OF TOURISM AND HOSPITALITY
“Time, Thought, And Materiality: Africa and the Fourth Industrial Revolution”
Faculty of Humanities, University of Johannesburg, South Africa.

**Keynote Speaker:**

**Prof. Hopeton Dunn**
Hopeton Dunn is an internationally established scholar in the field of mediated human communication, new media and globalization. He studied at the University of the West Indies and University of London, where he was awarded a doctorate in Communications Policy and Regulations. He holds professorships in Communications Technology, Policy and Digital Media at The University of the West Indies and more recently at University of Botswana, where he is now based. He is also Senior Research Associate in the School of Communication at University of Johannesburg. He was the 2017 recipient of the UWI Vice Chancellors Award for Excellence in the area of Public Service. Hopeton is a former Secretary General of the International Association for Media and Communication Research (IAMCR) and currently serves as Chairman of the panel of judges for IAMCR’s Stuart Hall Prize. In his native Jamaica and in the Caribbean region, Professor Dunn has served on a wide range of public boards, including as Chairman of the Broadcasting Commission of Jamaica, for two consecutive terms, totaling 10 years, and of the Telecommunications Advisory Council of Jamaica for 5 years. He is author or editor of numerous books, book chapters and journal articles, including the books ‘Globalization, Communication and Caribbean Identity’, and its sequel, called ‘Ringtones of Opportunity’. In 2018, he delivered invited lectures at London School of Economics (LSE) and at Goldsmith’s University in the United Kingdom, on topics related to Work, Technology the 4th Industrial Revolution. In both his academic publications and policy presentations, Professor Dunn has consistently emphasized the need for greater self-empowerment of scholars from the Global South and has led major institutional reforms as Director of the UWI’s Caribbean School of Media and Communication (CARIMAC). He is married to sociologist, Dr Leith Dunn, and they are parents to a daughter and a son, both now established professionals.

**Prof. Alex Broadbent**

**Executive Dean, University of Johannesburg**
Alex Broadbent is Executive Dean of the Faculty of Humanities at UJ, Founding Director of the African Centre for Epistemology and Philosophy of Science, and Professor of Philosophy. Before joining UJ in 2011, he held various research, teaching and visiting positions at Cambridge, Vienna, Athens and Harvard. Alex holds a B1 from the National Research Foundation of South Africa (2019-2025) and is an alumnus of the South African Young Academy of Sciences. Alex is a philosopher of science, medicine and epidemiology, with particular interests in causal inference, explanation, and prediction. He was a founding figure in establishing philosophy of epidemiology of a field (his 2013 book on the topic is a landmark text), and is a leading philosopher of medicine globally. Alex has published three monographs, the most recent being Philosophy of Medicine (2019, Oxford University Press), around 25 journal articles including in leading journals such as Philosophical Studies, British Journal of Philosophy of Science, Synthese, International Journal of Epidemiology, Legal Theory and Proceedings of the Aristotelian Society. He has also contributed to a number of prestigious edited volumes with publishers such as Routledge and Oxford University Press.

**Prof. Jane Duncan**

**Head of Department of Journalism, Film & TV, University of Johannesburg**
Jane Duncan works in the Department of Journalism, Film and Television at the University of Johannesburg. She was previously Executive Director of the Freedom of Expression Institute (FXI) holding various other posts including the Chair in Media and Information Society in the School of Journalism and Media Studies at Rhodes and co-Director of the Highway Africa Centre.
She is also the founder of the Media Policy and Democracy Project (MPDP). Jane is the author of, ‘The Rise of the Securocrats: the Case of South Africa’, ‘Protest Nation: the Right to Protest in South Africa’ and ‘Stopping the Spies: Constructing and Resisting the Surveillance State in South Africa’. She holds a Master’s degree from the University of Witwatersrand, and completed a PhD at the Wits School of the Arts in 2007.

**Prof. Emma Ruttkamp-Bloem**

Emma Ruttkamp-Bloem is a professor of philosophy and logic in the Department of Philosophy at the University of Pretoria. She is also the leader of the Ethics of AI research group at the Centre for Artificial Intelligence Research (CAIR). Her research expertise includes ethics of artificial intelligence (the impact of social robotics on the human condition, the ethics of autonomous weapon systems, AI and sustainability in Africa, and fair, accountable and transparent machine learning), formal methods in philosophy of science (scientific realism; the structure of scientific theories; the demarcation problem; scientific progress; scientific truth) and formal logic (mathematical logic). She currently participates in research projects focused on ethics of AI, scientific realism and the structure of theories, and epistemic justice.

Her work is well-known and respected in formal logic, philosophy of science and ethics of AI circles nationally and internationally. This is attested to by publications of her work in internationally accredited journals, the citations of her work in the Stanford Encyclopaedia of Philosophy, her invited talks here and abroad (e.g. at LMU in Munich and UNESCO), the success of the international Scientific Realism Conference she organised in Cape Town in 2014, her National Research Foundation ratings, her presidency of the Philosophical Society of Southern Africa (2011-2013), her visiting fellowship in Helsinki in 2015, her guest-editorships at high impact journals such as Synthese and Ethics and Information Technology, and her representation of South Africa at the International Union of History and Philosophy of Science since 2015.

**Dr. Motsamai Molefe**

Motsamai Molefe is at the University of Fort Hare. He is the author of *An African Philosophy of Personhood, Morality, and Politics* (Palgrave, 2019), as well as several journal articles on personhood. He specialises in applied ethics, African ethics, bioethics, development ethics, environmental ethics and political theory. He is also a Fellow in the African Humanities Programme, which is administered by the Carnegie Corporation in New York.

**Mr. Samuel Segun**

Samuel T. Segun is a PhD candidate at the University of Johannesburg and co-author of *New Conversations on the Problems of Identity, Consciousness and Mind* (Springer, 2019). He is interested in the ethical, existential and governance implications of AI, and his doctoral research focuses on developing a robust ethical theory for autonomous intelligent systems that is informed by African values and rivals Western approaches. He also researches on African intellectual development, philosophy and ethics.

**Dr. Mpho Tshivhase**

Mpho Tshivhase is a senior lecturer at the Department of Philosophy at the University of Pretoria. In 2018, she made history by becoming the black South African woman to be awarded a doctoral degree in Philosophy, graduating with a thesis entitled ‘Towards a Normative Theory of Uniqueness of Persons’. Her overarching research concern aims to delineate what uniqueness amongst persons is and how we relate to it. In short, she aims to construct a plausible account of Personal
Uniqueness, i.e. the unique distinction that sets persons apart from each other. Her approach is normative and, her research includes themes of Love, Death, Religion, African Ethics, Autonomy and Authenticity amongst other themes relating to personal uniqueness. Mpho lectures undergraduate courses in applied ethics. She has served as a postgraduate representative on Senate at the University of Johannesburg. Mpho is a member of the Philosophical Society of South Africa, as well as Golden Key Society in South Africa.

Prof. Fraser McNeill
Fraser McNeill is a social anthropologist based at the University of Pretoria. He received his PhD from the London School of Economics in 2007, and is author of Aids, Politics and Music in South Africa (Cambridge University Press 2014), various articles and chapters. He is currently PI on an NRF funded project on Venda male initiation. In his spare time, he plays guitar in a Venda reggae band.

Dr. Gcobani Qambela
Gcobani Qambela joined the UJ Anthropology and Development Studies department in 2018. My research, broadly, intersects the Anthropology of Masculinities, Sexual and Reproductive Health, and the Anthropology of Childhoods and Youth. My PhD focused on Xhosa men living in a rural and peri-urbanising context. Through my doctoral work, I developed what I call ‘the Anthropology of Boyhoods’. Prior to joining UJ, I taught at Rhodes University, North West University, as well for the Organization for Tropical Studies and Duke University, Florida International University and Quest University. I have worked in the non-governmental sector, where I got to work on various projects.

Ms. Kharnita Mohamed
Kharnita Mohamed lectures in Social Anthropology at the University of Cape Town. She has a Masters in Anthropology from the University of Chicago and is working on a PhD in Women’s and Gender Studies at the University of the Western Cape. Her research is focused on disability, race and gender towards thinking about disability from a decolonial feminist perspective. Her debut novel Called to Song was published by Kwela in 2018.

Prof. Eric Worby
Eric Worby teaches in the Department of Anthropology at the University of the Witwatersrand where he previously served as Head of the School of Social Sciences and Director of the Humanities Graduate Centre. Since 2016, he has directed an experimental doctoral program known as THInK (Transforming Humanities through Interdisciplinary Knowledge). His research, based on fieldwork in Zimbabwe, Botswana, Tanzania and Bangladesh and South Africa, has examined transformations in property, labour, race and ethnic relations, as well as contestations over colonial and postcolonial ‘development’, sovereignty, violence, the state, public space and the apprehension of power in both agrarian and urban contexts.

Prof. Pathmanathan Naidoo
Pathmanathan Naidoo is a Research Professor in the Department of Mechanical Engineering Science. He holds the City of Johannesburg Research Chair in Green Economy and Innovation. For the period 2016 to 2020, he serves as Non-Executive Director at Joburg Market SOC Limited. He is a registered professional engineer and a fellow of the South African Academy of Engineers and of the South African Institute of Electrical Engineers.
Time, Thought, Materiality: Africa and the Fourth Industrial Revolution

Dr. Martin Cook
Martin Cook has a Masters in high energy particle physics (specifically String Theory) from Wits and a PhD in applied nuclear physics from UJ. He went on to join Gem Diamonds to pursue the commercialisation of his PhD project, a new technique to image diamonds within rocks that has the potential to revolutionise diamond processing. This was critically dependent on high-volume, real-time data processing, imaging and machine learning. He is now the Head of Data Analytics at The Choice Architects, applying Data Science and behavioural economics to tackle interesting problems, understand and guide behaviour.

Dr. Wesley Doorsamy
Wesley Doorsamy completed his MSc in Engineering in one year and his PhD in two years at the University of Witwatersrand. He also completed the postgraduate diploma in education (with distinction). Currently, Dr Doorsamy is a senior lecturer at the University of Johannesburg, a full member of the IEEE and SAIEE, and an affiliate of the African Academy of Sciences (AAS). Dr Doorsamy’s area of research is in machine learning, pattern recognition and data analytics. His research activities are aligned to Industry 4.0 and he is actively involved in several related industry and government initiatives.

Mr. Anthony Kaziboni
Anthony Kaziboni is a political and critical sociologist, broadly interested in how power is conceptualised and theorised, its role in society, and the culminating patterns of social change. He is interested in social justice and this is manifest in his desire to pursue research in social inequality and social policy, hence his interest in hydropolitics, “water politics”. He has [co]authored publications in accredited journals, newspaper articles, among others, and also a series of book chapters in an undergraduate sociology textbook - Ferrante, J (ed). Sociology: A global perspective (South African 1st edition) published in 2015. He has been awarded the Best First Lecturer Award at the University of Johannesburg (2016) and in 2018 the International Sociological Association (ISA) RC46 – Clinical Sociology awarded him the prestigious Outstanding Early Career Award in Clinical Sociology for his exceptional contribution to social research and social theory.

Ms. Thandile Ntumba
Thandile Ntumba is a well-seasoned Language Practitioner with a demonstrated history of working in the government administration industry. Skilled in Interpreting, Translation, Editing, Proofreading / document quality control, Indexing, Terminology development and Language Planning. An accomplished media and communication professional with in-depth knowledge of critical analysis of texts, Intercultural communication and Public Relations.

Ms. Cassi Gewer
Cassi-Lee Gewer, is currently a top 3rd year Humanities’ student of Psychology at the University of Johannesburg. As an aspiring neuroscientist, with a passion for artificial intelligence models and the intricacies of the human neuronal valley, Cassi is an activist for Humanities study within the Fourth Industrial Revolution. From interning in neurology, neuroscience, A.I, and neuropsychology, Cassi devotes any academic endeavour to the technological innovations that occur in conjunction with computational neuroscience and the human brain. Cassi
Ms. Ruvimbo Samanga

Ruvimbo Samanga is a graduate of Law from the University of Pretoria as well as a Member of the Space Generation Advisory Council (SGAC) of the United Nations and currently services as the National Point of Contact for Zimbabwe. Recently, she participated as a delegate and presented a paper titled: “Lunar Ethics and the Implication of Resource Mining in Outer Space,” at the African Leadership Conference (ALC) Youth Forum 2018, NICON Luxury Hotel Abuja, Nigeria. Her love for Space Law began when she coached the Winning Team of the Manfred Lachs Moot Court World Finals Competition 2018 in Bremen, Germany, held during the 68th International Astronautical Congress, which team happens to be the first African winners since the inception of the competition in 1991. She was also inducted into Banking On Africa’s 10’000 Points of Light Programme, a Pan-African Youth led development think tank founded by prominent Zimbabwean businessman Mutumwa Mawere. Ruvimbo is also a recipient of the Mandela Rhodes Scholarship for Post Graduate Studies in International Trade and Investment Law in Africa at the Centre for Human Rights, University of Pretoria, South Africa. Her future interest lies in Space Law and Policy, Resource Mining, Trade and Investment Law. In April 2019 Ruvimbo walked away with the prestigious Zimbabwean Achiever Award in the Young Achievers Category.

Ms. Tsholofelo Masetshaba Mosala

Tsholofelo Mosala was appointed as a Commissioner for The Commission for the promotion and protection of the Rights of Cultural, Religious and Linguistic Communities. She is an anthropologist, poet and a culture activist. She holds a Masters of Arts degree in Anthropology from University of South Africa, A Bachelor of Social Sciences Honours Degree and a Bachelor of Arts Degree from University of Pretoria. Some of her expertise lies in traditional medicine and healing practices, African religion and spirituality. In her line of work, she has extensively researched on the Rastafari community, African Initiated Churches and traditional healers.

Ms. Vuyiswa Sokutu

Vuyiswa Sokutu was born in the Eastern Cape Province. She holds a Masters in Anthropology Degree and is currently a PhD candidate. She has been actively involved in research on gender and organising events such as conferences. Ms Vuyiswa Sokutu’s research interests are multidisciplinary and include, criminology, community development, gender, kinship obligations, capital and forms of belonging in south Africa’s framing areas.

Ms. Vuyiswa Sokutu

Vuyiswa Sokutu was born in the Eastern Cape Province. She holds a Masters in Anthropology Degree and is currently a PhD candidate. She has been actively involved in research on gender and organising events such as conferences. Ms Vuyiswa Sokutu’s research interests are multidisciplinary and include, criminology, community development, gender, kinship obligations, capital and forms of belonging in south Africa’s framing areas.

Prof. Maria Frahm-Arp

Maria Frahm-Arp obtained her PhD in the Sociology of Religion from Warwick University (UK) at the end of 2006. She is the author of several book chapters and journal articles on Pentecostal Charismatic Churches in South Africa and the author of ‘Professional Women in Pentecostal Charismatic Churches in South Africa’ (2010) and ‘Into the Deep: Finding God in the Midst of Suffering’ (2015). She is the winner of the UJ Humanities Teaching and Learning Award (2014) and the Vice Chancellors Distinguished Teaching and Learning Award (2016). In 2017 she worked as the Vice Dean in the Faculty of Humanities and since March 2018 she has been working as the Executive Director of the Library and Information Centre at UJ.

Dr. Phefumula Nyoni

Phefumula Nyoni is an anthropologist and sociologist lecturer and researcher. He has been actively involved in curriculum design, implementation and programme quality assurance. Dr Nyoni’s research interests are multidisciplinary and include education transformation, quality assurance and curriculum design in tertiary institutions, particularly from a culture-centric perspective, reconfiguration of urban spaces, access to socio-economic amenities for marginalised migrant and local communities, poverty alleviation and human rights, community development, urban workers’ experiences, urban artisanal mining and agriculture, women and harmful cultural practices, entrepreneurship as well as reinvention of post-colonial identities in African cities. This has combined research and policy advocacy.
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**Prof. Pragna Rugunanan**

Pragna Rugunanan is Head of the Department of Sociology at the University of Johannesburg. Her doctorate focused on the construction of migrant communities among African and South Asian communities in South Africa. She is a current recipient of a NIHSS Brics Mobility Grant and is a NRF Thuthuka grant holder in the post-PHD track. Pragna has served on the executive of the South African Sociological Association, was a council member and is currently a working group convener. She has been involved in NRF funded research projects on Family, Well-Being and Resilience; Social Capital and Citizenship; Refugee and Migration projects. Her current research project focuses on ‘Migration, identities and trans-continental linkages: Studying the Indian diaspora in South Africa’. Her research interests include the Sociology of migration and labour studies; changing patterns of work, social networks, and community studies. She has published on migration, gender, xenophobia, education and citizenship.

**Ms. Celine Meyers**

Celine Meyers is currently employed at the South African National Resource Centre for the First-Year Experience and Students in Transition (SANRC) and a PhD candidate at the University of Johannesburg. She holds a MA in Sociology (Cum Laude), BA Honours in Sociology (Cum Laude) and a BA in Psychology. She has received several prestigious scholarship awards from the Global Excellence and Stature 4.0 (GES), the National Research Foundation (NRF) and merit awards for academic excellence. Her research interests include studies in higher education and the fourth industrial revolution (4IR).

**Mr. Lynford Dor**

Lynford is a UJ Masters student at the Centre for Social Change and a volunteer at the Casual Workers Advice Office.

**Prof. Carin Runciman**

Carin Runciman is an Associate Professor in the Department of Sociology and based at the Centre for Social Change, University of Johannesburg. She is a Y1 rated researcher by the National Research Foundation and her research specialises in working-class politics and mobilisation in post-apartheid South Africa.

**Prof. Tapiwa Chagonda**

Tapiwa Chagonda completed his doctoral studies in 2011, focusing on the survival strategies of workers in Harare, Zimbabwe during the 2000s - Zimbabwe’s turbulent decade of hyperinflation and political crisis. In January 2017 Chagonda was promoted to Associate Professor in the Department of Sociology at the University of Johannesburg. He is the Chair of the Faculty of Humanities Ethics Committee. His research interests lie in the Sociology of Work with a focus on trade unions; the globalization of work; masculinities; and Zimbabwe’s socio-economic and socio-political situation.
Mr. Ashraf Patel

Ashraf Patel is a graduate on the Masters in Management (MM) Public Policy and Regulation Management (ICT) from the Graduate School of Public and Development Management (P&DM), University of Witwatersrand, South Africa. I am currently active and participation in the following high-level policy-program platforms that has policy impact at local, regional (SADC, AU) and global level; and G20 T2 working group on world of work n the 21 century skills. I am part of a multilateral group of think thanks in Africa, co funded by the German DIE, that is dealing with the area of world of world labour matters in preparation for the G 20 Summit in September 2018. We have attended the T 20 working group in Addis Ababa in April 2018 and have made research inputs into thematic documents of the world of world and skills development. As well as the BRICS knowledge and innovation cluster, NIHSS. In the past 3 years, I have consistently participated in the knowledge and innovation cluster of the BRICS academic network at NIHSS. This experience has enabled me to effectively contribute to inclusive social and economic policies with regards to world for work, 4th industrial revolution and inclusive development. I have had extensive experience in the academic, private, donor, innovation and public ICT sector in southern Africa for over 15 years. As a founder member of the Learning Information Network and Knowledge Centre (LINK) at Wits University, and program officer at a regional development donor and funder, I have a good mix of policy, development and research skills, expertise and networks in the knowledge economy and keen interest in 4IR, ICT4 Development, industry policy, skills development, regional development. In addition, Accolades included being selected for the UNIDO Global Cleantech Innovation Fund Green program in 2015.

Dr. Admire Mare

Admire Mare currently works at the Department of Communication, Namibia University of Science and Technology, and is Research Associate in the School of Communication at the University of Johannesburg. His research focuses on the intersection between technology and society. He is currently working on projects related to fake news and cyberpropaganda in Africa, social media and democracy, digital platform economies in the Global South, media and conflict studies, digital campaigns and diplomacy and safety of journalists in both offline and digital spaces and digital literacy in rural contexts.

Mr. Kyle Bester

Kyle Bester is a research psychologist and PhD candidate at the Faculty of Military Science, Stellenbosch University. After completing his B.Psych at Pearson Institute of Higher Learning he joined the Masters in Research Psychology programme at the University of the Western Cape where he was later recruited to work at the Military Psychological Institute (SANDF) where an emphasis was placed on psychometric testing and test development along with defence orientated research. Currently he is specialising in organisational development and research related to student retention at the University of South Africa (Unisa). His areas of interests rests in the colonisation of digital spaces in a South Africa Military context.

Prof. Joey Janse van Vuuren

Joey Jansen van Vuuren (PhD) heads the Computer Science Department at Tshwane University of Technology. Her research focus on cybersecurity, education, government and policy. She was the coordinator of the South African Cybersecurity Centre of Innovation for the Council for Scientific and Industrial Research (CSIR) that initiating several cybersecurity government initiatives in South Africa. The centre focuses on the promotion of research collaboration, cybersecurity education and the exchange of cyber threats. Previously as the Research Group Leader for Cyber Defence at CSIR, she gave the strategic research direction for the research conducted for the South African National Defence Force and Government sectors on Cyber Defence.

Dr. Anna-Marie Jansen van Vuuren

Anna-Marie Jansen van Vuuren is a post doctorate fellow at UJ’s Department of Journalism, Film and Television. Her research has been published in Taylor and Francis and Intellect journals, as well as being presented at various international conferences. It mostly focuses on South African cinema, historical cinema and the role of ideology.
and identity within media texts. Apart from lecturing at various tertiary institutions, she worked as a freelance radio producer for the SABC’s Radio Current Affairs programmes since 2008. In her capacity as RSG’s special film correspondent she won the ATKV’s National Media Award in 2016 and 2019.

**Dr. Hali Healy**

Hali Healy lectures at UJ’s Department of Anthropology and Development Studies, and belongs to the Sustainable Europe Research Institute (SERI Germany). Her PhD (KCL, Geography) was inspired by collaboration with networks of international scholars and activists via the EU funded CEECEC (www.ceecec.net) and EJOLT (www.ejolt.org) projects, drawing from the fields of political ecology, ecological economics and STS. Co-editor of Ecological Economics from the Ground Up (Routledge, 2013), recent work includes Environmental Injustice and Economic Growth, Conceptualising Green Economies: Origins, Evolution and Imperatives (both Springer Nature, 2019), and A Political Ecology of Transdisciplinary Research (forthcoming – Journal of Political Ecology).

**Mr. Dalitso Materechera**

Dalitso Materechera is a lecturer in the Department of Anthropology and Development Studies. His interests include Sustainable Development, Food Security, Monitoring and Evaluation, and Public Health issues. His Masters focused community knowledge, perceptions and practices towards public health issues with a focus on rodent infestations.

**Dr. Victoria Collis-Buthelezi**

Victoria J. Collis-Buthelezi is Senior Lecturer in English at the University of Johannesburg as well as a Senior Research Fellow at the Johannesburg Institute for Advanced Study (JIAS). She has held posts in English at the University of Cape Town and at the Wits Institute of Social and Economic Research (WiSER) at the University of the Witwatersrand. Her research interests include Caribbean, African, and African American literatures as well as black intellectual history. Her current book project, Before Nation: Early 20th Century Black Globalism, excavates the print cultures of black migrants from the Caribbean, the US, West Africa and the rest of South Africa to Cape Town from the Caribbean, the US, West Africa and other parts of South Africa before the rise of anti-colonial nationalism. Some of her work has appeared in Small Axe, Callaloo and The UK Journal of Arts and the Humanities.

**Professor Ronit Frenkel**

Ronit Frenkel is a Professor of English at the University of Johannesburg. She holds a Ph.D in Comparative Cultural and Literary Studies from the University of Arizona and an M.A. in African Literature from Wits. She mostly works on contemporary South African Literary and Cultural Studies. She has a strong interest in African feminisms, public cultures, the Indian Ocean and transnational connectivity. She is also the editor of the pan-African journal The Thinker - www.thethinker.co.za.
Dr. Oswelled Ureke

Oswelled Ureke is a GES post-doctoral research fellow in the Communication Studies Department at University of Johannesburg. He holds a PhD in Cultural and Media Studies from the University of KwaZulu Natal’s Centre for Communication Media and Society. Oswelled has published several articles in peer-reviewed, internationally accredited journals and has lectured in the Department of Media and Society Studies at Midlands State University, Zimbabwe in addition to previously working as a video producer and journalist. Oswelled’s research interests combine theoretical and practical aspects of screen media studies. He remains actively engaged in documentary video production in various technical capacities.

Mr. Sanjin Muftic

Sanjin Muftić is a Bosnian-born Canadian multi-disciplinary artist, lecturer and digital humanist based in Cape Town. After having completed a B.Sc. in Computer Science and Drama in Quebec, he continued his studies in theatre at the UCT. He has staged intermedial performances, designed videography and edited for various South African theatre and film productions (www.sanjinmuftic.com). Sanjin is completing his drama PhD and his written contributions include several chapters in performance theory compilations. He served as the Head of Acting at the CityVarsity School of Media and Creative Arts and is now working for UCT Libraries as a Digital Scholarship Specialist.

Prof. Thabisani Ndlovu

Thabisani Ndlovu is Associate Professor of literary and identity studies at Walter Sisulu University. His interdisciplinary work focuses on the intersection(s) of race, gender and class in Southern Africa. Deploying this approach, the subjects Thabisani has written on include literary imaginations of human rights, migration, masculinities, black middleclassness, nation and nationhood, monuments and memorialisation, and whiteness. Before joining WSU, he was lecturer and Deputy Director at the International Human Rights Exchange Programme, Wits University.
ABSTRACTS

KEYNOTE ADDRESS

Prof. Hopeton Dunn.
“To Reflect, Imagine And Co-Create In Africa And Its Diaspora: Humanities Demands From The Fourth Industrial Revolution”

This keynote presentation to the SAHUDA 2019 Conference is about the meaning and practice of Humanities Education in Africa and its diaspora, in the face of transformational innovations that are increasingly challenging the academy and society, globally. It interrogates Klaus Shwab’s concept of the Fourth Industrial Revolution (4IR) and argues that 4IR in Africa and the global South should be more about educating and empowering people, about advancing indigenous productivity and preserving our shared humanity. It is within that context that we should consider the role of such emerging digital technologies as artificial intelligence, robotics and algorithms, as advanced by Schwab. The presentation advocates a critical and selective approach to 4IR and places it within the context of other historical ‘periodisations’ of humanity’s interface with technology.

To better cope with emerging innovations in this era, a managed re-structuring of disciplinary boundaries in the academy is advocated, with a view to more inter-disciplinary and convergent approaches to research and curriculum reform. The goal is to enable researchers and students of the Humanities to combine their people-centred scholarship with an improved understanding of relevant applications in Science, Technology and Engineering, and vice versa. The presentation concludes that such reforms, needed at the regional, national and institutional levels, must include the space to reflect historically and culturally, the capacity to re-imagine our own futures and the time and competences to co-create indigenous material or virtual content, as equals with other academic disciplines, moving into the third decade of the 21st century.

ETHICS, PERSONHOOD, AND MORALITY IN THE FOURTH INDUSTRIAL REVOLUTION

Prof. Emma Ruttkamp-Bloem.
“Virtual Persons: Rethinking Human Value”.

The first of the 2018 EU guidelines for ethical AI states “AI should not trample on human autonomy. People should not be manipulated or coerced by AI systems, and humans should be able to intervene or oversee every decision that the software makes”. The thinking behind this guideline is the Kantian notion that humans have intrinsic worth, and should therefore always be the best final arbiters in considering the impact of decisions on humans. Are such views justified in an age where humans are not necessarily the only rational beings anymore, and also do not have the best history of beneficial moral decision-making? In the age of 4IR, we need to rethink our reasons for framing guidelines such as the above, especially, I argue, if they are built on assumptions of notions of personal identity giving humans the upper hand. In order to commence this ‘rethinking of humanity’, I consider the arguments of writers such as Asaro, Moor, Allen and Wallach for identifying levels of artificial morality as a way in which to formulate a positive contemporary response to the well-known 1991 article by Cole in which he defends the potential mental abilities of algorithms with his notion of ‘virtual persons’.
Dr. Motsamai Molefe.
“Personhood, Animals And Robots In African Philosophy”.
This essay considers the moral status of robots in the light of the idea of personhood salient in African philosophy. Specifically, I aim to consider whether robots can be objects of moral concern. To do so, I will first consider the place and status of animals in the light of personhood. I will consider moral reasons offered by the ethics of personhood to exclude animals from the moral community. I will proceed to consider whether robots can have moral status in light of personhood. I will conclude by observing that robots will be excluded from the moral community on more or less the same reasons that animals are excluded.

Mr. Samuel Segun.
“Making Afro-Ethics Computational”.
Arguably, research in computational ethics and particularly any attempt at composing an ethical scheme for machines or autonomous intelligent systems will require three steps. First, identifying and adopting an ethical system, which will be compatible with a top-down, bottom-up or hybrid approach to computation. Second, schematizing this ethic in analytic form and third, developing appropriate syntax and a utility function for the development of an ethical algorithm. In this essay, I consider the underexplored ethical system common to peoples of sub-Saharan Africa, which I have christened ‘Afro-ethics’. I show in this talk that the nature of Afro-ethics, unlike deontological or consequential ethics, is unstructured and makes the problem of tractability more evident. For lack of space and time, I address the first two steps of creating an ethically computational framework for artificial intelligent systems. These are identifying the primary features of Afro-ethics and schematizing these in analytic form.

Dr. Mpho Tshivhase.
“On The Unique Personhoods Of Robots”
The existence of these humanoid robots forces us to think about or rethink the issues concerning rights, citizenship, and personhood. There is something quite different about robots in relation to persons. I am particularly interested to test the plausibility of considering the uniqueness of robots. My aim is to consider the radical distinction of robots. I will test the uniqueness of robots against my theory of procedural uniqueness. Given that my view of uniqueness is founded on persons, it is necessary for my discussion of the uniqueness of robots to be preceded by a discussion of personhood with the aim to reveal whether robots can have the status of personhood. The question regarding the possibility of robots attaining personhood status is one that assumes that robots can develop moral status and thus able to take accountability for moral actions. Understood in this way, it would imply that robots would have the capacity to grasp the concept of moral responsibility so much so that they would be able to understand moral regard for other robots, humans, and animals. While legal personhood can be granted to robots in the same way that it is granted to historical buildings and corporations, it is unclear that robots can be persons in the way that thinkers such as Kant and Menkiti and others conceive of it.

UNCERTAINTY IN THE ANTHROPOCENE: POSSIBILITIES FOR A NEW HUMANISM IN THE FOURTH INDUSTRIAL REVOLUTION
Prof. Fraser McNeill.
“Posthumanism And The New Politics Of Difference”.
In this paper, I explore connections between humanism, posthumanism and neoliberal constructions of difference. I ask questions about the theoretical and applied efficacy of posthumanism as a legitimate way of thinking anthropologically, and argue that, ultimately, anthropology has always been, and should remain to be, a fundamentally humanistic endeavour. I root the paper in the context of increasing global inequalities, ethno-nationalisms, the destruction of ecosystems, the imposition of physical and metaphysical boundaries and other products of neoliberal dynamics. Of particular concern is the impact that neoliberalism has made in the Academy, specifically in anthropology as an intellectual pursuit, giving rise to a plethora of twists and ‘turns’ through which practitioners seek to carve out spaces of particularity through increasing peculiarity. I argue that, in this current global context,
posthumanist approaches have the potential to help generate meaningful understandings of contemporary lived experiences only if they remain firmly embedded in their humanist origins.

**Dr. Hylton White.**
*“The Non-Identical Human”.*

The new materialisms and the ontological turn have been aimed at de-centering the figure of the human from the project of anthropology. In most cases, though, this de-centering is conflated with dissolution. The result is an anthropology that seems to give up on specifying its object, while nonetheless proceeding in the shadow which that object continues to cast. We talk freely about the Anthropocene, for example, while refusing to theorise the Anthropos that names the age, except in terms of negating it. How might we do better at this without retreating back into the conceptions of human nature that materialists and many others have rightly found problematic? To address the question I turn to various marginal strands of historical materialism, and especially to work by Ilyenkov and Adorno. I argue on this basis for an idea of the human condition as the condition of inheriting and inhabiting artefactual worlds that afford us the capacity for culture. This affordance is extrinsic to the human being as such, but it enables the emergence of a specifically human existence.

**Dr. Gcobani Qambela.**
*“A Boy Is Not A Person That You Would Have To Tend: Towards A Humane Anthropology Of Boyhoods”.*

In this paper, I build upon a nascent and developing field of Black boyhood studies. Studies by Dumas and Nelson (2016), Drake (2016), hooks and Powell (2015) and many others have done well to index the ways in which critical aspects of becoming human for Black boys have remained unimagined and unimaginable in social science, anthropology, and social imagination. These studies have shown Black boys are imagined only as adults, and when not adults, as problems in need of fixing. A key limitation with this work is it’s centredness on the US experience of Black boyhood which does not have various cultural nuances observed in southern African Black boyhoods. Building on this corpus of work from Black boyhood studies, I argue for an Anthropology of Boyhoods that humanises boys, and Black boys more specifically. Using ethnographic data collected with young amaXhosa men in the Eastern Cape, I show social science and anthropological studies of amaXhosa men have mirrored many of the aspects noted in Black boyhood studies by imagining Xhosa boyhood only in relation to adulthood (i.e. initiation – *ulwaluko*) and post initiation lives through *ukwakha umzi* (building a homestead). Through uncovering the pre-initiation lives of Xhosa men (i.e. in boyhood), I show a more complex and nuanced depiction of amaXhosa boyhoods not currently reflected in anthropology or social science more broadly. In this way, I posit, to show more humanised representations of Black boyhood, and amaXhosa boyhoods more specifically, we have to “tend” to the boy – and not only in adulthood, but throughout their lifecourse. In doing so, ultimately I argue we can have more comprehensive understandings of the *processes of becoming* for Black boys as they come not only into their genders – but ultimately humanity. While exciting fields as the anthropology of Childhoods and Youth exist, ultimately, I argue for an Anthropology of Boyhoods that illuminates joys, complexities and nuances of being a boy.

**Ms. Kharnita Mohamed.**
*“Reanimating Archives In The Now: Frankensteinian Logics, Inheritances And Fictive Commensurabilities”.*

Imaginaries of the human have shifted over time with, and made possible new epistemes, politics, methodologies and ethics. As each
new ‘turn’ takes effect, the attempt to keep up with quests for recognition across inequalities, forms of life and worldings, can leave one feeling quite dizzy. The expansion of ontological imaginaries frequently animates the archive towards a politics for the present and/or future. The archive is frequently read towards a politics and new sets of relations: to insert new subjects (or worlds), recover them, dispute their rendering, or to delegitimize the scope of the archive. What remains, irrespective of the mode of human and the form of the political that is emergent, is a relation to the archive that appears to be paradigmatic. Given different imaginaries of the human across time and space, I want to present some questions about temporal (and ontological) equivalences and the ontological remainders that are carried across when we are mining the archive to animate our texts. In this paper, I will propose that Frankenstein as a metaphor is useful to explore the excisionary logics of knowledge production which sutures together ontological imaginaries and produces fictive historical contiguities.

**Prof. Eric Worby.**

*“Anti- Anti- Anti-Humanism: A Critique Of Human Origins Research In South Africa”*

In a time when liberal, universalist values are apparently in regression across the globe, should anthropology abandon its flirtation with post-humanism and anti-anthropocentrism? Should it instead be vigorously reasserting its historical role in defending the qualities that distinguish the human species from others, while arguing for the universality of those qualities across members of that species? I am sympathetic to the political reasoning underlying such a call in our current context. Yet here I want to urge caution against taking a naively sanguine view of some invocations of human unity and ‘humanism’ that have been constitutive of the discipline of anthropology, notably in relation to paleoanthropological research into ‘human evolution’ and ‘human origins’. In the South African context, such research has had an unusually influential – and sometimes deeply pernicious - role in relation to debates concerned with race, inequality and human difference over the past century. My paper will suggest that the effort to rehabilitate the ethical reputation of paleoanthropology during the late Apartheid and post-Apartheid period, grounded as it is in the invocation of common human origins in Africa and specifically in the ‘Cradle of Humankind,’ can paradoxically serve to shore up both national chauvinism and white apologetics. While this need not derail a revival of the ‘humanist’ impulse of anthropology per se, it should give us sufficiently cause to be wary of the uses to which such a revival might be put.

**Prof. Achille Mbembe**

Abstract tba.

**SPACE, DESIGN, AND ECOLOGY**

**Prof. Pathmanathan Naidoo.**

*“Nexus Of Energy, Water, Food, Waste : 4IR Contributions”.* Given the reference, United Nations Sustainable Development Goals, *Agenda 2030 : Transforming our World*, the Department of Mechanical Engineering Science has interest in promoting solutions that will stimulate new economic development and new jobs in the age of Industrial Revolution 4.0. A focus is to explore the gains from the nexus of energy, water, food, waste and transport value chains when embedded in Industrial Revolution 4.0 technologies, business models and societal values. The aim is to maximise circular economics, minimize environmental impact and to deliver new business models of economic development and job creation. A sharp focus is to bring forward machine decision making in the delivery of sustainable and resilient solutions of integrity and value to customers and society.

**Dr. Martin Cook.**

*“The Digital Twin In Industry: Enhanced Safety And Performance In Aerospace, Mining And Industry”.* One of the hallmarks of the Fourth Industrial Revolution is the “ubuntu” of data: instead of focussing on individual sources of data, we rather understand each data source in the context of a broader, coherent picture. The whole becomes more valuable than the sum of its parts. This is a key concept underlying digital replicas of real-world systems, called “digital twins”. The digital twin concept is explored through three examples: an
aeroplane, a nuclear reactor and a mine. Instead of interacting directly with the real-world system through individual sensor readings, the paradigm shifts to interacting with the digital twin itself. The benefits of this approach include greatly increased information richness and accuracy, fault tolerance, scenario planning and ability to optimise.

Dr. Wesley Doorsamy.  
“Data – The Invisible Hand: Technological Impacts On Society”.  
From a technological perspective, each of the previous industrial revolutions could be characterised according to some unique features. While the Fourth Industrial Revolution is characterised by a confluence of technologies, data is seemingly a distinct feature of 4IR’s DNA. Data is considered by many to be the new gold and true invisible hand behind 4IR. With natural, human and capital resources’ scarcity and constraints being felt now more than ever, data is potentially a critical feedstock for economic development and driver for knowledge generation. This talk focuses on how data, together with technological development, have and will continue to bring about deep sociological and economic impacts. These impacts are analysed through a technological lens aimed at stimulating discourse around the role of data in society.

Mr. Anthony Kaziboni.  
“Achieving Water Security In The 4IR: Possibilities For South Africa”.  
The Forth Industrial Revolution (4IR) is dawning on South Africa. There are debates on whether it is going to bring about positive change or the opposite – an increase in social problems, social strife, poverty and inequality. South Africa is the 30th driest country globally. Against the backdrop of climate change and increased variability in rainfall patterns globally as a result of global warming, there has been a sharp decline in rainfall in Southern Africa. Water scarcity in South Africa been compounded human induced factors. This paper interrogates the technologies that come with the 4IR and how they can be employed to improve water management, access and provision in South Africa. I argue that if these 4IR technologies are embraced and employed, we stand a better chance at achieving water security.

Ms. Thandile Ntumba.  
“The Rise In The Staging Of Sacred Intercessions By Traditional Healers On Digital Spaces”.  
Ukuhlola is an exercise of enquiring about one’s well-being from the ancestors through consulting a traditional healer who then acts as an intermediary between the enquirer and his/her ancestors. Lately TV shows like Umoya and Radio programmes like Dr Khehlelezi have been broadcasting these consultation sessions. This research paper will look at how the practice of African traditional healing consultation has moved from being a very confidential sacred exercise to being something that is put on public platform. The paper will look at the motive of putting what used to be understood as sacred on public platforms for public consumption and entertainment. The paper will seek to explore possible reasons for this new trend from all concerned participants. It will further interrogate the authenticity of this practice. The research participants will be the pioneers of this new ways of consulting which will include the Traditional healers who hold their consultations on digital space. The media houses who broadcast these episodes on their media channels as well as the audience who have been on those episodes. The analysis will be based on narrative interviews and participant observation. The study aims to uncover the
impact of this social innovation on spirituality’s sustainability on whether these performers have overstepped the boundaries which are regarded as spiritual moral values in trying to fit in and keep up with the fast paced developing society.

TECHNOLOGY, CULTURE, AND THE FOURTH INDUSTRIAL REVOLUTION

Ms. Cassi Gewer.
“Neuroscience, Psychology And Machine Learning: Decoding Both Human And Artificially Simulated Brains Within The Scope Of Humanities’ Study”.

As a Humanities’ student in the age of artificial intelligence algorithms, software engineering and big data – concepts such as youth unemployment, human cognition and the future of academia are prominent in Industry 4.0. This paper highlights the role a Humanities’ scholar plays in embracing technological trends and using critical thinking, human observation and psychoanalysis to enter the world of machines and computers. It is through grappling with the underlying psychological and sociological aspects, which a Humanities’ degree provides, that innovative deep learning and its enigma can be uncovered. This is an account of the academic journey from Freud to Turing, from cognition to neural networks, and from the University of Johannesburg to the University of Cambridge – all in advocacy of the Fourth Industrial Revolution.

Ms. Ruvimbo Samanga.
“Space Applications: How The Use Of Satellite Technology Will Promote Access To Data And Information In The Fourth Industrial Revolution”.

The 4th industrial revolution is going to be driven by three key ages, artificial intelligence, digitization and most notably the Space age. It is this last field especially that has formed the bulk of my research and how Space Applications can promote sustainable development on the African continent especially though the use of satellite technology. Given rapid technological advances many fields, including the law and humanities, are evolving to keep up with a world that is constantly looking for effective and more efficient ways to conduct business. Take for example the proliferation of satellite technology for internet coverage to increase access to information to individuals in remote areas such as Rwanda and most recently Ghana have done. This is all with the broader aim not only to establish Africa’s technological footprint but also to encourage the younger generation to gain a better appreciation of how important it is to integrate into the global community and often the only way to do so is access to important data on the rapidly changing trends in modern sectors. Artificial intelligence and digitization are also pertinent to the extent that they could potentially eliminate the need for human intervention in the coming years, and the future generation in its teachings must be informed of the consequences and the preemptive steps to be taken to ensure that in a technologically driven world they will still find relevancy and an opportunity to contribute to different sectors and career fields. I hope to give insight on space law, a highly niche area of the law and how it interplay’s with the other drivers of the 4th industrial revolution and how collectively each should be a fundamental part of educational curricula. Now that “robots” have and will replace many of the functions currently conducted by humans how do we stop the next generation of researchers, students, industry experts from becoming obsolete, lazy or simply failing to engage with what is a novel but extremely complex development in modern society.

Prof. Maria Frahm-Arp.
“Why In The Fourth Industrial Revolution Are Miracle Churches Attracting So Many People?”.

In 2013 machine learning took off as deep learning – the ability of computers to teach themselves new concepts and ideas – became a reality. The Fourth Industrial Revolution is a revolution unlike any we have seen before because it ushers in a world in which machines can continually learn making it possible for them to make intelligent decisions based on the data they collect. Put differently not only can machines do the same manual work that people do ie plough a field of corn, they can also solve problems, diagnose diseases and often more accurately then people calculate outcomes. This reality makes many people uncomfortable and people are beginning to ask what does it mean to be human? In this
paper I explore how the rise of grass eating, petrol drinking, doom-spraying pastors that have been dominating our headlines since the 2015 is not because South Africans are somehow unique or more superstitious than other nations but rather that this phenomena echoes the reactions we have seen at the advent of the previous three Industrial Revolutions in various parts of the world. This paper compares the religious phenomena we are currently seeing to the religious expressions we saw during the previous three Industrial Revolutions. It then unpacks why at this moment in South Africa’s history we are witnessing the particular religious reaction to the Fourth Industrial Revolution that we currently see and what the socio-political implications of this might be for South Africa.

Ms. Tsholofelo Masetshaba Mosala.
“Online Church: The Impact Of Technology And Religion In The Digital Age”.

The concept of religion in anthropology, is understood to be a sort of cultural script- a strong framing narrative for daily life in many parts of the world. The digital technology has made it into the social settings and mirrors new sociocultural realities. Today, church sermons can be lived-streamed, downloaded online and congregants can actively participate from the comfortable of their homes. The power of the internet space has become a cultural game changer, infusing both religion and technology into one space. The study sets out to investigate the experiences of users who surf the cyberspace, the different religious outcome between television viewing and internet. The purpose is to describe the behavioural patterns and the socio-economic backgrounds of participants. The study argues that technology as a social reality excludes the underprivileged thereby placing digital technology in question.

Dr. Phefumula Nyoni and Ms. Vuyiswa Sokutu.
“Kinship Obligations, Capital And Forms Of Belonging Among Africa’s Farming Communities In The Fourth Industrial Revolution”.

This study is an investigation of kinship influences on women smallholder farmers’ practices in rural spaces. This study is an ongoing study conducted within a context were livelihoods are increasingly getting linked to the capitalist economy which has proved to be going through rapid transformations largely linked to the features of the Fourth Industrial Revolution (4th IR). A study that focuses on kinship influences on women farming practices is essential when one looks into the resilience of customary forms or organisation within the current neoliberal setting where the dictates of the 4th IR are looming large. Instead of such forms of organisation being pushed to the periphery they have come to be at the core of defining socio-economic relationships. In this regard, the study will seek to establish forms of relationships that kinship assists to shape as women engage in their farming activities. This is especially with respect to how the kinship obligations act as an enabling or constraining form of agency within the whims of Victor Turners concept of Liminality. Whilst methodologically, the broader study is set to draw from in-depth interviews and observations this paper is a result of the initial phase which draws from empirical literature.
CITIZENS, STATES, AND THE FUTURE OF WORK

Prof. Pragna Rugunanan and Ms. Celine Meyers.
“Graduate Employability, Human Development And The Fourth Industrial Revolution: Tracing The Career Paths Of Sociology Alumnus At The University Of Johannesburg”.

Graduate unemployment is rapidly becoming a rising concern in South Africa. Graduates tend to experience obstacles during the employment phase largely due to the lack of required labour market skills. While the envisaged fourth industrial revolution (4IR) is perceived to promote unemployment for soft-skilled professions, it is widely applauded by highly skilled technological careers. Given the broad career and employment possibilities of Sociology, the aim of this study is to provide an advanced understanding into the experiences of former Sociology graduates with an advanced qualification in the labour market. This article trace the career paths of 130 Sociology alumnus who completed an honour’s degree in Sociology between 2013 and 2017 at the University of Johannesburg. Data was collected through qualitative emailed questionnaires. Research participants were either unemployed graduates or recently employed graduates. The findings reveal important insights into (a) their level of employment, (b) the value of an honours degree in Sociology to find employment and (c) preparedness for technological aspects required in their current employment. The findings have important implications for educational institutions and companies to consider possible solutions to resolve the causes of graduate unemployment. The findings also contribute to a better understanding of the skills needed to better prepare current honours students in Sociology for the fourth industrial revolution and how this may advance youth development. It provides a rich platform for further studies and replication in other sectors, especially within the African region.

Mr. Lynford Dor and Prof. Carin Runciman.
“The Fractured Labour Process And Responses To It”.

The rise of new forms of ‘precarious’ work in South Africa over the last few decades has necessitated a return to the study of the capitalist labour process. Labour broking, outsourcing, contract work and casual work are often described as ‘atypical’ forms of work but, as we will demonstrate, they have fast become the norm. In this paper we will detail how workplace restructuring has gone hand-in-hand with processes of labour casualiation and the implications for the decent work agenda. We demonstrate how trade unions have largely failed to keep pace with these developments and have neglected to organise precarious workers. Furthermore, we argue that, despite some recent positive reforms in the rights for precarious workers, the institutional framework that is intended to safeguard worker rights is in many cases denying workers their rights. Taken together this suggests the need for a radical rethink for the role of the state in promoting and safeguarding decent work for all.

Prof. Tapiwa Chagonda.
“The Indispensable Nature Of ‘Illegal’ And Deportable Migrants Within The South African Labour Market: Migrant Workers In South Africa In The Age Of The Fourth Industrial Revolution”.

Debates on the 4IR are raging within the academy, as scholars endeavor to grapple with the pros and cons of this revolution. Within the labour market, fears have been expressed by scholars on how the 4IR might disrupt the traditional work environment as we have known it, as some of the semi-skilled and even skilled office workers might end up being made redundant by technology and robots. It is the contention of this paper that in the midst of all these fears of retrenchments within the labour market, as a consequence of 4IR, the ‘illegal’ and deportable migrants who work in the lower rungs of the labour market are more likely to remain unscathed and to be retained within South Africa’s labour market, as compared to semi-skilled and skilled migrant workers who might be properly documented.

Mr. Ashraf Patel.
“Towards An Inclusive 4IR For South Africa Impact On Labour, Youth And Communities In SA”.

The advent of the 4IR within elite WEF formations, is continuation of Castells’ critical theorisation of ‘informational capitalism’ and ‘space of flows’ as the highest forms of new imperialism (David Harvey, 2013).
Even progressives within mainstream institutions, such as Professor Joseph Stiglitz (2009) have come to acknowledge the information power symmetries - and possibilities and applying ‘Knowledge for Development’ discourse, albeit within reformist agenda of World Bank, suggesting that knowledge society discourse has varying perspectives, experiences and impacts. The paper seeks to bring out these robust discourses such as the capitalism and network society thesis (Castells, 1998), Surveillance capitalism (Zuboff, 2018), Future of Work (Brynjolfsson, 2013, ILO, 2018), Additive manufacturing and innovation (UNIDO, 2018) and global social justice campaigns regarding the social internet (CRIS, APC 2005).

POLITICS, POWER, AND PARTICIPATION

Dr. Admire Mare.
“Politics On Steroids? Algorithms, Bots And Automated Propaganda In Africa”.

Digital media platforms are credited for having transformed political engagement especially with regards to transmogrifying it into ‘participatory’ and ‘democratic’ processes. Besides its glorified potential, the advent of these gizmos has also opened the floodgates for the use of algorithms, bots and automated back-end applications, which are mostly used for digital listening, posting political content, engaging in discursive conversations with human beings and sentiment analysis. This presentation looks at the emerging role of bots, algorithms and automated propaganda in African electoral processes. Using recent elections as case studies, the presentation provides compelling evidence on how the quest to harvest big data (mostly the electorate’s demographic information, including their physical addresses, mobile phone numbers and email addresses), to manufacture the “necessary illusions” (automated propaganda and misinformation) and to control the master narrative has complicated the political process. This has not only made the already uneven playing field more unequal, but it has also ushered in new actants into the political field. These actants have been blamed for normalising and institutionalising misinformation, polluting the public sphere, producing uniformed and misinformed citizens as well as influencing the (in)visibility of political content and advertisements on digital media platforms. In the case of social media algorithms, they play an instrumental role in terms of filtering (gatekeeping), ranking (hierarchisation), selecting and recommending political content. This presentation argues that algorithms, bots and automated propaganda are increasingly playing an important role in terms of political communication in fragile and established democracies.

Mr. Kyle Bester.
“The Relevancy Of The Fourth Industrial Revolution In The South African National Defence Force: Adapt Or Be Hacked”.

The 4th Industrial Revolution (4IR) has advanced various aspects of human life is rapidly altering the way individuals communicate with each other in the work place. This study focused on the qualitative exploration on how the advancement of cybersecurity may influence the behaviour of military officers and the manner in which they interact with changing technology in the workplace. Exploring the views and perceptions of cybersecurity and how threats are scrutinised among military officers is considered to be vital when producing knowledge in an emerging research area. The securitization framework was used to indicate how participants securitize an issue within the military context, particularly when viewing the 4IR as an agent that advances technological innovation in the workplace and demands social acceptance. Exploring the views and perceptions of military officers from an organizational psychology perspective necessitated that
the researcher explore this emerging topic from a qualitative method of inquiry and highlighting a site of knowledge which has often been left unengaged in mainstream psychology. This study employed non-probability purposive sampling and selected 20 participants enrolled in a senior officers’ course at one South African Military Tertiary Institution. Findings point towards the notion that securitizing an issue such as cyber-attacks has an impact on threat perception and behaviour when interacting with others through cyberspace.

**Prof. Joey Janse van Vuuren and Dr. Anna-Marie Janse van Vuuren.**
*“With Great Access Comes Great Responsibility: Proposing A Cybersecurity Implementation Framework For South Africa”*

South Africa is one of the African nations with the highest rate of internet access to the internet. Despite this rapid spread of mobile phones and interactivity, the country’s government has been slow in implementing a definite cyber strategy. With more South Africans gaining access to the internet, the risks of citizens’ exposure to cyber threats are rising. The Institute of Risk Management South Africa has that cyberattacks were amongst the ten highest ranked risks threatening the country. The large number of South African citizens growing up without regular or sustained exposure to technological devices and broadband internet access makes them vulnerable to online exploitation. This may in turn lead to the country itself being more exposed to security breaches and potential international cyberattacks. Within this paper the researchers argue for the importance of implementing a strong cyber awareness strategy in South Africa. The paper situates the country within its unique African context, by explaining strategies and frameworks that have been developed internationally, and how they could be applied to the country. They conclude by recommending that for South African and African citizens to protect themselves against online threats, they need adequate training in cybersecurity awareness.

**Dr. Hali Healy and Mr. Dalitso Materechera.**
*“Mapping Environmental Injustice With The Ejatlas: Tool Or Trap?”*

Environmental justice (EJ) is sought by the poor, or working class, often of ethnic/marginal communities who have been disproportionately affected by the negative consequences of environmental degradation. Originating in American activism against ‘environmental racism’ in the 1970s and 1980s, academics (especially political ecologists, ecological economists, and environmental sociologists) have long focused analysis on the topic of EJ in the West. More recently, however, scholars have begun to document the evolution of a global environmental justice movement, comprised of both activists and researchers engaged in the work of linking protest with theory. Indeed in the South African (SA) context, evidence points to a burgeoning of EJ activism, as local communities engage in urgent, high stakes struggles to defend their access to non-market environmental resources and services upon which livelihoods depend, against contamination and/or encroachment by market and state forces. This paper examines a range of South African EJ struggles, drawing from a recently developed interactive map of environmental conflicts. It argues that online platforms such as the EJAtlas offer a valuable means by which environmental justice organisations (EJOs) can leverage “network effects”, thereby increasing possibilities for achieving organisational goals.

**LITERATURE, CINEMA, AND AFRICAN FUTURES**

**Dr. Victoria Collis-Buthelezi.**
*“African Futurity In Contemporary Caribbean Fiction”*

History has typically been understood as the “muse” of Caribbean literature, or so Derek Walcott contends in “The Muse of History”. So too, Martinican scholar and poet, Edouard Glissant, who declares in *Discours antillais/Caribbean Discourse* that the Caribbean “landscape is its own monument: its meaning can only be traced on the underside. It is all history”. Whether in English, French or Spanish, much of Caribbean fiction that we might call speculative has turned to the past in order to understand the Caribbean contemporary. In this paper, I will explore the recent turn toward the future by Caribbean writers such as Marlon James and Nalo Hopkinson. Both of whom offer speculative, futuristic fiction that re-imagines Caribbean lives and futures within a global African diaspora framework.
Professor Ronit Frenkel.
“African Futurity And Nnedi Okorafor’s Binti Series”.

“Binti was born out of my own personal struggles with family, my own need to pursue my dreams, my need to see Africa in the future, and my experiences of traveling to distant and vastly different parts of the world in a short period of time. And then that concoction was spiced with several layers of fear — from a fear of my own decisions to a fear of outer space.” Nnedi Okorafor. Nnedi Okorafor’s iconoclastic Binti series engages with concepts of African futurity in multiple senses of the words: as the time to come and as the shadow that the future casts on the present. Centering an African woman as the protagonist in this Speculative Fiction series, Okorafor’s writing offers a glimpse of the future as both African and female. As a character who is able to adapt and transform both her home planet and universal configurations, Binti challenges ideas of what victory looks like while rewriting the dominant narrative of what is heroic in the genre. Okorafor’s series is a comment on structural inequalities of the present, the resilience of African women in history and what the future may become in an increasingly digitally connected but divided world. The multiple layering of meanings in the texts allow for an interesting investigation into what images of African futurity may reveal about both the present and its impact on the future through a series that defies any hegemonic cultural constructions.

Dr. Oswelled Ureke.
“South Of South: Audio-Visual Technology And The San Of Zimbabwe”.

The paper is an ethnographic account based on the author’s experiences teaching the San of Sabase Village, Bulilima, Matabeleland South in Zimbabwe to make video-films. It explores how the San, as a marginalized community in Zimbabwe, have interacted with, negotiated with and appropriated filmmaking technology. The community at the centre of the study lies on the periphery of Zimbabwe’s social and economic spectrum. Between 2018-19, they encountered (as users), some of them for the first time, video technology such as DSLR cameras, smartphones, drones and editing equipment, when they were trained by a team of Zimbabwean researchers. The study focuses on how the San, regarded as Africa’s First People, appropriated this filmmaking technology to confront as well as articulate their ‘everyday’. It contributes to the representation of African futures in film by analysing the spatial and temporal aspects of San life, focusing on the Sabase community’s history, present circumstances and future aspirations as conveyed through a film that they produced, titled The San of Twai Twai. It not only focuses on the film’s content but also on the circumstances of its production. The article, therefore contributes to the growing discourse of Afrofuturism, recently re-enthused by the universally acclaimed Black Panther film. From that perspective, the San’s endeavours and the resultant film represent alternative realities to those that appear in mainstream films about the San and other First People made by ‘dominant’ outside groups. The research was designed as a participatory action research in which data was collected using the participant observation method as well as focus group discussions with members of the San community, including the filmmakers. It also incorporates an analysis of the documentary film created by the San.

Mr. Sanjin Muftic.
“Reimagining African Histories Through Digital Arts”.

This paper discusses how the emergence of digital scholarship is allowing artist to restage, reperform, and re-investigate the histories of the African content through mediums that are informed by the development of new media technologies of the 4th Industrial Revolution.
Revolution. Using Achille Mbembe’s claim that the “Internet is Afropolitan” (2015), the paper looks at several projects by African artists and on the continent which find their expression in locative sound installations, online exhibitions, and interactive video performances. Through a critical reflection identifying these projects as part of digital humanities, it examines how their critical appreciation can give insight to the continent’s navigation through the 4th Industrial Revolution.

Prof. Thabisani Ndlovu. “African Literature And Human Rights In The Fourth Industrial Revolution”.

The humanities, in this case, African literature, are under threat – a situation that should spur those in the field into relevant action towards reinvention, increased relevance and survival in the Fourth Industrial Revolution (4IR). This paper proposes interdisciplinarity – in this case the interdiscipline of African literature and human rights – as one example of the ways in which the humanities can reinvent themselves to prove their worth and utility in struggles for human survival and flourishing. While there is so much hype about the 4IR and technological advancements, there is increasingly less critical focus on ideas of human coexistence. There seems to be a terrible assumption that technological advancements will be accompanied by increased understanding among humans when instead, there are already strong signs, such as the rise of the far-right and xenophobia – proof that the 4IR needs an even stronger humanities presence and intervention than before. The centering of the human in African literature and human rights foregrounds notions of co-existence and reminds us that to be aware of one’s and others’ humanity requires continual reflection and practice – something that this paper, drawing on humanising pedagogy, will illustrate through examples from my teaching of African literature and human rights.
Time, Thought, Materiality: Africa and the Fourth Industrial Revolution