

Hashim H. Mohamed, PhD

PERSONAL INFORMATION

Nationality: Tanzanian.

Marital Status: Married.

CONTACT INFORMATION

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INTERESTS

Grid computing, high performance computing, distributed systems, clusters/multi-clusters design, configuring and administration, programming.

EMPLOYMENT HISTORY

Dec 2006-to-date: Scientific Researcher/Programmer, Delft University of Technology, Delft, the Netherlands.

1) I perform research on resource management in large-scale distributed systems, e.g., computational grids and multi-cluster systems, 2) I am extending the KOALA resource management system to perform scheduling in heterogeneous hostile environments, 3) I am extending the KOALA resource management system to perform scheduling across multiple Virtual Organizations with different usage policies, 4) I was the advisor for the hardware selection of the Delft DAS-3 cluster, and 5) I have worked with the mathematics group at TuDelft to parallelize their Lagrangian particle model application with MPI.

2004-2005 : Part time/ Open source/ Volunteering work, Amsterdam, the Netherlands.

I have designed, installed, configured, manage several Linux Virtual Server (LVS) clusters for web applications and mail servers. I have adapted open source MYSQL database management system replication mechanism to be used in a cluster environment.

Feb 2001-Feb 2003: Assistant Lecturer, University of Dar es salaam, Dar es salaam, Tanzania.

I gave lectures for the following Computer Science courses: Operating Systems, Data communications and Networking and Distributed Systems.

June 1998-Jan 1999: Systems analyst/programmer, University of Dar es salaam, Dar es salaam, Tanzania.

1) I customized and maintained a Help Desk Software, and 2) I designed, implemented and maintained the University Computing Center Stock Control System.

EDUCATION

March 2003-Dec 2007: Ph.D Track, Delft University of Technology, The Netherlands.

Research area: Resource (Processor and data) scheduling for large-scale distributed systems, e.g., computational grids and multi-cluster systems.

Software Output: A grid resource management system called KOALA currently used in the Distributed ASCI Supercomputer (DAS) testbed in the Netherlands. More information about KOALA can be found at <http://www.st.ewi.tudelft.nl/koala/>

PhD Defence Committee:

Prof.dr.ir. H.J. Sips	Technische Universiteit Delft, supervisor
Dr.ir. D.H.J. Epema	Technische Universiteit Delft, supervisor
Prof.dr.ir. H.E. Bal	Vrije Universiteit Amsterdam
Prof.dr. F. Desprez	INRIA, France
Prof.dr.ir. A.J.C. van Gemund	Technische Universiteit Delft
Prof.dr. C. Kesselman	University of Southern California, USA
Dr. A.A. Wolters	Universiteit Leiden

Feb 1999-Jan 2001: MSc. in Technical Informatics, Delft University of Technology, The Netherlands.

Area of Specialization: Parallel and Distributed Systems.

MSc. Graduation Project: Interoperability tests and Analysis of Media Gateway Control Protocols.

June 1995–June 1998: BSc. Computer Science, Univeristy of Dar es salaam, Tanzania.

Course studied: Computer Science, Mathematics, Statistics, Micro--economics.

Major: Computer Science, Mathematics

BSc. Graduation Project: Analysis and Implementation of Shortest Path Algorithms.

Others

Attended Cisco Network Academy.

Award: Certified Cisco academy Instructor.

Attended Navision Development and Programming Course.

Award: Navision Product Specialist Certificate.

SELECTED PUBLICATIONS

1. Hashim H. Mohamed. The Design and Implementation of KOALA Grid Resource Management System. PhD thesis, Delft University of Technology, 2008.
2. H.H. Mohamed and D.H.J Epema. Interfacing Different Application Types to the KOALA Grid Scheduler. Submitted for publication.

3. H.H. Mohamed and D.H.J Epema. KOALA: A Co-Allocating Grid Scheduler. Concurrency and Computation: Practice and Experience. Accepted for publication.
4. C. Dumitrescu, A. Iosup, O. Sonmez, H.H. Mohamed, and D.H.J. Epema. Virtual Domain Sharing in e-Science Based on Usage Service Level Agreements. In Proc. of the CoreGRID Symposium, Rennes, France, CoreGRID series, Springer-Verlag, pages 15–26, 2007.
5. J. Buisson, H.H. Mohamed, O. Sonmez, W. Lammers, and D.H.J. Epema. Scheduling Malleable Applications in Multicluster Systems. In Proc. of the IEEE International Conference on Cluster Computing 2007, pages 372–381, 2007.
6. O. Sonmez, H.H. Mohamed, and D.H.J. Epema. Communication-Aware Job Placement Policies for the KOALA Grid Scheduler. In Proc. of the Second IEEE International Conference on e-Science and Grid Computing, pages 79–87, 2006.
7. A.I.D. Bucur, H.H. Mohamed, and D.H.J. Epema, Co-allocation in Grids: Experiences and Problems. In Proc. of the Workshop on Future Generation Grids, Dagstuhl, Germany, CoreGRID series, Springer-Verlag, pages 195–213, 2006.

INVITED TALKS

- Invited Speaker, Interfacing Different Application Types to the KOALA Grid Scheduler, DAS-3 Symposium, Delft, The Netherlands, June 2006.
- Invited Speaker, The KOALA Grid Scheduler: Architecture and Issues, CoreGRID Workshop June 2005, Barcelona Spain.
- Invited Speaker, KOALA: The Co-Allocating Grid Scheduler, VL-e workshop, Amsterdam, The Netherlands, March 2005.

SKILLS

High Performance Computing

Globus Toolkit, MPI, MPI-G2, PBS, SGE, OpenMP.

Familiar with: Condor, High Performance Fortran.

Programming Languages

Java, C, Fortran.

Familiar with: C++, Visual Basic, Pascal, COBOL.

Shell scripting:

Perl, Bash, AWK, SED, Python.

Systems Analysis and Software Design

UML (Unified Modeling Language) for Objected Oriented Design.

Familiar with: Structured Systems Analysis and Design (SSADM).

DataBase Management System

MYSQL, MS Access.

DataBase Design

Relational Database Design.

Protocols/Standards

TCP/IP suite, H.248/Megaco, MGCP, SIP, H.323, V5.

Operating Systems

LINUX/UNIX, Mac os-x, Windows 95/98/2000/Me/XP/NT

Others

Html, PHP, Javascript, Flash, AJAX, the Gimp, Tex/Latex.

HOBBIES

Computer games, computer graphics.

REFEREES

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