



## SACAIR2020: Programme

Please note:

Presentation slots are 20 minutes long (1 min. introduction and sharing of screen, 12 min. presentation and 7 min. Q&A)

DAY 1   24 February 2021				
Theme	Time	Title	Presenter	Chair
<b>Social Session</b>	08:30			
<b>Welcome &amp; Organisation</b>	09:15	<b>Prof. Emma Ruttkamp-Bloem</b> , Chairperson SACAIR2020 & <b>Prof. Aurona Gerber</b> , SACAIR2020 Technical Chair		
<b>Keynote</b>	09:45		<b>Prof. Peter-Paul Verbeek</b> Professor of Philosophy of Technology, University of Twente, (the Netherlands)	<b>Prof Emma Ruttkamp-Bloem</b> , Professor and Head Department of Philosophy, Faculty of Humanities, University of Pretoria
<b>Break</b>	10:45			
<b>AI for Ethics and Society</b>	11:00	Human-Robot Moral Relations: Human Interactants as Moral Patients of their Own Agential Moral Actions Towards Robots	Cindy Friedman	Jaco Kruger
	11:20	Nature, Culture, AI and the Common Good – Considering AI's Place in Bruno Latour's Politics of Nature	Jaco Kruger	Emma Ruttkamp-Bloem
	11:40	The Quest for Actionable AI Ethics	Emma Ruttkamp-Bloem	Heather Rufus
	12:00	The Implications of Personalization Algorithms on Individual Autonomy	Heather Rufus	Herklaas Combrink
	12:20	A Framework for Undergraduate Data Collection Strategies for Student Support Recommendation Systems in Higher Education	Herkulaas Combrink, Vukosi Marivate and Benjamin Rosman	Johan Breytenbach
	12:40	Embedding Ethics into 4 IR Information Systems Teaching and Learning	Johan Breytenbach and Carolien van den Berg	Cindy Friedman
<b>Lunch</b>	13:00			
<b>AI in Information Systems, AI for Development and Social Good</b>	14:00	Dataset Selection for Transfer Learning in Information Retrieval	Yastil Rughbeer, Anban Pillay and Edgar Jembere	Hakunavanhu Ngoro
	14:20	Artificial Intelligence Uses, Benefits and Challenges: A Study in the Western Cape of South Africa Financial Services Industry	Hakunavanhu Ngoro, Kevin Johnston and Lisa Seymour	Asad Jeewa
<b>Applications of AI</b>	14:40	Analysing Coronavirus Trends in South Africa and Countries with a Similar Coronavirus Profile	Asad Jeewa, Edgar Jembere, Nirvana Pillay, Yuvika Singh, Serestina Viriri and Anban Pillay	Lisa-Ann Kirkland
	15:00	An Evaluation Framework for Wildlife Security Games	Lisa-Ann Kirkland, Alta de Waal and Pieter de Villiers	Lulamile Mzamo
	15:20	Evaluation of Heuristic Guided Character Level World Models for Morphological Segmentation of isiXhosa	Lulamile Mzamo, Albert Helberg and Sonja Bosch	Matthew Baas
<b>Break</b>	15:40			
<b>Applications of AI</b>	16:00	StarGAN-ZSVC: Towards zero-shot voice conversion in low-resource contexts	Matthew Baas and Herman Kamper	Johannes Louw
	16:20	Text-to-speech duration models for resource-scarce languages in neural architectures	Johannes Louw	Austine Heyns
	16:40	Word Embeddings for Recognised Multilingual Speech	Austine Heyns and Etienne Barnard	Rhyno Strydom
	17:00	Classifying Recognised Speech with Deep Neural Networks	Rhyno Strydom and Etienne Barnard	Yastil Rughbeer
<b>Social Session</b>	17:20			
<b>End</b>	19:00			

DAY 2   25 February 2021				
Theme	Time	Title	Presenter	Chair
<b>Social Session</b>	08:30			
<b>Machine Learning Theory</b>	09:00	Tracking Translation Invariance in CNNs	Johannes Christiaan Myburg, Coenraad Mouton and Marelie Davel	Coenraad Mouton
	09:20	Stride and Translation Invariance in CNNs	Coenraad Mouton, Johannes Christiaan Myburg and Marelie Davel	Arthur Venter
	09:40	Pre-interpolation Loss Behaviour in Neural Networks	Arthur Venter, Marthinus Theunissen and Marelie Davel	Jamie Burns
	10:00	Automated Music Recommendations Using Similarity Learning	Jamie Burns and Terence van Zyl	Daniël Haasbroek
<b>Break</b>	10:20			
<b>Machine Learning Theory</b>	10:40	Exploring Neural Networks Training Dynamics through Binary Node Activations	Daniël Gerbrand Haasbroek and Marelie Davel	Dylan Lamprecht
	11:00	Using a Meta-model to Compensate for Training-evaluation Mistakes	Dylan Lamprecht and Etienne Barnard	Luyolo Manangane
	11:20	Link Prediction in Knowledge Graphs using Latent Feature Modelling and Neural Tensor Factorisation	Luyolo Manangane and Willie Brink	Johannes Christiaan Myburg
<b>Keynote</b>	11:40		<b>Prof. Bernhard Nebel</b> Professor at Albert-Ludwigs-Universität Freiburg (Germany) and head of the research group on Foundations of Artificial Intelligence	<b>Prof. Tommie Meyer</b> , UCT-CSIR Chair in Artificial Intelligence, Professor in the Department of Computer Science at the University of Cape Town
<b>Lunch</b>	12:40			
<b>Knowledge Representation and Reasoning</b>	13:40	Cognitive Reasoning: The Extent to which Forms of Defeasible Reasoning correspond with Human Reasoning	Clayton Baker, Claire Denny, Paul Freund and Thomas Meyer	Guy Paterson-James
	14:00	A Boolean Extension of KLM-style Conditional Reasoning	Guy Paterson-James, Thomas Meyer and Giovanni Casini	Adam Kaliski
	14:20	Quo Vadis KLM-style Defeasible Reasoning?	Adam Kaliski and Thomas Meyer	Ivan Varzinczak
	14:40	An Exercise in a Non-classical Semantics for Reasoning with Incompleteness and Inconsistencies	Ivan Varzinczak	Lethabo Maluleke
<b>Break</b>	15:00			
<b>Knowledge Representation and Reasoning</b>	15:20	A Formal Concept Analysis Driven Ontology for ICS Cyberthreats	Lethabo Maluleke, Luca Singels and Caryn Biebuyck	Laurette Marais
	15:40	Exploiting a Multilingual Semantic Machine Translation Architecture for Knowledge Representation of Patient Information for COVID-19	Laurette Marais and Laurette Pretorius	Iena Derks
	16:00	A Taxonomy of Explainable Bayesian Networks	Iena Derks and Alta de Waal	Clayton Baker
<b>Social Session</b>	16:20			
<b>End</b>	19:00			

Day 3   26 February 2021				
Theme	Time	Title	Presenter	Chair
<b>Keynote</b>	09:00		<b>Mr Lee Annamalai</b> CTO at Geo Intelligence Corp (GeoInt)	<b>Dr Alta de Waal</b> , Senior Lecturer and Researcher, Department of Statistics, University of Pretoria
<b>Applications of AI</b>	10:00	Hybridized Deep Learning Architectures for Human Activity Recognition	Bradley Pillay, Anban Pillay and Edgar Jembere	Ditebogo Masha
	10:20	Importance Sampling Forests for Location Invariant Proprioceptive Terrain Classification	Ditebogo Masha and Michael Burke	Shivaar Sooklal
	10:40	DRICORN-K: A Dynamic CORrelation-driven Nonparametric Algorithm for Online Portfolio Selection	Shivaar Sooklal, Terrence van Zyl and Andrew Paskaramoorthy	Jocelyn Mazarura
<b>Break</b>	11:00			
<b>Applications of AI</b>	11:20	Learning to Generalise in Sparse Reward Navigation Environments	Asad Jeewa, Anban Pillay and Edgar Jembere	Koume Kouassi
	11:40	An Analysis of Deep Neural Networks for predicting Trends in Time Series Data	Kouame Kouassi and Deshendran Moodley	Edgar Jembere
	12:00	Probabilistic Distributional Semantic Methods for Small Unlabelled Text	Jocelyn Mazarura, Alta de Waal and Tristan Harris	Tshidiso Mazibuko
<b>Lunch</b>	12:20			
<b>Applications of AI</b>	13:20	Machine Learning for Improved Boiler Control in the Power Generation Industry	Tshidiso Mazibuko and Katherine Malan	Nirvana Pillay
	13:40	Future Frame Prediction in Transformation Space using good STN	Nirvana Pillay and Edgar Jembere	Olasupo Ajayi
	14:00	On the Performance of Off-peak Workload Allocation Models in Cloud Computing	Olasupo Ajayi, Isaac Odun-Ayo and Louise Leenen	Teriza Wanyana
	14:20	An Ontology for supporting Knowledge Discovery and Evolution	Tezira Wanyana, Deshendran Moodley and Thomas Meyer	Bradley Pillay

<b>Closure</b>	14:40	<b>Prof. Emma Ruttkamp-Bloem</b> , Chairperson SACAIR2020 & <b>Prof Thomas Meyer</b> , UCT-CSIR Chair in Artificial Intelligence
<b>Conference Meeting</b>	15:00	<b>Anban Pillay</b> , University of KwaZulu-Natal, School of Mathematics, Statistics and Computer Science
<b>CAIR Steering Committee Meeting</b>	16:00	<b>Committee Members Only</b>