Dear editor of SACJ and academic colleagues,

As SACJ is the ‘house journal’ of the SAICSIT community, and as the annual SAICSIT conference papers are published in the ACM's digital library (ACM-DL, https://dl.acm.org/) since many years, the following bibliometric information might perhaps be interesting for several of your readers.

On the 5th of October 2019 I browsed the ACM-DL’s database with the search key ‘South Africa’ in the ‘conference location’ field such as to obtain all ACM-DL-listed conference papers which were at any time presented in South Africa. This search yielded (inter alia) all SAICSIT papers. My search was motivated by my desire to know how well these papers are received by the international ICT (informatics and computer science) scholarly community. For this purpose I used the ACM-DL’s sorting function to rank the retrieved SAICSIT papers by their citation numbers.

Though I know many cases in which ‘Google Scholar’ finds more citations per paper than the ACM-DL —SAICSIT papers included— I did not extend my citation search to the ‘Google Scholar’ database for these two reasons:

• Convenience: Alas the ‘Google Scholar’ search mask does not offer any specific ‘conference’ or ‘location’ field, such as any ‘Google Scholar’ search specifically for SAICSIT papers would have become very tedious and time-consuming, whereas I wanted to ‘produce’ this letter to the editor as swiftly as possible.

• As the ACM-DL is the ‘house’ of the SAICSIT papers, I was particularly interested in seeing how well these papers are received by their very own ‘house community’, i.e.: the ACM.

For the sake of convenience (and swift production of this letter to the editor) I also refrained from checking how many of each SAICSIT paper’s citations were self-citations (by the same authors) or in-house citations (by authors’ close collaborators or colleagues from within the same academic institutions).

In spite of these above-mentioned shortcomings, I believe that my search results are still interesting enough to justify the writing of this letter. Most of the SAICSIT papers did not receive any ACM-DL-registered citation at all so far — however there was also one paper with the respectable number of #33 ACM-DL-registered citations. In order to make the retrieved results more interesting for your community of readers, I have ranked all positively cited SAICSIT papers according to the following


Copyright © the author(s); published under a Creative Commons NonCommercial 4.0 License (CC BY-NC 4.0). SACJ is a publication of the South African Institute of Computer Scientists and Information Technologists. ISSN 1015-7999 (print) ISSN 2313-7835 (online).
method:

\[ r \leftarrow \frac{c}{a} \]

whereby

- \( r \) is a paper \( P \)'s ranking value (the larger the better);
- \( c > 0 \) is \( P \)'s number of ACM-DL-registered citations (5th of Oct. 2019);
- \( a \leftarrow (2019 - y) > 0 \) is \( P \)'s current age with \( y \) as \( P \)'s year of publication.

Thus, in case that \( c(P) = c(P') \) for two different papers \( P, P' \), my ranking gives a higher rank to the younger paper, which is only fair since the older paper would have had ‘more time’ to ‘gather’ citations.

In the cases of \( r(P) = r(P') \) for two different papers \( P, P' \), I sorted them first by numbers of citations \( (c(P) > c'(P')) \), then lexicographically (alphabetically) by the words of their titles, \((t, t')\). All in all, in this manner it should be interesting to see more or less at once glance what have been the most successful research themes of SAICSIT since this conference’s papers have been stored in the ACM-DL.

The ranking, so prepared, is shown in the following long enumerated list (‘best first’), whereby each list item \( n \) for a SAICSIT paper \( P(n) \) has the following structure:

\[ n. \ r/#c/y: t \]

1. 3.33/#20/2013: A case study in the gamification of a university-level games development course
2. 3.00/#33/2008: Predicting technology acceptance and adoption by the elderly: a qualitative study
3. 2.00/#10/2014: Designing Social Media for Community Information Sharing in Rural South Africa
4. 1.50/#18/2007: A comparative study of two usability evaluation methods using a web-based e-learning application
5. 1.45/#16/2008: Scientific computing using virtual high-performance computing: a case study using the Amazon elastic computing cloud
6. 1.43/#10/2012: Symbolic execution of programs with strings
7. 1.42/#17/2007: Modelling the factors that influence mobile phone adoption
8. 1.30/#13/2009: Evaluation criteria for assessing the usability of ERP systems
9. 1.18/#13/2008: Investigating the use of Grounded Theory in information systems research

https://doi.org/10.18489/sacj.v31i2.788
10. **1.17/#7/2013**: Design-based research - the educational technology variant of design research: illustrated by the design of an m-learning environment

11. **0.82/#9/2008**: Automatic marking with Sakai

12. **0.78/#7/2010**: The evaluation of an adaptive user interface model

13. **0.75/#3/2015**: The use of Facebook by a Community Policing Forum to combat crime

14. **0.71/#5/2012**: Audio pacemaker: walking, talking indigenous knowledge

15. **0.70/#7/2009**: Glaserian and Straussian grounded theory: similar or completely different?

16. **0.67/#2/2016**: A System for a Hand Gesture-Manipulated Virtual Reality Environment

17. **0.67/#2/2016**: Domestication of Free Wi-Fi Amongst People Living in Disadvantaged Communities in the Western Cape Province of South Africa

18. **0.67/#2/2016**: Validating Mobile Phone Design Guidelines: Focusing on the Elderly in a Developing Country

19. **0.60/#6/2009**: Exploring the African Village metaphor for computer user interface icons

20. **0.60/#6/2009**: Plagiarising of source code by novice programmers a cry for help?

21. **0.60/#6/2009**: Usability evaluation methods: mind the gaps

22. **0.58/#7/2007**: Examining the influence of demographic factors on internet users' information privacy concerns

23. **0.56/#5/2010**: Mobile phone adoption: do existing models adequately capture the actual usage of older adults?

24. **0.56/#5/2010**: Mobile user experience in a M-learning environment

25. **0.55/#6/2008**: Towards a taxonomy of network scanning techniques

26. **0.50/#4/2011**: Mobile phones and digital divide in East African countries

27. **0.50/#4/2011**: Providing media download services in African taxis

28. **0.50/#4/2011**: Understanding culturally distant end-users through intermediary-derived personas

29. **0.50/#3/2013**: A conceptual framework for delivering cost effective business intelligence solutions as a service

30. **0.50/#3/2013**: Crowd computing: a literature review and definition

https://doi.org/10.18489/sacj.v31i2.788
31. 0.50/#3/2013: First year student performance in a test for computational thinking

32. 0.50/#2/2015: SPLicing TABASCO: Custom-Tailored Software Product Line Variants from Taxonomy-Based Toolkits

33. 0.50/#1/2017: Agile and hackathons: a case study of emergent practices at the FNB codefest

34. 0.50/#1/2017: Challenges to the successful implementation of social media in a South African municipality

35. 0.50/#1/2017: Investigating the effects various compilers have on the electromagnetic signature of a cryptographic executable

36. 0.50/#1/2017: Morphological cluster induction of Bantu words using a weighted similarity measure

37. 0.45/#5/2008: Agile systems development and stakeholder satisfaction: a South African empirical study

38. 0.45/#5/2008: An application of genetic algorithms to the school timetabling problem


40. 0.44/#4/2010: Is tilt interaction better than keypad interaction for mobile map-based applications?

41. 0.43/#3/2012: Effects of application type on the choice of interaction modality in IVR systems

42. 0.43/#3/2012: Hardware and software for skateboard trick visualisation on a mobile phone

43. 0.43/#3/2012: Moses: method for selecting senior mobile phones: supporting design & choice for the elderly

44. 0.42/#5/2007: An ontology-based, multi-modal platform for the inclusion of marginalized rural communities into the knowledge society

45. 0.40/#4/2009: A lightweight methodology to improve web accessibility

46. 0.40/#4/2009: The adoption of open source software in business models: a Red Hat and IBM case study

47. 0.40/#4/2009: Towards an artificial neural network-based simulator for behavioural evolution in evolutionary robotics

48. 0.40/#2/2014: Abstracting and Narrating Novice Programs Using Regular Expressions

https://doi.org/10.18489/sacj.v31i2.788
49. 0.40/#2/2014: Employee perceptions of BYOD in South Africa: Employers are turning a blind eye?

50. 0.40/#2/2014: Intrinsic Relations between Data Science, Big Data, Business Analytics and Datafication

51. 0.40/#2/2014: Measuring Method Complexity of the Case Management Modeling and Notation (CMMN)

52. 0.38/#3/2011: A domain-specific language for URDAD based requirements elicitation

53. 0.38/#3/2011: Browser-based software for technology transfer

54. 0.38/#3/2011: Evaluating web conferencing tool effectiveness

55. 0.38/#3/2011: ICT career track awareness amongst ICT graduates

56. 0.36/#4/2008: An analysis of representations for hyper-heuristics for the uncapacitated examination timetabling problem in a genetic programming system

57. 0.36/#4/2008: Guidelines for secure software development

58. 0.36/#4/2008: Usability context analysis for virtual reality training in South African mines

59. 0.33/#4/2007: A probabilistic movement model for shortest path formation in virtual ant-like agents

60. 0.33/#3/2010: A mobile commerce application for rural economy development: a case study for Dwesa

61. 0.33/#3/2010: A study into the use of hyper-heuristics to solve the school timetabling problem

62. 0.33/#3/2010: An informed genetic algorithm for the high school timetabling problem

63. 0.33/#3/2010: Comparing and analyzing the computational complexity of FCA algorithms

64. 0.33/#3/2010: Design and evaluation of a multimodal interface for in-car communication systems

65. 0.33/#2/2013: Cooperating to buy shoes: an application of picking cycles in directed graphs

66. 0.33/#2/2013: Ease of use and usefulness of webinars in an open distance learning environment: an activity theory perspective

67. 0.33/#1/2016: Can I Have Your Attention, Please? An Empirical Investigation of Media Multitasking during University Lectures

https://doi.org/10.18489/sacj.v31i2.788
68. **0.33/#1/2016**: FINCHAN: A Grammar-based Tool for Automatic Comprehension of Financial Instant Messages

69. **0.33/#1/2016**: Persuasive Design for Behaviour Change Apps: Issues for Designers

70. **0.30/#3/2009**: GPU packet classification using OpenCL: a consideration of viable classification methods

71. **0.29/#2/2012**: An exploratory survey of design science research amongst South African computing scholars

72. **0.29/#2/2012**: How can usability contribute to user experience?: a study in the domain of e-commerce

73. **0.29/#2/2012**: The adoption of e-Learning in corporate training environments: an activity theory based overview

74. **0.29/#2/2012**: Towards a framework for decision making regarding IT adoption

75. **0.27/#3/2008**: An investigation into the implementation of open source software within the SA government: an emerging expansion model

76. **0.27/#3/2008**: Investigating the impact of the external environment on strategic information systems planning: a qualitative inquiry

77. **0.27/#3/2008**: Planning as model checking: the performance of ProB vs NuSMV

78. **0.25/#3/2007**: Assessment of a framework to compare software development methodologies

79. **0.25/#2/2011**: A sketch-based articulated figure animation tool

80. **0.25/#2/2011**: Enhancing identification mechanisms in UML class diagrams with meaningful keys

81. **0.25/#2/2011**: Issues of adoption: have e-learning management systems fulfilled their potential in developing countries?

82. **0.25/#2/2011**: Successful ICT service delivery: enablers, inhibitors and hygiene factors: a service provider perspective

83. **0.25/#2/2011**: The influence of gender and internet experience on the acceptability of smell as interaction modality

84. **0.25/#2/2011**: Towards a framework for the adoption of business intelligence in public sector organisations: the case of South Africa

https://doi.org/10.18489/sacj.v31i2.788
85. **0.25/#1/2015**: CAPP: A C++ Aspect-Oriented Based Framework for Parallel Programming with OpenCL

86. **0.25/#1/2015**: Contextualizing BYOD in SMEs in developing countries

87. **0.25/#1/2015**: Contributor Motivation in Online Knowledge Sharing Communities with Reputation Management Systems

88. **0.25/#1/2015**: Developing a Conceptual Model for Facilitating the Issuing of Digital Badges in a Resource Constrained Environment

89. **0.25/#1/2015**: On the prioritization of data quality challenges in e-health systems in South Africa

90. **0.25/#1/2015**: SpotMal: A hybrid malware detection framework with privacy protection for BYOD

91. **0.25/#1/2015**: The User Experience Landscape of South Africa

92. **0.25/#1/2015**: Toward a framework for ontology modularity

93. **0.25/#1/2015**: Use of the Alice visual environment in teaching and learning object-oriented programming

94. **0.25/#1/2015**: Using Business Intelligence to Support Strategic Sustainability Information Management

95. **0.22/#2/2010**: Deriving a digraph isomorphism for digraph compliance measurement

96. **0.22/#2/2010**: Determining requirements within an indigenous knowledge system of African rural communities

97. **0.22/#2/2010**: Investigating the feasibility factors of synthetic sign language visualization methods on mobile phones

98. **0.22/#2/2010**: Parallel packet classification using GPU co-processors

99. **0.22/#2/2010**: The complementary role of two evaluation methods in the usability and accessibility evaluation of a non-standard system

100. **0.20/#2/2009**: A framework and methodology for knowledge management system implementation

101. **0.20/#2/2009**: An analysis of the international discourse about women in information technology

102. **0.20/#2/2009**: An evaluation of techniques for image searching and browsing on mobile devices
103. **0.20/#2/2009**: The revised developmental approach to the uncapacitated examination timetabling problem

104. **0.20/#1/2014**: An Ant-based Mobile Agent Approach to Resource Discovery in Grid Computing

105. **0.20/#1/2014**: Applying design-based research for developing virtual reality training in the South African mining industry

106. **0.20/#1/2014**: Mobile-Health Tool Use and Community Health Worker Performance in the Kenyan Context: A Task-Technology Fit Perspective

107. **0.20/#1/2014**: The Effects of Mother Tongue and Text Difficulty on Gaze Behaviour while Reading Afrikaans Text

108. **0.18/#2/2008**: A model for eliciting user requirements specific to South African rural areas

109. **0.18/#2/2008**: Comparison of the effects of professional and pedagogical program development environments on novice programmers

110. **0.18/#2/2008**: Using adaptive interfaces to improve mobile map-based visualisation

111. **0.17/#2/2007**: A model to assess the benefit value of knowledge management in an IT service provider environment

112. **0.17/#2/2007**: Agile software development: a contemporary philosophical perspective

113. **0.17/#2/2007**: Constraint-based conversion of fiction text to a time-based graphical representation

114. **0.17/#2/2007**: Criteria used in selecting effective requirements elicitation procedures

115. **0.17/#1/2013**: A new mapping function to improve the accuracy of a video-based eye tracker

116. **0.17/#1/2013**: Categorizing the provision of mobile centric information access and interaction for higher educational institutions

117. **0.17/#1/2013**: Effectiveness with EEG BCIs: exposure to traditional input methods as a factor of performance

118. **0.17/#1/2013**: Evaluating the acceleration of typical scientific problems on the GPU

119. **0.17/#1/2013**: Evaluating performance of long short-term memory recurrent neural networks on intrusion detection data

120. **0.17/#1/2013**: Numerical verification of bidirectional reflectance distribution functions for physical plausibility

https://doi.org/10.18489/sacj.v31i2.788
121. 0.17/#1/2013: Personally identifiable information leakage through online social networks
122. 0.17/#1/2013: The usability of collaborative tools: application to business process modelling
123. 0.17/#1/2013: Using machine learning to predict the driving context whilst driving
124. 0.14/#1/2012: A longitudinal analysis of ICT project success
125. 0.14/#1/2012: ABox abduction in ALC using a DL tableau
126. 0.14/#1/2012: Are mobile in-car communication systems feasible? a usability study
127. 0.14/#1/2012: Automated coverage calculation and test case generation
128. 0.14/#1/2012: CaptureFoundry: a GPU accelerated packet capture analysis tool
129. 0.14/#1/2012: Changing career choice factors as the economic environment changes
130. 0.14/#1/2012: Internet use and expatriate adjustment: understanding the degree of isolation experienced in kingdom of Saudi Arabia
131. 0.14/#1/2012: Monte-Carlo tree search parallelisation for computer go
132. 0.14/#1/2012: Performance assessment of dead-zone single keyword pattern matching
133. 0.14/#1/2012: What is software architecture?
134. 0.13/#1/2011: Adoption of Green IS in South Africa: an exploratory study
135. 0.13/#1/2011: Contextual factors influencing strategic information systems plan implementation
136. 0.13/#1/2011: Day labour mobile electronic data capture and browsing system
137. 0.13/#1/2011: Empirical comparison of four classifier fusion strategies for positive-versus-negative ensembles
138. 0.13/#1/2011: Proposed stages of a rural ICT comprehensive evaluation framework in ICT for rural development projects
139. 0.13/#1/2011: The accreditation of ICT degree programs in South Africa
140. 0.13/#1/2011: The impact of sensor fusion on tilt interaction in a mobile map-based application
141. 0.13/#1/2011: Using information visualization to support web service discovery
142. 0.13/#1/2011: Using mass video notification methods to assist deaf people
143. 0.13/#1/2011: Using N-grams to identify mathematical topics in MXit lingo

https://doi.org/10.18489/sacj.v31i2.788
144. 0.11/#1/2010: A four-way framework for validating a specification
145. 0.11/#1/2010: A South African perspective of the international discourse about women in information technology
146. 0.11/#1/2010: A virtual VLSI architecture for computer hardware evolution
147. 0.11/#1/2010: An intelligent framework for mobile devices
148. 0.11/#1/2010: A-POInter: an adaptive mobile tourist guide
149. 0.11/#1/2010: Integrated security framework for low cost RFID tags
150. 0.11/#1/2010: IT moderation going green
151. 0.11/#1/2010: Motivation and learning preferences of information technology learners in South African secondary schools
152. 0.11/#1/2010: Ontology goes postmodern in ICT
153. 0.11/#1/2010: Panopticon: a scalable monitoring system
154. 0.11/#1/2010: PH2: an hadoop-based framework for mining structural properties from the PDB database
155. 0.11/#1/2010: Quality metrics for mashups
156. 0.11/#1/2010: Sweetening the medicine: educating users about information security by means of game play
158. 0.11/#1/2010: Toward a service creation framework: a case of intelligent semantic services
159. 0.10/#1/2009: A hybrid neural network and Minimax algorithm for zero-sum games
160. 0.09/#1/2008: Contemplating systematic software reuse in a project-centric company
161. 0.09/#1/2008: Designing technology for young children: what we can learn from theories of cognitive development
162. 0.09/#1/2008: Development and implementation of an institutional repository within a science, engineering and technology (SET) environment
163. 0.09/#1/2008: Do online buying behaviour and attitudes to web personalization vary by age group?

https://doi.org/10.18489/sacj.v31i2.788
164. **0.09/#1/2008**: Java Micro Edition and Adobe Flash Lite for arcade-style mobile phone game development: a comparative study

165. **0.09/#1/2008**: Maintaining customer profiles in an e-commerce environment

166. **0.09/#1/2008**: Usability evaluation of the South African National Accessibility Portal interactive voice response system

167. **0.09/#1/2008**: Using mobile preference-based searching to improve tourism decision support

168. **0.08/#1/2007**: Supporting CS1 with a program beacon recognition tool

169. **0.08/#1/2007**: Generic process model structures: towards a standard notation for abstract representations

170. **0.08/#1/2007**: KernTune: self-tuning Linux kernel performance using support vector machines

Just by chance this list of positively cited papers currently has the ‘round’ number of 170 elements (if I have not forgotten anything from what I retrieved from the ACM-DL).

For further illustration I plotted each of these 170 paper’s two-dimensional \((r, c)\) value in Figure 1: some ‘clustering’ is clearly visible. The different colours in Figure 1 represent the different event years (2007–2017; created with the MS PowerPoint software package).
It is up to your readers to infer their own conclusions (e.g.: what are ‘attractive’ research topics?) by their own methods (e.g.: ‘Wordle’ word frequency analysis) from the information which I have provided in this letter as a service to the SACJ/SAICSIT community. Most concerning is perhaps what is invisible in this letter, namely the large number of SAICSIT papers for which the ACM-DL says: “0 citations” —which includes all SAICSIT conferences before the year 2007, and so far also SAICSIT’2018— in spite of the ACM-DL’s global visibility and accessibility (though, as mentioned above, more citations are likely to be found with help of other tools such as ‘Google Scholar’).

With kind regards: Stefan Gruner