

CURRICULUM VITAE

YUZITA YAACOB

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- Education: B.S. in Mathematics, Sam Houston State University (U.S.A.), 1987
B.S. in Computer Science, Sam Houston State University (U.S.A.), 1987
M.S. in Mathematics (Minor in Computer Science), Sam Houston State University (U.S.A.), 1989
Ph.D. in Computer Algebra (Symbolic Computation), International Islamic University Malaysia (collaboration with the University of New Mexico, U.S.A), 2007
- Positions: Teaching and Research Assistant, Sam Houston State University (U.S.A.), 1987-1989
Lecturer, University Technology MARA, 1990-1992
Programme Coordinator, Cosmopoint Institute, 1992-1993
Lecturer, International Islamic University Malaysia, 1994-1995
Lecturer, National University of Malaysia, 1996-present

PUBLICATIONS – JOURNALS (RECENT)

- 2011** Michael Wester, Yuzita Yaacob and Stanly Steinberg, *Computing Integrals Over Polynomially Defined Regions and Their Boundaries in 2 and 3 Dimensions*, Journal of Mathematics and Computers in Simulation 82 (2011) 79-101.
- 2010** Yuzita Yaacob, Stanly Steinberg and Michael Wester, *Towards the Development of an Automated Learning Assistant for Vector Calculus: Integration over Planar Regions*. Special Session on Computer Algebra in Education. The International Journal for Technology in Mathematics Education (formerly the International Journal of Computer Algebra in Mathematics Education). Volume 17, Number 2, 2010.

PUBLICATIONS – PROCEEDINGS

- 2011** Hazlina Awang Lah & Yuzita Yaacob, *Konsep Pedagogi Computer Algebra System (CAS) Dalam Penyelesaian Masalah Fizik (Linear Motion)*, IMETC 2011 (International Malaysian Educational Technology Convention 2011), Kuantan, Pahang.
- 2011** Yuzita Yaacob, Hazlina Awang Lah & Nurul Saadah Zawawi. *Pakej Sistem Aljabr Komputer: Alat Bantuan Pengajaran dan Pembelajaran Berautomasi*, Kongres Pengajaran & Pembelajaran UKM 2011, Pulau Pinang.
- 2009** Yuzita Yaacob, Stanly Steinberg and Michael Wester, *ILMEV: A symbolic vector calculus package*, International Symposium on Symbolic and Algebraic Computation (ISSAC 2009), organized by Special Interest Group on Symbolic and Algebraic manipulation (SIGSAM), ACM at the Korean Institute for Advanced Study, July 28-31, 2009
- 2009** Nurul Saadah Zawawi, Yuzita Yaacob, Mohammad Khatim Hasan, Hamzah Mohd Salleh and Ibrahim Ali Noorbatcha, 5th Asian Mathematical Conference (AMC 2009), organized by USM
- 2008** Yuzita Yaacob, Stanly Steinberg, Michael Wester, Ahmad Faris Ismail and Hamzah Salleh, Prosiding Seminar Pendidikan Kejuruteraan dan Alam Bina (PeKA) 2008, Bukit Merah Laketown Resort, Perak, p 74-83.
- 2005** Yuzita Yaacob, Stanly Steinberg and Michael Wester, *A symbolic vector analysis package*, The 7th International Mathematica Symposium (IMS 2005), University of Western Australia, Perth, Australia, presenter, CD Rom.
- 2003** Yuzita Yaacob and Zawiyah Mohd Yusof, *Developing prototype for multimedia courseware Interactive Learning – Mathematica Enhanced Calculus (ILMEC)*, Proceedings of The International Symposium on Information Technology 2003, Faculty of Technology and Information Science, National University of Malaysia, vol 2., 807 (Bronze medal).
- 2002** Yuzita Yaacob, Noor Aini Hassan, Hasni Amiruddin & Khairina Atika Mohd. Zawawi, *ILMEC multimedia courseware: A pedagogical tool to enhancing mathematics education in Malaysia*, Vienna International Symposium on Integrating Technology into Mathematics Education (VISIT-ME 2002), University of Vienna, Austria, presenter, CD Rom.
- 2000** Yuzita Yaacob, *Computer algebra systems: A brief study on strength, user friendliness and reliability*, Simposium Kebangsaan Teknologi Maklumat (ITSim '2K), National University of Malaysia, presenter, 114-118.

- 1999** Riza Sulaiman, Yuzita Yaacob dan Najwa Hayaati, *Pembangunan manual AutoCAD Release 13 secara multimedia untuk sekolah menengah teknik dan vokasional di Malaysia*, International Conference on Teaching and Learning, National University of Malaysia, Vol 1, 207-214.
- 1999** Juhana Salim dan Yuzita Yaacob, *Hyperdocument: An innovative tool for teaching and learning*, International Conference on Teaching and Learning, National University of Malaysia, Vol 2, 798-812.
- 1999** Haslina Arshad, Yuzita Yaacob, Maryati Mohd. Yusof, Roziah Latih dan Azizi Abdullah, *Implication of introducing technology into mathematics education*. International Conference on Teaching and Learning, National University of Malaysia, presenter, Vol 3, 934-943.
- 1999** Maryati Mohd. Yusof dan Yuzita Yaacob, *Penggunaan Mathematica 3.0 dalam matematik tambahan sekolah menengah di Malaysia*, Kolokium Pengintegrasian Teknologi dalam Sains Matematik, Universiti Sains Malaysia, 141-144.
- 1999** Yuzita Yaacob, Wan Zulkifli Wan Abdul Rahman dan Masri Ayob, *Isian kursus mantik berasaskan web untuk mata pelajaran Matematik 1 (TR 1313)*, Kolokium Pengintegrasian Teknologi dalam Sains Matematik, Universiti Sains Malaysia, 364-367.
- 1998** Yuzita Yaacob, *Pendidikan matematik dengan menggunakan isian kursus multimedia untuk tingkatan 4 dan 5 sekolah menengah*, Seminar Pembelajaran Matematik Agenda Semasa, Fakulti Sains Matematik, Universiti Kebangsaan, Malaysia, presenter, 59-73.
- 1997** Yuzita Yaacob dan Norleyza Jailani, *Penggunaan isian kursus multimedia dalam pendidikan akhlak Islam*, Seminar Kebangsaan Teknologi Maklumat dalam Pendidikan Islam, Pusat Islam, Kuala Lumpur, presenter, 37-45.

PUBLICATIONS - TECHNICAL REPORTS , BULLETINS , and others

- 2003** Yuzita Yaacob and Zawiyah Mohd. Yusof, *Interactive Learning – Mathematica Enhanced Calculus*. IPTA Research & Development Exposition 2003. Research Management Centre (RMC), Universiti Putra Malaysia, 160.
- 2001** Yuzita Yaacob, *Pembangunan perisian kursus multimedia untuk mempertingkatkan pendidikan kalkulus dengan menggunakan sistem algebra computer (CAS)*, Wajah Penyelidik Technology Page, Penerbitan PPP, UKM, 71.
- 2000** Yuzita Yaacob, *Pembangunan perisian kursus multimedia untuk mempertingkatkan pendidikan kalkulus dengan menggunakan sistem algebra komputer (CAS)*, Prosiding Seminar IRPA RMK-7, Jilid 1, 178-181.

- 2000** Yuzita Yaacob, *Pembangunan perisian kursus multimedia untuk mempertingkatkan pendidikan kalkulus dengan menggunakan sistem algebra komputer (CAS)*, Prosiding Seminar IRPA RMK-7, Jilid 2, 298-301.
- 1998** Yuzita Yaacob dan Maryati Mohd. Yusof, *Penggunaan teknologi multimedia dalam pengajaran kalkulus untuk tingkatan 4 dan 5 di sekolah menengah di Malaysia*, UKM Research Highlights 1998, Penerbitan PPP, UKM, 49-51.

PAPERS/PROJECTS SUBMITTED or IN FINAL DRAFT

1. (research project with Stanly Steinberg and Michael Wester). *Developing an automated assistant for computing integrals over polynomially defined regions and their boundaries using a computer algebra system (CAS)*. Submitted to MOSTI on Nov 29, 2011 for Science Fund application (status: MOSTI technical).
2. (research project with Stanly Steinberg and Zamri Murah). *Development of kriging techniques algorithms in geostatistics surface mapping package enhanced by a computer algebra system (CAS)*. To be submitted to MOSTI for Science Fund application.

WORK IN PROGRESS

1. (paper with Saadah binti Zawawi). *Immunology Education Software (IMEDs) Using a Computer Algebra System (CAS)*. To be submitted to the Journal of Computers in Mathematics and Science Teaching.
2. (paper with Hazlina Awang Lah). *Computer algebra system (CAS) pedagogical concepts in developing physics education (linear motion) symbolic package*. To be submitted to the Journal of Computers in Mathematics and Science Teaching.
3. (paper with Stanly Steinberg and Michael Wester). *The software development of ILMEV package using Mathematica 5.0*. To be submitted to the Journal of Systems and Software.
4. (book). *Interactive Learning – Mathematica Enhanced Vector Calculus (ILMEV): Alat bantuan pengajaran dan pembelajaran berautomasi*. To be submitted to the Dewan Bahasa & Pustaka.

PRESENTATIONS

- 2011** Yuzita Yaacob, *Al-Jabr Komputer: Dari Al-Khwarizmi hingga ...*, on Dec 29, 2011, 2.30 pm, Bilik Mesyuarat 2, FTSM, UKM, organized by . Kumpulan Pemeribumian Teknologi Maklumat, FTSM, UKM.
- 2007** Yuzita Yaacob, Stanly Steinberg and Michael Wester, *ILMEV: An automated learning assistant for vector calculus*, The 12th Asian Technology Conference in Mathematics (ATCM 2007), Taiwan National Science of Education, Taipei, Taiwan, presenter, http://atcm.mathandtech.org/EP2007/All_Abstracts.
- 2006** Hamzah Salleh & Yuzita Yaacob, *The development of a multimedia symbolic package (vector analysis) to enhance a computer algebra system (CAS) (IRPA 04-02-08-10005 EAR)*, MOSTI Visit to Monitor IRPA Project, Research Centre, International Islamic University Malaysia, presenter.
- 2005** Yuzita Yaacob, Stanly Steinberg and Michael Wester, *The development of a multimedia symbolic vector analysis package*, Conference on Applications for Computer Algebra (ACA 2005), Nara Women's University, Japan, presenter.
- 2001** Yuzita Yaacob, Noor Aini Hassan, Hasni, Amiruddin, Khairina Atika Mohd. Zawawi & Farizan Othman, *The Development of Islamic Multimedia Courseware To Enhance Calculus Education Using a ComputerAlgebra System (Mathematics)*, Conference on Information Systems and Islam (ISI 2001), International Islamic University Malaysia, presenter.

SHORT COURSES, WORKSHOPS

- Nov 20, 2008** Participant, *Bengkel Kerjasama UKM-MERCY Malaysia*, Hotel Marriott Hotel Putrajaya, organized by Pejabat Hubungan Universiti-Masyarakat, UKM.
- Nov 6-7, 2008** Participant, *Workshop on Problem Based Learning (PBL)*, Kelab Golf Danau, UKM, organized by Perkembangan & Inovasi Kurikulum, UKM.
- April 21, 2008** Participant, *Structurally optimised & fuel efficient concept car project workshop*, Shangri-La Hotel Putrajaya, organized by Fakulti kejuruteraan, UKM.
- Mar 25-27, 2008** Participant, *Kursus penulisan makalah jurnal berimpak & berindeks, UKM dan Cyberview Lodge Resort & SPA*, Cyberjaya, organized by Pusat Pembangunan Akademik, UKM.

- Oct 31, 2007** Organizer and presenter, *One day workshop on computer algebra*, Research Management Center, International Islamic University Malaysia (IIUM), organized by Dept. of Industrial Computing, Faculty of Technology and Information Science (UKM), Dept. of Mathematics and Statistics, University of New Mexico, USA and Research Management Center, IIUM.
- Oct 29-30, 2007** Organizer and presenter, *Two days workshop on computer algebra*, Faculty of Technology and Information Science, National University of Malaysia, organized by Dept. of Industrial Computing, Faculty of Technology and Information Science (UKM) and Dept. of Mathematics and Statistics, University of New Mexico, USA.
- Aug 22, 2007** Participant, “*Penulisan menulis tesis gaya UKM*” worksop, National University of Malaysia, organized by Pusat Pengajian Siswazah (PPS), National University of Malaysia.
- May 22-25, 2007** Participant, “*Kursus Penilaian Tahap Kecekapan 3 (PTK 3)*, Kelab Golf Danau, National University of Malaysia, organized by Pusat Pembangunan Akademik, National University of Malaysia.
- Jan 14-15, 2005** Participant, *Programming in Mathematica workshop (M220)*, University of Melbourne, Australia, organized by Wolfram Research Inc. (WRI), U.S.A.
- Jan 26-30, 2004** Participant, *Research methodology workshop*, Research Centre, International Islamic University Malaysia, organized by Research and Academic Training, Research Centre, International Islamic University Malaysia.
- Aug 16, 2003** Participant, *Seminar on the understanding of tasawwuf*, Engineering Auditorium, Kulliyyah of Engineering, International Islamic University Malaysia, organized by Intellectual Youth Club & PEPIAS in collaboration with STADD, International Islamic University Malaysia.

CONFERENCE ORGANIZER

- 2010** Programme committee member (abstract reviewer and parallel session chair), *Technology and its Integration into Mathematics Education (TIME 2010)*, Malaga, Spain, organized by Derive & TI-Nspire and Austrian Center of Didactic in Computer Algebra (ACDCA), Vienna, Austria.
- 2008** Programme committee member (abstract reviewer and parallel session chair), *Technology and its Integration into Mathematics Education (TIME 2008)*,

Tshwane University of Technology, Buffelspoort, South Africa, organized by Derive & TI-Nspire and Austrian Center of Didactic in Computer Algebra (ACDCA), Vienna, Austria.

- 2006** Programme committee member (abstract reviewer), *Dresden International Symposium on Technology and its Integration into Mathematics Education (DESTIME-2006)*, Dresden, Saxony, Germany, organized by Derive & TI-Nspire and Austrian Center of Didactic in Computer Algebra (ACDCA), Vienna, Austria.

INVITATIONS

- Sept-Nov, 2006** Invited to present Ph.D. dissertation to graduate seminar at the Dept. of Mathematics and Statistics, University of New Mexico, Albuquerque, New Mexico 87131, U.S.A.
- March-May, 2001** Invited to participate in the applied mathematics research groups (Computer algebra research group) from the Dept. of Mathematics and Statistics, University of New Mexico, Albuquerque, New Mexico 87131, U.S.A.

MEETINGS ATTENDED (without presenting)

- 1998** Participant, 2nd Asian Technology Conference in Mathematics (ATCM 2007), Universiti Sains Malaysia, Penang, Malaysia.

OTHER POSITIONS

- 2006** Committee member, Mentor/Mantee, Dept. of Industrial Computing, National University of Malaysia
- 2000** Committee member, 30th year celebration of National University of Malaysia.

VISITING SCHOLARS

- 2007** *Prof. Dr. Stanly Steinberg* from the University of New Mexico, was a visitor for ten days (Oct 24 – Nov 2) at the Faculty of Technology and Information Science, National University of Malaysia to advice on the new established Center of Industrial Computing, meet the I-Comp research group and postgraduate students, and participate in *Two days workshop on computer Algebra (UKM)* and *One day workshop on computer algebra (IIUM)*, and present papers in two colloquims.

- 2003** Dr. Bernhard Kutzler from the University of Linz, Austria and member of Austrian Center of Didactic in Computer Algebra (ACDCA), Vienna, Austria, was a visitor for one day at the Kulliyyah of Engineering, International Islamic University Malaysia, to discuss Ph.D. projects.

GRADUATE STUDENTS

Master's Students (100% thesis)

- 2000-2003** Khairina Atika binti Mohd Zawawi, *Pengintegrasian sistem algebra komputer (CAS) dalam pembangunan perisian kursus multimedia untuk pendidikan prakalkulus: geometri koordinat.*
- 2000-2003** Noor Aini binti Hasan, *Pengintegrasian sistem algebra komputer (CAS) dalam pembangunan perisian kursus multimedia untuk pendidikan prakalkulus: fungsi kuadratik.*
- 2008-** Nur Hidayah binti Adnan, *The development of a multimedia package in enhancing biotechnology teaching (immunology) using a computer algebra system (CAS)*
- 2008-** Saadah binti Zawawi, *The development of a multimedia package in enhancing biotechnology teaching (cloning) using a computer algebra system (CAS)*

Phd. Students (100% thesis)

- 2008-** Nur Hidayah binti Adnan, *The development of a multimedia package in enhancing biotechnology teaching (immunology) using a computer algebra system (CAS)*

EDITOR, REVIEWS, JOURNALS AND BOOK SERIES

- 2008** Abstract reviewer, Technology and its Integration into Mathematics Education (TIME 2008), Tshwane University of Technology, Buffelspoort, South Africa,
- 2006** Abstract reviewer, Dresden International Symposium on Technology and its Integration into Mathematics Education (DES-TIME-2006), Dresden, Saxony, Germany.

MEMBERSHIPS

SIAM – Society for Industrial and Applied Mathematics.

IMACS – International Association for Mathematics and Computers in Simulation.

SIGSAM – ACM Special Interest Group on Symbolic Computation.

AAAS – American Association for the Advancement of Science

RESEARCH SUPPORT

2004-2007 International Islamic University Malaysia:

Grant: IRPA 04-02-08-10005
Total fund: RM 62,000
Position: Member
Title: The development of a multimedia symbolic package (vector analysis) to enhance a computer algebra system (CAS)

2000-2002 National University of Malaysia:

Grant: IRPA 04-02-02-0034
Total fund: RM 205,000
Position: Project leader
Title: The development of a multimedia courseware to enhance calculus education using a computer algebra system (CAS)

1998-2000 National University of Malaysia:

Grant: Y/4/98
Total fund: RM 6,800
Position: Project leader
Title: Penggunaan teknologi multimedia dalam pengajaran kalkulus untuk tingkatan 4 dan 5 di sekolah menengah di Malaysia

UNIVERSITY and OTHER SERVICE

1999 Committee member, Jawatankuasa Induk Sambutan 30 Tahun UKM

COURSES TAUGHT

TR 1313	Mathematics I
TR 1323	Mathematics II
TR 1413	Mathematics III
TR 1613	Foundations of Mathematics
TR 1713	Statistics and Probability
TR 1723	Sampling and Data Analysis
TR ?	Symbolic Programming
TR 3223	Industrial Models
TR 3523	Introduction to Manufacturing Technology
TR 3563	Information Technology in Manufacturing Industry