

# South African Computer Journal

Volume 32 Number 2, December 2020

ISSN 1015-7999 (print)

ISSN 2313-7835 (online)

*A publication of the South African Institute of Computer Scientists and Information Technologists*

Open Access: <http://sacj.cs.uct.ac.za>

## CONTENTS

---

Editorial: More Covid .....	vii
Philip Machanick	
Guest editorial: FAIR 2019 special issue.....	x
D. Moodley and M.H. Davel	
<b>FAIR 2019 special issue</b>	
Clustering residential electricity consumption data to create archetypes that capture household behaviour in South Africa .....	1
W. Toussaint and D. Moodley	
Pairwise networks for feature ranking of a geomagnetic storm model .....	35
J.P. Beukes and S. Lotz and M.H. Davel	
Improved semi-supervised learning technique for automatic detection of South African abusive language on Twitter .....	56
O. Oriola and E. Kotzé	
Benign interpolation of noise in deep learning .....	80
M.W. Theunissen and M.H. Davel and E. Barnard	
Using summary layers to probe neural network behaviour .....	102
M.H. Davel	
Ht-index for empirical evaluation of the sampled graph-based Discrete Pulse Transform .....	124
M. de Lancey and I. Fabris-Rotelli	
Algorithmic definitions for KLM-style defeasible disjunctive Datalog.....	141
M. Morris and T. Ross and T. Meyer	
Defeasibility applied to Forrester's paradox.....	161
J. Chingoma and T. Meyer	

---

# South African Computer Journal

DDLV: A system for rational preferential reasoning for Datalog ..... 184  
M. Harrison and T. Meyer

## Reviewed papers

Exchanging image processing and OCR components in a Setswana digitisation pipeline..... 218  
G. Kotzé and F. Wolff

Decoding the underlying cognitive processes and related support strategies  
utilised by expert instructors during source code comprehension ..... 232  
P.J. Khomokhoana and L. Nel

A survey of benchmarking frameworks for reinforcement learning ..... 258  
B. Stapelberg and K.M. Malan

## Viewpoints

Invited lecture: Notions of ‘theory’ and their practical consequences in  
the discipline of software ‘engineering’ (including information systems design)..... 293  
S. Gruner

