

**INDEX TO THE JOURNAL OF THE SOUTH AFRICAN
INSTITUTION OF CIVIL ENGINEERING
ISSN 1021-2019 (Volume 64) 2022**

<u>Title</u>	<u>Author(s)</u>	<u>Journal Number</u> <u>Page Numbers</u> <u>File Number</u> <u>DOI Number</u>
ARTICLES		
A mathematical model for determining engineering soil classifications from pedological data Keywords: pedology, soil classification, geotechnical engineering, models	G C Fanourakis	No 1, pp 2–11 Paper 1286 http://dx.doi.org/10.17159/2309-8775/2022/v64n1a1
Utilising Land Type data for geotechnical investigations Keywords: land type survey, soil surveys, pedology, soil mapping, geotechnical investigations	G C Fanourakis	No 1, pp 12–24 Paper 1311 http://dx.doi.org/10.17159/2309-8775/2022/v64n1a2
Incorporation of additional information into the South African Wind Load Formulation Keywords: wind loading, structural reliability, wind engineering	F P Bakker N de Koker C Viljoen	No 1, pp 25–36 Paper 1266 http://dx.doi.org/10.17159/2309-8775/2022/v64n1a3
Assessment of local sewage sludge ash as a supplementary cementitious material – effects of incineration temperature and cooling rate of the ash Keywords: sewage sludge ash, pyro-processing, pozzolanicity, mortar strength, workability	R Juala Y Ballim J Mulopo	No 1, pp 37–47 Paper 1315 http://dx.doi.org/10.17159/2309-8775/2022/v64n1a4

<u>Title</u>	<u>Author(s)</u>	<u>Journal Number</u> <u>Page Numbers</u> <u>File Number</u> <u>DOI Number</u>
<p>Evaluation of the seismic response of a reinforced concrete footing with stub column to increasing peak ground acceleration using pseudo-dynamic experimentation</p> <p>Keywords: pseudo-dynamic experimentation, reinforced concrete stub column, seismic performance evaluation, hysteretic curves, Newmark's implicit numerical method, El Centro earthquake</p>	<p>S M Hossell C P Roth</p>	<p>No 1, pp 48–62</p> <p>Paper 0814</p> <p>http://dx.doi.org/10.17159/2309-8775/2022/v64n1a5</p>
<p>What leads to severe multi-vehicle crashes on mountainous expressways in Western China?</p> <p>Keywords: multiple vehicle crash, mountain expressway, risk factor, partially constrained generalised ordered logit model, elasticity analysis</p>	<p>Y Wang L Wang L Sun</p>	<p>No 1, pp 63–70</p> <p>Paper 1174</p> <p>http://dx.doi.org/10.17159/2309-8775/2022/v64n1a6</p>
<p>Light-coloured concrete surfacing for urban heat-island mitigation in Southern Africa</p> <p>Keywords: Portland cement concrete, thermal performance, heat island, thermal mass</p>	<p>T P Mlilwana E P Kearsley</p>	<p>No 2, pp 2–12</p> <p>Paper 0862</p> <p>http://dx.doi.org/10.17159/2309-8775/2022/v64n2a1</p>
<p>Geotechnical properties of Cape Flats sands</p> <p>Keywords: Cape Flats, sands, geotechnical characterisation</p>	<p>M Fouché P W Day</p>	<p>No 2, pp 13–27</p> <p>Paper 1372</p> <p>http://dx.doi.org/10.17159/2309-8775/2022/v64n2a2</p>
<p>An assessment of a practical implementation of the deemed-to-satisfy durability design and specification approach in the Swakopmund–Walvis Bay Freeway upgrade project in Namibia</p> <p>Keywords: corrosion, marine exposure, durability index, service life, chloride ingress</p>	<p>M Otieno K Walter</p>	<p>No 2, pp 28–37</p> <p>Paper 1357</p> <p>http://dx.doi.org/10.17159/2309-8775/2022/v64n2a3</p>

<u>Title</u>	<u>Author(s)</u>	<u>Journal Number</u> <u>Page Numbers</u> <u>File Number</u> <u>DOI Number</u>
<p>Investigating the behaviour factor and seismic response of structural wall systems in low- to medium-rise buildings when soil-structure interaction is considered</p> <p>Keywords: seismic response, soil-structure interaction, structural wall system, bahaviour factor, damping, ductility</p>	<p>P W W Visagie T N Haas G P A G van Zijl</p>	<p>No 2, pp 38–55</p> <p>Paper 1265</p> <p>http://dx.doi.org/10.17159/2309-8775/2022/v64n2a4</p>
<p>An experimental study of the mechanical behaviour of squat shear walls built with precast concrete two-way hollow slabs</p> <p>Keywords: shear wall, precast concrete hollow slab (PCHS), vertical joint, vertical shear crack, load-bearing capacity</p>	<p>P Luo J Liu</p>	<p>No 2, pp 56–66</p> <p>Paper 1044</p> <p>http://dx.doi.org/10.17159/2309-8775/2022/v64n2a5</p>
<p>Optimising sustainable mobility: A performance assessment of non-motorised transport infrastructure in Johannesburg, South Africa</p> <p>Keywords: non-motorised transport, infrastructure, South Africa, sustainable transportation, feasibility studies</p>	<p>C S Okoro K Lawani</p>	<p>No 2, pp 67–76</p> <p>Paper 1188</p> <p>http://dx.doi.org/10.17159/2309-8775/2022/v64n2a6</p>
<p>Variability of oxygen permeability index values in concrete construction: A proposed approach for parameter margins to guide concrete mixture design</p> <p>Keywords: durability, durability index tests, variability, quality control, margins</p>	<p>G W Nganga M G Alexander Y Ballim</p>	<p>No 3, pp 2–9</p> <p>Paper 1313</p> <p>http://dx.doi.org/10.17159/2309-8775/2022/v64n3a1</p>
<p>Target reliability for new road bridges in South Africa</p> <p>Keywords: target reliability, bridges, cost optimisation, structural redundancy, societal risk</p>	<p>A C Way N de Koker C Viljoen</p>	<p>No 3, pp 10–19</p> <p>Paper 1388</p> <p>http://dx.doi.org/10.17159/2309-8775/2022/v64n3a2</p>

<u>Title</u>	<u>Author(s)</u>	<u>Journal Number</u> <u>Page Numbers</u> <u>File Number</u> <u>DOI Number</u>
<p>A stochastic, daily time-step model for conjunctive water use at local authority level</p> <p>Keywords: water resource management, conjunctive use, stochastic streamflow modelling, daily disaggregation, reliability of supply</p>	<p>J A du Plessis E G Braune</p>	<p>No 3, pp 20–31</p> <p>Paper 1314</p> <p>http://dx.doi.org/10.17159/2309-8775/2022/v64n3a3</p>
<p>Quantifying MyCiTi supply usage using Big Data and Agent-Based Modelling</p> <p>Keywords: MyCiTi, Agent-Based Modelling (ABM), MATSim, Big Data, transit supply estimation</p>	<p>D Willenberg M Zuidgeest E Beukes</p>	<p>No 3, pp 32–41</p> <p>Paper 0162</p> <p>http://dx.doi.org/10.17159/2309-8775/2022/v64n3a4</p>
<p>A pragmatic derivative method to assess the condition of a public health built infrastructure portfolio</p> <p>Keywords: public health, report card, SAICE, CSIR, infrastructure condition</p>	<p>P de Jager K Wall</p>	<p>No 3, pp 42–49</p> <p>Paper 1303</p> <p>http://dx.doi.org/10.17159/2309-8775/2022/v64n3a5</p>
<p>Enhanced methodology for visual bridge inspections in South Africa</p> <p>Keywords: visual bridge inspections, 4IR technology, unmanned aerial vehicles (UAVs), point cloud models</p>	<p>L Kemp W J vd M Steyn M P Roux</p>	<p>No 3, pp 50–57</p> <p>Paper 1439</p> <p>http://dx.doi.org/10.17159/2309-8775/2022/v64n3a6</p>
<p>Experimental study and classification of natural zeolite pozzolan for cement in South Africa</p> <p>Keywords: cement extender, pozzolan, natural zeolite, durability, drying shrinkage, alkali-silica reaction, sulphate attack, supplementary cementitious materials</p>	<p>F Singu S O Ekolu A Naghizadeh H A Quainoo</p>	<p>No 4, pp 2–15</p> <p>Paper 1443</p> <p>http://dx.doi.org/10.17159/2309-8775/2022/v64n4a1</p>

<u>Title</u>	<u>Author(s)</u>	<u>Journal Number</u> <u>Page Numbers</u> <u>File Number</u> <u>DOI Number</u>
<p>Application of a modern laser technique to evaluate the performance of recycled railway ballast</p> <p>Keywords: railway ballast, shape characteristics, settlement, modern laser, triaxial</p>	<p>G M Mvelase J K Anochie-Boateng P J Gräbe</p>	<p>No 4, pp 16–28</p> <p>Paper 1361</p> <p>http://dx.doi.org/10.17159/2309-8775/2022/v64n4a2</p>
<p>A proposal to facilitate BIM implementation across the South African construction industry</p> <p>Keywords: Building Information Modelling (BIM), BIM implementation strategies, BIM adoption, digital construction, construction management</p>	<p>S Calitz J A Wium</p>	<p>No 4, pp 29–37</p> <p>Paper 1450</p> <p>http://dx.doi.org/10.17159/2309-8775/2022/v64n4a3</p>
<p>Traffic safety and the rural road environment: Assessing the impact of combined roadway conditions on crash incidence</p> <p>Keywords: crash prediction models, road crashes, severe road crashes, road classifications, Namibia</p>	<p>R Ambunda M Sinclair</p>	<p>No 4, pp 38–48</p> <p>Paper 1383</p> <p>http://dx.doi.org/10.17159/2309-8775/2022/v64n4a4</p>