

Hussein Suleman

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Education

Ph.D. in Computer Science

Date: December 2002

Topic: Open Digital Libraries

Advisor: Dr Edward A. Fox

Virginia Polytechnic Institute and State University (Blacksburg, Virginia, USA)

M.Sc. in Computer Science

Date: May 1997

Topic: Genetic Programming in Mathematica

Supervisor: Dr Miloslav Hajek

University of Durban-Westville (Durban, Kwazulu-Natal, South Africa)

B.Sc. Honours *cum laude*

Date: May 1995

Specialisation: Computer Science

University of Durban-Westville (Durban, Kwazulu-Natal, South Africa)

B.Sc. *cum laude*

Date: May 1994

Majors: Computer Science and Mathematics

University of Durban-Westville (Durban, Kwazulu-Natal, South Africa)

Selected Awards

Fulbright Scholarship

Period: August 1997 - July 1999

Awarded by US Government for graduate study in the USA

Senate Silver Medal

Date: May 1995

Awarded by University of Durban-Westville in recognition of outstanding performance as an Honours degree student

FRD Honours Programme Scholarship

Period: January-December 1994

Awarded by Foundation for Research Development's (FRD) University Development Programme to encourage post-graduate education

Faculty Bronze Medal (Faculty of Science)

Date: May 1994

Awarded by University of Durban-Westville in recognition of outstanding performance as an undergraduate student

Employment Overview

January 2016 – present:

Employer: University of Cape Town

Position: Head of Department: Computer Science

January 2003 – present:

Employer: University of Cape Town

Position: Senior Lecturer / Associate Professor / Professor

May 1999 – December 2002:

Employer: Virginia Tech

Position: Graduate Research Assistant / Instructor

August 1997 – April 1999:

Unemployed (Fulbright scholarship did not allow employment)

January 1996 – June 1997:

Employer: University of Durban-Westville

Position: Associate Lecturer

Teaching Experience

Introduction to Problem Solving and Programming (sections of CSC1015/CSC1016), Data Structures and Unix (CSC2001), Computer Architecture (CSC2002), Operating Systems (CSC3002), XML and Information Retrieval (CSC303), Comparative Programming Languages (CSC304), Compilers – Code Generation (CSC305/CSC3005/CSC3003/CSC4000), Introduction to Digital Libraries (CSC4000), Internet Interoperability (CSC4000), ICT for Development (CSC4000), Information Retrieval (CSC4000/CSC5001)

Period: 2003-present

Employer: Department of Computer Science at University of Cape Town

Introduction to Data Structures and Software Engineering (CS1704), Data Structures and File Processing (CS2604)

Period: July-August 2000, July-August 1999

Employer: Department of Computer Science at Virginia Tech

Data Structures (2nd year), Object Oriented Programming in C++ (3rd year), Assembly Language (2nd year)

Period: January 1996-June 1997

Employer: Department of Computer Science at University of Durban-Westville

Selected Research Projects/Grants

WUN: Open Cultural Heritage Scholarship

Period: 2017

Funding Agency: UCT / World University Network

Role: Partner in project. This project involved networking related to cultural heritage and open scholarship, with partners from diverse groups (computer scientists, archaeologists, museums, architects, etc.), to encourage cross-fertilisation of ideas.

Information Retrieval for Development

Period: January 2017-December 2019

Funding Agency: NRF

Role: Principal Investigator. This project is about the development of algorithms, corpora and systems that have the explicit goal of supporting human development; sub-projects include searching in African and marginalised languages, encouraging good governance, handling unemployment and increasing the use of local languages.

WUN: Web Observatory Project

Period: 2016

Funding Agency: UCT / World University Network

Role: Partner in project. This project was on the development of nodes around the world to support experimental work on the Web in different contexts/locations.

Information Retrieval in isiXhosa

Period: January 2014-December 2016

Funding Agency: NRF

Role: Principal Investigator. This project is about the development of algorithms, corpora and systems for information retrieval in African languages, specifically isiXhosa.

Telecommunications for Development

Period: January 2014-December 2017

Funding Agency: THRIP (NRF/DTI)/Telkom/Telesciences

Role: Principal Investigator. This is a joint industry-funded project with Edwin Blake, Gary Marsden, Antoine Bagula, Hanh Le and Melissa Densmore to investigate various technological solutions that addresses human and socio-economic development based on telecommunications infrastructure and applications thereof. This is core funding for the Telkom Centre of Excellence at UCT.

Incentive grants associated with NRF C1 rating

Period: 2013-2018

Funding Agency: NRF

Incentive grants associated with NRF Y1 rating

Period: 2009-2012

Funding Agency: NRF

Summer Undergraduate Research Experience

Period: January 2011-December 2013

Funding Agency: UCT Vice Chancellor's Fund

Role: Co-Principal Investigator (with Michelle Kuttel and James Gain). This is a developmental project to introduce promising Black and female students to research during their undergraduate degrees, thereby increasing the pool of interested students from minority groups in Computer Science in later years.

High Performance Digital Libraries on-Demand

Period: January 2008-December 2010

Funding Agency: NRF

Role: Principal Investigator. This project is about the design of digital library systems that scale in terms of services and data collections using on-demand computing such as utility computing and volunteer computing. The project also includes appropriate improvements in the usability of digital library software systems.

Scalable Information Management

Period: January 2006-December 2007

Funding Agency: NRF

Role: Principal Investigator. This project is about various ways in which scalability can be introduced into classical information management solutions, including interoperability, information retrieval and repository architectures.

Refactoring of Web-based Digital Library Components for Scalability in Computing Clusters

Period: January 2004-December 2006

Funding Agency: NRF THRIP/Telkom/Siemens (CoE)

Role: Principal Investigator. This project is investigating how Web-based digital library systems can be (re)designed to work on component farms as a high-level abstraction of computing clusters.

Flexible Packaging Methodologies for Rapid Deployment of Customisable Component-based Digital Libraries

Period: January 2003-December 2005

Funding Agency: NRF THRIP/Telkom/Siemens (CoE)

Role: Principal Investigator. The aim of this effort is to determine how, once configured through visual mechanisms, the individual components of a larger Web-based system can be shepherded into packages for redistribution.

Flexible Digital Libraries

Period: January 2003-December 2005

Funding Agency: NRF

Role: Principal Investigator. The FDL project is investigating techniques of managing suites of components that comprise generic component-based digital libraries, largely through the mechanism of visual design interfaces.

AmericanSouth.Org

Period: May-August 2002

Employer: Digital Library Research Laboratory at Virginia Tech, in collaboration with SOLINET and Emory University

Funding Agency: Mellon Foundation

Role: Research Assistant. Developed components and component frameworks for a distributed digital library of resources related to history and culture of the American South. Served in a consultative role to central site at Emory University and its partner institutions to solve system interoperability problems and help plan the organisation and sharing of data using open standards.

A Digital Library of Reusable Science and Math Resources for Undergraduate Education

Period: August 2000 – May 2002, August 2002 – current

Employer: Digital Library Research Laboratory at Virginia Tech, in collaboration with Eduprise and UNC-Wilmington

Funding Agency: National Science Foundation (USA)

Role: Research Assistant. Provided ongoing developmental and maintenance support for the Computer Science Teaching Center (<http://www.cstc.org>), a digital library of peer-reviewed teaching resources. Added interoperability support to the system to interface with peer systems at Eduprise/UNC-Wilmington.

Web Characterization Repository

Period: May-June 1999, August 1999 – June 2000

Employer: Network Research Group at Virginia Tech, in collaboration with the W3C's Web Characterization Activity working group

Funding Agency: National Science Foundation (USA)

Role: Research Assistant. Designed, developed and maintained a digital library of publications, tools, and data sets related to web characterization (<http://repository.cs.vt.edu>). Developed procedures and tools to support structural validation of log files.

Other Related Work Experience

Coordinator of Digital Libraries Laboratory

Period: January 2008 – present

Employer: Department of Computer Science, University of Cape Town

Role: Coordinated postgraduate student activities and facilities, marketing of research related to research laboratory, promoting and obtaining funding for lab-related collaborative ventures.

Coordinator of Advanced Information Management Research Laboratory

Period: July 2003 – July 2006

Employer: Department of Computer Science, University of Cape Town

Role: Coordinated postgraduate student activities and facilities, marketing of research related to research laboratory, promoting and obtaining funding for lab-related collaborative ventures.

Principal Tutor / Laboratory Assistant

Period: January 1995 – December 1995

Employer: Department of Computer Science, University of Durban-Westville

Role: Supervised tutors/graders and provided administrative support for undergraduate students' laboratory work. Maintained computer laboratory and network. Actively advocated Internet usage among students: acquired, installed and administered the first Internet servers in the department; set up the first Internet firewall at the university to get students online; and, created the first departmental website.

Tutor

Period: February 1993 – November 1994

Employer: Department of Computer Science, University of Durban-Westville

Role: Graded assignments and programming projects for 1st and 3rd year students.

Current Research Interests

- ICT for Development
- Digital libraries / networked information systems
- Internet standards, application-level protocols and interoperability
- Information retrieval
- Architecture of learning management systems
- Cluster computing for Web-based systems
- High performance computing
- Computer Science education and Educational Technology

Postgraduate Student Supervision / Examination

Masters and PhD Current:

Jecton Anyango – PhD (2018-)
Catherine Chavula – PhD (2015-)
Jackson Moji – MSc (2017-)
Khanyisa Mtombeni – MPhil (2019-)
Selvas Mwanza - PhD (2016-)
Jivashi Nagar – PhD (2016-)
Kinsley Ndenge – MPhil (2018-)
Sunkanmi Olaleye – MSc (2014-2015)
Jorgina Paihama – PhD (2014-2016)
Soham Singh – MSc (2019-)
Joseph Telemala – PhD (2018-)

Masters and PhD Completed (2012-2020):

Mohammed Mustafa Ali – PhD (awarded 2013)
Haji Ali Haji – PhD (awarded 2017)
Maryam Al-Mukhaylid - MSc (awarded 2017)
Sarah Brittan – MSc (awarded 2018)
Josiah Chavula – PhD (awarded 2017)
Deena Chetty – M.Phil (awarded 2014)
Devan Govender – M.Phil (awarded 2018)
Anesh Kalan – M. Phil (awarded 2016)
Michelle Katz – MSc (awarded 2012)
Mohato Lekena – MSc (awarded 2015)
Mushashu Lumpa – MSc (awarded 2020)
King'ori Maina – MSc (awarded 2017)
Jessica Mantel - M.Phil (awarded 2017)
Chao Mbogo – PhD (awarded 2015)
Mvurya Mgala – PhD (awarded 2016)
Morebodi Modise - MSc (awarded 2018)
Ngoni Munyaradzi – MSc (awarded 2013)
Sinini Ncube – PhD (awarded 2020)
Marwan Nour – MSc (awarded 2012)
Ayodeji Olojede – MSc (awarded 2016)
Muammar Omar – MSc (awarded 2012)
Sean Packham – MSc (awarded 2016)
Jorgina Paihama – MSc (awarded 2012)
Lighton Phiri – MSc (awarded 2013), PhD (awarded 2018)
Lebeko Poulo – MSc (awarded 2013)
Janine Ritchie – M.Phil (awarded 2019)
Grace Ssekakubo – PhD (awarded 2015)
Kieran Sharpey-Schafer – MSc (awarded 2012)
Kyle Williams – MSc (awarded 2012)

Masters and PhD (prior to 2012):

Hisham Abdalla - PhD (2007-2010)
Ashwinkoomarsing Balluck – M.Phil (awarded 2007)
Linda Eyambe – MSc (awarded 2005)
Masha du Toit – M.Phil (awarded 2007)
Nils Koerber – MSc (2007-2009)
Siyabonga Mhlongo – MSc (awarded 2006)
Themba Munalula – M.Phil (awarded 2008)
Ndapandula Nakashole – MSc (awarded 2009)
Marius Nel – M.Phil (awarded 2011)
Mongezi Ngindana – PhD (2006-2011)
Mayumbo Nyirenda – MSc (awarded 2008)
Christopher Parker – MSc (awarded 2009)
Stefano Rivera – MSc (2009-2011)
Mpho Sello – M.Phil (awarded 2007)
Kathryn van Niekerk – M.Phil (awarded 2011)

84 Honours student projects supervised in the period 2003-2018.

Details are at: <http://www.husseinsspace.com/research/students/>

External examiner for approximately 16 Masters and 3 PhD dissertations since 2003, from the following universities:

Central University of Technology, South Africa
University of Cape Town, South Africa
University of Kwazulu-Natal, South Africa
University of Western Cape, South Africa
University of Witwatersrand, South Africa
University of Zululand, South Africa
Nanyang Technical University, Singapore
Waikato University, New Zealand

Selected Current Collaborators

Carolyn Hamilton / UCT

We are currently working towards a new model and software system for the Five Hundred Year Archive project.

Pippa Skotnes / CCA, UCT Fine Arts

We work together on the development of the Bleek and Lloyd Collection, one of the key digital library collections of UCT.

Hasso Plattner Institute, Potsdam, Germany

We collaborate on problems related to ICT for development through annual research workshops and staff exchanges.

British Library, UK

I manage their electronic thesis metadata collection data provider.

Networked Digital Library of Theses and Dissertations, (registered in USA)

At UCT, we run a union collection of metadata for all universities around the world – this supports our research into efficient management of very large collections of metadata.

Papers and Publications

Conference Papers

- Jivashi Nagar and Hussein Suleman (2019) Using Signal processing to Investigate User Web Search Behaviour on Topics of Interest with Multiple Periodicities, Proceedings of Asia-Pacific Library and Information Education and Practice 2019 (A-LIEP), 4-7 November 2019, Kuala Lumpur, Malaysia. Available: <http://pubs.cs.uct.ac.za/id/eprint/1332/>
- Mushashu Mwansa Lumpa and Hussein Suleman (2019) Investigating the feasibility of digital repositories in private clouds, Proceedings of 21st International Conference on Asia-Pacific Digital Libraries (ICADL), 4-7 November 2019, Springer. Available: <http://pubs.cs.uct.ac.za/id/eprint/1335/>
- Meluleki Dube and Hussein Suleman (2019) Language identification for South African Bantu languages Using Rank Order Statistics, Proceedings of 21st International Conference on Asia-Pacific Digital Libraries (ICADL), 4-7 November 2019, Kuala Lumpur, Malaysia, Springer. Available: <http://pubs.cs.uct.ac.za/id/eprint/1334/>
- Hussein Suleman (2019) Investigating the effectiveness of client-side search/browse without a network connection, Proceedings of 21st International Conference on Asia-Pacific Digital Libraries (ICADL), 4-7 November 2019, Kuala Lumpur, Malaysia, Springer. Available: <http://pubs.cs.uct.ac.za/id/eprint/1333/>
- Hussein Suleman (2019) Reflections on Design Principles for a Digital Repository in a Low Resource Environment, Proceedings of HistoInformatics Workshop 2019, 13 September 2019, Oslo, Norway, CEUR. Available: <http://pubs.cs.uct.ac.za/id/eprint/1331/>
- Telemala, Joseph and Hussein Suleman (2018) Exploring Information Needs of Swahili Speakers in Tanzania. In Proceedings 20th International Conference on Asia-Pacific Digital Libraries, Hamilton, New Zealand.
- Horscroft, Gina, Jivashi Nagar and Hussein Suleman (2018) Re-ranking the Search Results for Users with Time-periodic Intents. In Proceedings 2018 Annual Conference of the South African Institute of Computer Scientists and Information Technologists (SAICSIT), Port Elizabeth.
- Selvas Mwanza and Hussein Suleman (2017) Measuring Network Structure Metrics as a Proxy for Socio-political Activity in Social Media, to appear in Proceedings of Data Mining in Practice (DmiP), New Orleans, USA, 18-21 November 2017.
- Catherine Chavula and Hussein Suleman (2017) Morphological Cluster Induction of Bantu Words Using a Weighted Similarity Measure, to appear in Proceedings of SAICSIT 2017, 26-28 September, Bloemfontein, South Africa.
- Andreas von Holy, Alon Bresler, Osher Shuman, Catherine Chavula and Hussein Suleman (2017) BantuWeb: A Digital Library for Resource Scarce South African Languages, to appear in Proceedings of SAICSIT 2017, 26-28 September, Bloemfontein, South Africa.
- Jivashi Nagar and Hussein Suleman (2017) Investigating Per-user Time Sensitivity Of Search Topics, to appear in 1st Workshop on Temporal Dynamics in Digital Libraries, 18-21 September, Thessaloniki, Greece.
- Hussein Suleman, Stephan Jamieson and Maria Keet (2017) Testing Test-Driven Development, in Proceedings of SACLA 2017, 3-5 July, Magaliesburg, South Africa.

- Lighton Phiri and Hussein Suleman (2017) Peer Tutoring Orchestration: Streamlined Technology-driven Orchestration for Peer Tutoring, in Proceedings of CSEDU 2017, 21-23 April, Porto, Portugal.
- Simon Price, Wendy Hall, Graeme Earl, Thanassis Tiropanis, Ramine Tinati, Xin Wang, Eleonora Gandolfi, Jane Gatewood, Richard Boateng, David Denemark, Alexander Gröflin, Brian Loader, Maxine Schmidt, Marilyn Billings, Gerasimos Spanakis, Hussein Suleman, Kelvin Tsoi, Bridgette Wessels, Jie Xu, Mark H. Birkin (2017) Worldwide Universities Network (WUN) Web Observatory: Applying Lessons from the Web to Transform the Research Data Ecosystem, in WWW 2017 WOW: Workshop on Web Observatories, Social Machines and Decentralisation, 3-7 April, Perth, Australia.
- Sinini Ncube and Hussein Suleman (2017) Learner Satisfaction in eTextbook Co-reading: A comparative study of internal and external forums, in Proceedings of eLmL 2017, 19-23 March, Paris, France.
- Morebodi Modise and Hussein Suleman (2017) Mobile Search Interfaces for isiXhosa Speakers: A Comparison Between Voice and Text, in Proceedings of IEEE ICTAS 2017, 9-10 March, Durban, South Africa.
- Catherine Chavula and Hussein Suleman (2016) Assessing the Impact of Vocabulary Similarity on Multilingual Information Retrieval for Bantu Languages, in Proceedings of Forum for Information Retrieval (FIRE) 2016, 7-10 December, Kolkata, India. Available <http://pubs.cs.uct.ac.za/archive/00001161/>
- Josiah Chavula, Hussein Suleman and Melissa Densmore (2016) Using SDN and Reinforcement Learning for Traffic Engineering in UbuntuNet Alliance, in Proceedings of 3rd IEEE International Conference on Advances in Computing, Communication and Engineering (ICACCE 2016), Durban, South Africa. Available <http://pubs.cs.uct.ac.za/archive/00001162/>
- Lighton Phiri, Christoph Meinel and Hussein Suleman (2016) Ad hoc vs. Organised Orchestration: A Comparative Analysis of Technology-driven Orchestration Approaches, in Proceedings of 8th IEEE International Conference on Technology for Education (T4E 2016), 2-4 December, Mumbai, India. Available <http://pubs.cs.uct.ac.za/archive/00001128/>
- Selvas Mwanza and Hussein Suleman (2016) Measuring citizen participation in South African public debates using Twitter: An exploratory study, in Proceedings of Symposium on Information Management and Big Data (SimBig 2016), Cusco, Peru, September 2016. Available <http://pubs.cs.uct.ac.za/archive/00001163/>
- Gina Paihama and Hussein Suleman (2016) What happens when the untrained search for training information, to appear in Proceedings of Theory and Practice of Digital Libraries, Hannover, Germany, Springer LNCS, September 2016.
- Hussein Suleman (2016) Flipping Computer Architecture, to appear in Proceedings of SACLA 2016, Pretoria, Springer LNCS, 5-6 July 2016.
- Chao Mbogo, Edwin Blake and Hussein Suleman (2016) Design and Use of Static Scaffolding Techniques to Support Java Programming on a Mobile Phone, to appear in Proceedings of 21st Conference on Innovation and Technology in Computer Science Education (ITiCSE 2016), Arequipa, Peru, 11-13 July 2016.
- Balone Ndaba, Hussein Suleman, C. Maria Keet and Langa Khumalo (2016) The Effects of a Corpus on isiZulu Spellcheckers based on N-grams, in Proceedings of IST-Africa 2016, Durban, South Africa, 11-13 May 2016.

- Roslyn Sanby, Josiah Chavula and Hussein Suleman (2016) Efficient Topology Discovery for African NRENs, in Proceedings of IST-Africa 2016, Durban, South Africa, 11-13 May 2016.
- Chantal Yang, Josiah Chavula and Hussein Suleman (2016) A Topology Visualisation Tool for National Research and Education Networks in Africa, in Proceedings of IST-Africa 2016, Durban, South Africa, 11-13 May 2016.
- Josiah Chavula, Melissa Densmore, and Hussein Suleman (2015) Reducing Latency in African NRENs Using Performance-based LISP/SDN Traffic Engineering, in Proceedings of NetCom 2015, Sydney, Australia, 26-27 December 2015.
- Ayodeji Olojede and Hussein Suleman (2015) Investigating Image Processing Algorithms for Navigating Cultural Heritage Spaces using Mobile Devices, in Proceedings of 2015 Asian Digital Library Conference, Seoul, South Korea, 9-12 December 2015.
- Sunkanmi Olaleye and Hussein Suleman (2015) Xamobile: Usability Evaluation of Text Input Methods on Mobile Devices for Historical African Languages, in Proceedings of 2015 Asian Digital Library Conference, Seoul, South Korea, 9-12 December 2015.
- Job King'ori Maina and Hussein Suleman (2015) Enhancing Digital Heritage Archives Using Gamified Annotations, in Proceedings of 2015 Asian Digital Library Conference, Seoul, South Korea, 9-12 December 2015.
- Sean Packham and Hussein Suleman (2015) Crowdsourcing a Text Corpus is not a Game, in Proceedings of 2015 Asian Digital Library Conference, Seoul, South Korea, 9-12 December 2015.
- Nkosana Malumba, Katlego Moukangwe and Hussein Suleman (2015) AfriWeb: A Web Search Engine for a Marginalized Language, in Proceedings of 2015 Asian Digital Library Conference, Seoul, South Korea, 9-12 December 2015.
- Haji, Haji Ali, Hussein Suleman and Ulrike Rivett (2015) Evaluating the effectiveness of mobile graphic-based reminders to support treatment of tuberculosis patients. In Proceedings IDIA 2015, 8-9 November, Zanzibar, Tanzania.
- Haji, Haji Ali, Hussein Suleman and Ulrike Rivett (2015) Development of a Mobile Image-Based Reminder Application to Support Tuberculosis Treatment in Africa. In Proceedings 17th International Conference on Wireless Mobile Communication and Healthcare (ICWMCH 2015), 9(8), pages 522-529, Paris, France.
- Mohammed Mustafa and Hussein Suleman (2015) Mixed Language Arabic-English Information Retrieval, in Proceedings of 16th International Conference on Intelligent Text Processing and Computational Linguistics (CICLING 2015), pp. 427-447, Cairo, Egypt, 14-20 April 2015, Springer.
- Chao Mbogo, Edwin Blake and Hussein Suleman (2015) Scaffolding Java programming on a Mobile Phone for Novice Learners, in Proceedings of Mobile Learning 2015, Madeira, Portugal, 14-16 March 2015.
- Josiah Chavula, Nick Feamster, Antoine B. Bagula, Hussein Suleman (2014) Quantifying the Effects of Circuitous Routes on the Latency of Intra-Africa Internet Traffic: A Study of Research and Education Networks, in Proceedings of AFRICOMM 2014, Kampala, Uganda, pp. 64-73.

- Haji Ali Haji, Hussein Suleman, Ulrike Rivett (2014) Developing Mobile Graphic Reminders for Reinforcing Compliance in Tuberculosis Treatment in Africa, in Proceedings of the first International Conference on the use of Mobile Information and Communication Technology (ICT) in Africa -- UMICTA 2014, Stellenbosch, ISBN: 978-0-7972-1533-7
- Sinini Ncube & Suleman, H. (2014). Complementing formal learning with mobile technology outside the classroom. In proceedings of International Conference on Interactive Mobile Communication Technologies and Learning (IMCL 2014), Thessaloniki, Greece, 13-14 November 2014.
- Lebeko Poulo, Lighton Phiri & Suleman, H. (2014). Fine-grained Scalability of Digital Library Services in the Cloud. In Matthee, Machdel and Helene Gelderblom, Eds. Proceedings 2014 South African Institute for Computer Scientists and Information Technologists, Centurion, South Africa. Available <http://pubs.cs.uct.ac.za/archive/00000963/>
- Ssekakubo, Grace, Hussein Suleman and Gary Marsden (2014) A Streamlined Mobile User-Interface for Improved Access to LMS Services, eLmL 2014, The Sixth International Conference on Mobile, Hybrid, and On-line Learning, Barcelona, Spain, 23-27 March 2014, IARIA.
- Haji Ali Haji, Hussein Suleman, Ulrike Rivett (2014) Mobile Graphic-Based Communication: Investigating Reminder Notifications to Support Tuberculosis Treatment in Africa. HIS 2014: 204-211
- Mbogo, Chao , Edwin Blake and Hussein Suleman (2014) Initial Evaluation of a Mobile Scaffolding Application that seeks to Support Novice Learners of Programming . In Proceedings Mobile Learning, Madrid, Spain.
- Mbogo, Chao , Edwin Blake and Hussein Suleman (2014) Supporting the Construction of Programs on a Mobile Device: A Scaffolding Framework. In Proceedings Mobile Communications for Development (M4D), Dakar, Senegal.
- Williams, Kyle, Hussein Suleman and Jorgina K. do R. Paihama (2013) A Comparison of Machine Learning Techniques for Handwritten Xam Word Recognition. South African Institute for Computer Scientists and Information Technologists (SAICSIT'13), East London, South Africa.
- Phiri, Lighton and Hussein Suleman (2013) Flexible Design for Simple Digital Library Tools and Services. In Machanick, Philip and Mosiuoa Tsietse, Eds. Proceedings SAICSIT '13 2013 South African Institute for Computer Scientists and Information Technologists, pages 160-169, East London, South Africa.
- Munyaradzi, Ngoni and Hussein Suleman (2013) Quality Assessment in Crowdsourced Indigenous Language Transcription. In Proceedings Theory and Practice of Digital Libraries (TPDL) 2013, Malta.
- Havenga, M, K Williams and H Suleman (2012) Motivating Users to Build Heritage Collections Using Games on Social Networks. In Chen, H.-H and G Chowdhury , Eds. Proceedings 14th International Conference on Asia-Pacific Digital Libraries (ICADL '12), pages 279-288, Taipei, Taiwan.
- Mohamed Nour, Morwan, Kyle Williams and Hussein Suleman (2012) Evaluating Simple Repository Deposit for Open Educational Resources. In Proceedings 14th International Conference on Asia-Pacific Digital Libraries (ICADL 2012), Taipei, Taiwan.

- Mvumbi, Tresor, Flora Kundaali, Zafika Manzi, Kyle Williams and Hussein Suleman (2012) An Online Meeting Tool for Low Bandwidth Environments. In Proceedings Annual Research Conference of the South African Institute for Computer Scientists and Information Technologists (SAICSIT 2012), Centurion, South Africa.
- Nel, Marius, Kyle Williams and Hussein Suleman (2012) Evaluating Large Image Support for DSpace. In Proceedings 14th International Conference on Asia-Pacific Digital Libraries (ICADL 2012), Taipei, Taiwan.
- Paihama, Jorgina K. do R., Kyle Williams and Hussein Suleman (2012) Assessing the Design of Web Interoperability Protocols. In Proceedings Annual Conference of South African Institute for Computer Scientists and Information Technologists (SAICSIT 2012), Pretoria, South Africa .
- Phiri, Lighton, Kyle Williams, Miles Robinson, Stuart Hammar and Hussein Suleman (2012) Bonolo: A General Digital Library System for File-based Collections. In Chen, Hsin-Hsi and Gobinda Chowdhury, Eds. Proceedings 14th International Conference on Asia-Pacific Digital Libraries 7634, pages 49-58, Taipei, Taiwan.
- Rai, Idris, Anthony Rodrigues, Isabella Venter, Godfrey Mills, Hussein Suleman and John Edumadze (2011). Relevant Computing Curricula in Sub-Saharan Africa, in Proceedings of 3rd International ICST Conference on e-Infrastructure and e-Services for Developing Countries (Africomm 2011), Zanzibar Islands, Tanzania. Available <http://pubs.cs.uct.ac.za/archive/00000749/>
- Mohammed Mustafa Ali and H. Suleman (2011), Building a Multilingual and Mixed Arabic-English Corpus, in Proceedings of Arabic Language Technology International Conference (ALTIC) 2011, Alexandria, Egypt. Available <http://pubs.cs.uct.ac.za/archive/00000747/>
- Mohammed Mustafa Ali and H. Suleman (2011), Multilingual Querying, in Proceedings of Arabic Language Technology International Conference (ALTIC) 2011, Alexandria, Egypt. Available <http://pubs.cs.uct.ac.za/archive/00000746/>
- Kyle Williams and H. Suleman (2011), Creating a Handwriting Recognition Corpus for Preserving Indigenous Bushman Knowledge, in Proceedings of International Conference on the Asian Digital Library (ICADL) 2011, Beijing, China, 24-27 October 2011, pp.222-231, Springer. Available <http://pubs.cs.uct.ac.za/archive/00000734/>
- Thompson, J., D. Bainbridge and H. Suleman (2011), Very Large Scale Digital Library Building in Greenstone using Parallel Processing, in Proceedings of International Conference on the Asian Digital Library (ICADL) 2011, Beijing, China, 24-27 October 2011, pp.331-340, Springer. Available <http://pubs.cs.uct.ac.za/archive/00000742/>
- Mohammed Mustafa Ali, Izzedin Osman and H. Suleman (2011), Indexing and Weighting of Multilingual and Mixed Documents, in Proceedings of Annual Conference of the South African Institute for Computer Scientists and Information Technologists (SAICSIT) 2011, Cape Town, South Africa, 3-5 October 2011, pp.161-170, ACM. Available <http://pubs.cs.uct.ac.za/archive/00000744/>
- Ssekakubo, G., H. Suleman and Gary Marsden (2011), Issues of Adoption: Have E-Learning Management Systems Fulfilled their Potential in Developing Countries?, in Proceedings of Annual Conference of the South African Institute for Computer Scientists and Information Technologists (SAICSIT) 2011, Cape Town, South Africa, 3-5 October 2011, pp.231-238, ACM. Available <http://pubs.cs.uct.ac.za/archive/00000712/>

- Thompson, J., D. Bainbridge and H. Suleman (2011), Using TDB in Greenstone to Support Scalable Digital Libraries, in Proceedings of 3rd Workshop on Very Large Digital Libraries (VLDL), Berlin, Germany, 29 September 2011. Available <http://pubs.cs.uct.ac.za/archive/00000745/>
- Webley, L., T. Chipeperewa and H. Suleman (2011), Creating a National Electronic Thesis and Dissertation Portal in South Africa, in Proceedings of 14th International Symposium on Electronic Theses and Dissertations (ETD) 2011, Cape Town, South Africa, 13-15 September 2011. Available <http://pubs.cs.uct.ac.za/archive/00000748/>
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Suleman, H. (2007), Scalable Open Access, UNISA Graduate School of Business Leadership, Midrand, 3 May 2007.

Suleman, H. (2007), What and Why of IRs; Choosing an IR platform: what's new and what's hot?; Demo of setting up and submitting, Open Access (OA) and Institutional Repository (IR): New Models for Scholarly Communication, State Library, Maseru, Lesotho, 24-25 April 2007.

Suleman, H. (2006), What is Wrong with Digital Repository Software?, Academic libraries: proactive partners in learning and research, Stellenbosch University Library, 2-3 November 2006.

Suleman, H. (2005), Institutional Repositories and Licensing of Research Output, Commons-Sense: Towards an African Digital Information Commons, Creative Commons SA, Wits University, Johannesburg, 25-27 May 2005.

- Suleman, H. (2004), Introduction to Open Access and Institutional Repositories; Discussion; Using DSpace to Self-Archive Academic Literature; Higher Level Services Seminar and Training on UNAM and the Open Access Initiative, University of Namibia, Windhoek, 18-19 October 2004.
- Suleman, H. (2004), Not to Wait is the Answer: Institutional Repositories from the Bottom up, Open Access Scholarly Communication Conference, SASLI/OSI, Pretoria, 29-30 July 2004.
- Suleman, Hussein and Monica Hammes (2004), Workflow of ETDs, Electronic Thesis and Dissertations Workshop, Addis Ababa University, Addis Ababa, Ethiopia, 26-27 February 2004.
- Suleman, Hussein (2004), Standards, metadata and the OAI-PMH (NDLTD and adherence to the OAI-PMH Protocol); Software Options: VT, D-Space, EPrints, Greenstone; UNESCO ETD Guide - principles, guidelines, workflow models and best practices, Electronic Thesis and Dissertations Workshop, Addis Ababa University, Addis Ababa, Ethiopia, 26-27 February 2004.
- Suleman, Hussein and Monica Hammes (2003), Workflow of ETDs, Electronic Thesis and Dissertations Workshop, Wits University, Johannesburg, 18-19 September 2003.
- Suleman, Hussein (2003), Standards, metadata and the OAI-PMH (NDLTD and adherence to the OAI-PMH Protocol); Software Options: VT, D-Space, EPrints, Greenstone; UNESCO ETD Guide - principles, guidelines, workflow models and best practices, Electronic Thesis and Dissertations Workshop, Wits University, Johannesburg, 18-19 September 2003.

Events

- Suleman, H. and M. Densmore. Co-organizers of ICT4D Workshop at SAICSIT 2015 conference, Stellenbosch, 30 September 2015.
- Suleman, H. Facilitator at 1st African Digital Management and Curation Conference and Workshop, CSIR Convention Centre, Pretoria, 12-13 February 2008.
- Suleman, H. Co-organiser of Scientific Clustering Applications Workshop (SCAW) 2007, Cape Town, 6 December 2007.
- Suleman, H. Facilitator at Scientific Clustering Applications Workshop (SCAW) 2006, Cape Town, 6-7 April 2006.
- Suleman, H. Co-organiser of Workshop on Building Digital Library Collections with Greenstone, University of Cape Town, Cape Town, 30 November - 1 December 2005.
- Suleman, H. Co-organiser of Workshop on Institutional Repositories, CILLA-CSIR, Pretoria, 11-13 May 2005.

Suleman, H. Invited participant at SARIS Project workshop, CSIR, Pretoria, 4 October 2004.

Suleman, H. Co-organised Open Archives: Communities, Interoperability and Services, held in conjunction with ACM SIGIR 2001, New Orleans, September 2001.

Suleman, H. Co-chaired Extending Interoperability of Digital Libraries: Building on the Open Archives Initiative, held in conjunction with Fourth European Conference on Research and Advanced Technology for Digital Libraries, Lisbon, Portugal, September 2000.

Suleman, H. Co-chaired Extending Interoperability of Digital Libraries: Building on the Open Archives Initiative, held in conjunction with ACM Hypertext'2000 and ACM Digital Libraries'2000, San Antonio, June 2000.

Invited Tutorials and Talks

Suleman, H. Keynote address at AFIRM 2020, Cape Town.

Suleman, H. Keynote address at AFIRM 2019, Cape Town.

Suleman, H. (2015) Global ETD Search, invited talk at ETD 2015 Symposium, 3-6 November New Delhi, India.

Suleman, H. (2014) ICT and African Development, Keynote address at ICEFICT 2014, 11-12 June, Nairobi, Kenya.

Suleman, H. (2013) The D (in ICT4D) is for Development, Keynote address at ACIT 2013, 17-19 December, Khartoum, Sudan.

17 Seminars on Digital Libraries and Development given during 2013, including at:

- State University of Zanzibar, Tanzania
- Stone Town, Zanzibar (public lecture), Tanzania
- Makerere University, Uganda
- Strathmore University, Kenya
- Kenya Methodist University, Kenya
- University of Nairobi, Kenya
- University of Zambia, Zambia

Suleman, H. (2011) Low Cost Heritage Preservation, at International Conference on Digital Information and Knowledge Management (ICDK) 2011, 14-17 February 2011, Gurgaon, India.

Suleman, H (2010) Teaching ICT4D, at Workshop on Digital Libraries for International Development, 25 June 2010, Australia.

Suleman, H. (2010) Post-colonialism and DL architecture, at Digital Libraries in an International Context, Panel Discussion at JCDL 2010, June 2010.

- Suleman, H. (2011) "Preserving African Cultural Heritage" at Digital Libraries Research Laboratory, June 2010, Virginia Tech; and Digital Libraries Laboratory, July 2010, University of Waikato.
- Suleman, H. (2006), "XML", full-day tutorial at Singapore National Library Board, Singapore, 3 July 2006.
- Suleman, H. (2006), "Open Archives Initiative Protocol for Metadata Harvesting", full-day tutorial at Singapore National Library Board, Singapore, 12 March 2006.
- Suleman, H. (2005), "How to participate in the Union Catalog project", Eighth International Symposium on Electronic Theses and Dissertations (ETD2005), Sydney, Australia, 28-30 September 2005.
- Suleman, H. (2002), "Building Interoperable Digital Libraries: A Practical Guide to Creating Open Archives", half-day tutorial at the Second ACM/IEEE Joint Conference on Digital Libraries, Portland, Oregon, USA, 14-18 July 2002.
- Suleman, H. (2002), "Open Archives Initiative", LITA OSS4LIB Pre-conference at ALA 2002, Atlanta, 14 June 2002.
- Suleman, H. (2002), "Building Interoperable and Accessible ETD Collections: A Practical Guide to Creating Open Archives", Fifth International Symposium on Electronic Theses and Dissertations (ETD2002), Provo, Utah, USA, 30 May-1 June 2002.
- Suleman, H. (2001), "Building Interoperable Digital Libraries: A Practical Guide to Creating Open Archives", half-day tutorial at the First ACM-IEEE Joint Conference on Digital Libraries, Roanoke, Virginia, USA, June 2001.

Standards Body Participation

- Networked Digital Library of Theses and Dissertations (NDLTD) Standards Committee
Period: March 2005 – present
Role: Contributed to developing metadata standards and underlying technology for electronic theses and dissertation union catalogues.
- Open Archives Initiative (OAI) Technical Committee
Period: September 2000 – June 2002
Role: Contributed to developing versions 1.0, 1.1 and 2.0 of the OAI Protocol for Metadata Harvesting, a network protocol for transferring metadata between digital libraries. Provided community support by implementing and disseminating software tools for development and testing.

Professional Service

- Developed national portal for electronic theses and dissertations for NRF, 2008-.

Set up local BOINC server for volunteer computing paradigm, in collaboration with Africa@Home and funded through CERN. This system was set up specifically to host African scientific projects in Africa. Christopher Parker did the initial software/hardware configuration. Work is continuing under the auspices of the Citizen Cyberscience Centre, of which UCT is an affiliate, 2008-.

Developed digital library for the Bleek and Lloyd Archive, a collection of Bushman heritage documents, with the Department of Fine Arts at UCT, September 2006-.

Conducted feasibility study for a South African National Electronic Thesis and Dissertation project for NRF, March 2006.

Provided consultation support for the LawSpace project, to set up an institutional repository for the Law Faculty at UCT, September 2005.

Provided consultation support for the DISA project, to evaluate their current asset management system and recommend improvements and future directions, January 2004.

Developed new website for NDLTD, with funding provided by UNESCO, December 2003, and again in 2006.

Memberships/Affiliations

Senior Member of Association of Computing Machinery (ACM).

Member of IEEE (up to 2017).

Member of British Computer Society.

Member of Board of Directors of Networked Digital Library of Theses and Dissertations (NDLTD) (2004-2010, 2014-)

Member of South African Institute of Computer Scientists and Information Technologists (Member 2004-, Member of Council 2004-2016, Vice-President 2011-2016)

Member of Steering Committee of CHELSA/NRF South African National ETD Project (2006-).

Member of Programme Committees for:

- Symposium on Computing for Development (Posters in 2015)
- Electronic Theses and Dissertations Symposium (ETD) 2007-8, 2010, 2011, 2015
 - Programme Co-Chair 2011
- International Conference on Web Information Systems and Technologies (WEBIST) 2007-2015.
- Scientific Clustering Applications Workshop 2007-8
- Joint Conference on Digital Libraries (JCDL) 2006-
 - Senior PC Member 2014-20
 - Tutorial Track Co-Chair 2016
 - Posters Track Co-Chair 2011
- International Symposium on Parallel Applications (ISPA) 2006
- European Conference on Digital Libraries (ECDL) 2005-
 - Member of Organising Committee 2007
 - Senior PC Member 2010-2012, 2014, 2017-20
 - Tutorials Track Co-Chair, 2013
 - Doctoral consortium jurist, 2013, 2018
- International Conference on the Asian Digital Libraries (ICADL) 2005-2014, 2016-7
- South African Computer Lecturer's Association Conference (SACLA) 2016-
 - Programme Co-Chair 2018
- South African Telecommunications and Networking Conference (SATNAC) 2004-
- South African Institute of Computer Scientists and Information Technologists Annual Conference (SAICSIT) 2004-
 - Programme Co-Chair 2011

Journal Editorial Teams:

- South African Computer Journal (2010-2013)
- PLOS One (2012-)

Member of NRF/Government Panels:

- NRF ICT Competitive Funding for Rated/Unrated Researchers Committee (2014,2016)
- THRIP ICT Committee (2011-2014)
- NRF ICT Ratings Specialist Committee (2011-2014)
- DHET Publication Count Panel (2015-)

Past inducted member of The Honor Society of Phi Kappa Phi and Upsilon Pi Epsilon, International Honor Society for the Computing Sciences