



CURRICULUM VITAE

Name: Mohd Razali Muhamad

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76109 Durian Tunggal, Melaka

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Date/Place of Birth: 3 January 1960 / Bukit Mertajam, S. Perai.

Nationality: Malaysian

Marital Status: Married

EDUCATION:

1996 Ph.D. (Manufacturing Systems), The University of Liverpool
1984 MSc. (Materials Protection), Loughborough University of Technology
1983 B.Sc. (Production Engineering and Management), Loughborough University of Technology

CAREER SUMMARY:

May 2003 – present	Professor, Faculty of Manufacturing Eng., KUTKM
July 1997 - April 2003	Associate Professor, School of Mechanical Engineering, Universiti Sains Malaysia
Jan 1989 - Jun 1997	Lecturer, School of Mechanical Engineering, USM
Mac-April 1997	Visiting Fellow, Dept. Of Industrial Studies, The University of Liverpool
Apr 1986- Dec 1988	Lecturer, School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia
Oct 1984- Mar 1986	Lecturer, School of Eng. Science and Industrial Technology, Universiti Sains Malaysia

MEMBERSHIP:

Registered Member (Graduate), Board of Engineers Malaysia (#18835)
Graduate Member, Institution of Engineers Malaysia (#10455)

INDUSTRIAL EXPERIENCE:

August 1991 - March 1992

Industrial Attachment at Robert Bosch (UK) Ltd. Cardiff, Wales.
(Involved with rotor line team. Responsible for maintenance of tooling.)

January - March 1988

Industrial Attachment at Syarikat Malaysia Explosives, Batu Arang, Selangor.
(Design and manufacture of precision tooling for mold and die)

AWARDS

- 2000 'Sijil Penghargaan Perkhidmatan' (Service Appreciation Certificate), Universiti Sains Malaysia.
- 1999 'Sijil Penghargaan Perkhidmatan' (Service Appreciation Certificate), School of Mechanical Engineering.
- 1999 Tan Sri Raja Zainal Prize for an outstanding technical paper (Graduate Member), Institution of Engineers, Malaysia.
- 1997 Visiting Fellow, Department of Industrial Studies, The University of Liverpool

ADMINISTRATIVE DUTIES

November 2004 – present

Dean, Faculty of Manufacturing Engineering, KUTKM

August 2003 – October 2004

Deputy Dean, Research and Graduate Studies, Faculty of Manufacturing Engineering, KUTKM

May 2000 – April 2003

Deputy Dean, Research and Graduate Studies, School of Mechanical Engineering, Universiti Sains Malaysia.

Jan 1997 - April 2000

Chairman, Manufacturing System and Technology Program, School of Mechanical Engineering, Universiti Sains Malaysia.

July 1996 - Dec 1996

Chairman, Higher Degree Programme, School of Mechanical Engg.

Jan. 1989- June 1991

Dean, School of Mechanical Engineering, Universiti Sains Malaysia.

January 1987- Dec. 1988

Coordinating the planning and development of the School of Mechanical Engineering,

1987-1989

Coordinator: Management courses to engineering students

June 1986-June 1988

Chairman, Materials Engineering Programme, School of Materials and Mineral Resources Engineering.

June 1986- June 1988

Co-ordinator, Islamic Civilisation course to engineering students.

UNDERGRADUATE TEACHING

Courses Taught :

2006/07	Advanced Manufacturing Processes, Engineer in Society, Final Year Project, Design Project
2005/06	Advanced Manufacturing Processes, Engineer in Society, Final Year Project, Design Project
2004/05	Applied Mechanics, Engineer in Society, Final Year Project
2003/04	Manufacturing Practice, Machine Design
2002/03	Manufacturing Technology, Engineer in Society, Engineering Laboratory
2001/02	Advanced Manufacturing, Manufacturing Systems, Manufacturing System Design, Engineer in Society, Production Management, Technology Management, Engineering Laboratory
2000/01	Advanced Manufacturing, Manufacturing Systems, Engineer in Society, Engineering Management, Production Management, Manufacturing Technology, Engineering Laboratory
1999/2000	Advanced Manufacturing, Engineer in Society, Engineering Management, Production Management, Manufacturing Technology, Engineering Laboratory
1998/99	Advanced Manufacturing, Engineer in Society, Engineering Management, Production Management, Manufacturing Technology, Design III (Design for Manufacture), Engineering Laboratory
1997/98	Advanced Manufacturing, Engineer in Society, Engineering Management, Production Management, Manufacturing Technology, Design III (Design for Manufacture), Engineering Laboratory
1996/97	Advanced Manufacturing, Manufacturing Technology, Engineering Laboratory
1995/96 1994/95 1993/94 1992/93	Study Leave
1991/92	Industrial Management
1990/91	Industrial Management, Engineer in Society, Industrial Psychology
1989/90	Industrial Management, Engineer in Society, Industrial Psychology
1988/89	Engineering Mechanics, Properties of Materials, Industrial Management, Engineer in Society, Industrial Psychology
1987/88	Properties of Materials, Engineering Mechanics, Applied Dynamics, Corrosion and Degradation, Transport Processes, Islamic Civilisation, Engineering Laboratory
1986/87	Properties of Materials, Engineering Mechanics, Applied Dynamics, Corrosion and Degradation, Transport Processes, Islamic Civilisation, Workshop Practice, Engineering Laboratory
1985/86	Applied Metallurgy, Properties of Materials, Workshop Practice, Islamic Civilisation, Engineering Laboratory
1984/85	Applied Metallurgy, Workshop Practice, Engineering Laboratory

Final Year Projects:

2001/02 (12 projects)

Technology Management, Design for Manufacture and Assembly, Quality Function Deployment, Design of Manufacturing Systems, Systems Modelling Using WITNESS, machining of metals

2000/01 (7 projects)

New Product Development, Robot Controller, Design for Manufacture and Assembly, Technology Management

1999/00 (6 projects)

Machine selection using AHP, machine selection using knowledge-based system

1998/99 (5 projects)

Computer aided process planning, new product development, concurrent engineering, study on technological innovation

1997/98 (5 projects)

Concurrent Engineering, Manufacturing strategy, knowledge-based system for process selection, quality function deployment application

1996/97 (5 projects)

Economic machining of metals, electro-discharge machining, manufacturing system simulation, concurrent engineering

1989/90 (3 projects)

Metal coating of plastics, metallic corrosion

1988/89 (3 projects)

Metallic corrosion, Weldability of metals

1986/87 (1 projects)

Stress corrosion cracking of 304 stainless steel

POST-GRADUATES:

PhD

On-going:

Registration	Candidate		Title
2006 - 2009	Al-Mansur Abu Said	M	An empirical investigation of intrapreneurship intensity
2006 - 2009	Esmar Budi	M	Multilayer TiAlN/Ni coating
2003 – 2008	Chan Siew Lim	M	Manufacturing Integration
2003 – 2008	Hasbullah Hj. Ashari	M	Manufacturing strategy
2000 – 2006	M. Sobron Yamin Lubis	C	Development of ceramic cutting tools

MSc.

Completed:

Year	Candidate		Title
2005	Rahmatullah	M	Development of a method to enhance design for assembly
2004	Zakri Ghazalli	M	Development of Design Evaluation System for Assembly
2003	Arshed Hussain	M	Application of Feature-Based Design for Assembly Planning
2003	M. Tarmizi Omar	M	Development of Implant Plate Using 316L Steel
2003	Md. Nizam Abd Rahman	M	A study on idea generation in NPD
2002	Sylvi Ariyanti	M	Studies on new product development among Malaysian manufacturing companies.
2002	Mosaddeque M. Rizwan	M	Integrated approach for improving product design
1999	M. Sobron Yamin Lubis	M	Incorporating surface quality in the machining cost of metals.
1999	Anthony M. Raj	M	Computer implementation of integrated manufacturing systems.

M= main supervisor; C=co-supervisor

On-going:

Registration	Candidate		Title
2006 - 2008	Jacob Anto Vincent	M	Precision engineering
2006 - 2008	Faisal bin Parai	M	Value stream mapping in lean manufacturing
2006 – 2008	Keristina M. Devanesan	M	Enhancing concurrent engineering practices
2005 – 2007	Ismawati Ibrahim	M	The influence of coating parameters on the performance of TiC-coated cutting tools
2004 – 2007	Zainal Ariffin Selamat	C	An Experimental Investigation of Cutting Tool Performance
2004 – 2007	Abd. Razak Ramli	M	Machine Tool Controller

P = part time

Internal Examinership:

- 2002 (Suresh Gobee) Applications of Fuzzy Logic in FMEA
- 1998 Development of Hardware and Cell Control for Flexible Manufacturing System (Norsihan Mokhtar, MSc)
- 1997 Application of Knowledge-based System for Material and Process Selection (Sujan Debnath, MSc)

External Examinership:

- 2006 New product development framework for engineer to order production (Abdul Rahman Abdul Rahim, PhD, UTM)
- 2002 Determination of optimum specifications on indigenous oil palm biomass processing machinery: initial technical requirements derived through QFD approach (Mahmuddin bin Salleh, MSc, Universiti Teknologi MARA)
- 1999 An Integrated Approach for Manufacturing Resource Optimisation Under Conditions of Intermittent Demands (Mohamed K. Omar, PhD, Universiti Teknologi Malaysia)

RESEARCH**Research interest:**

Concurrent Engineering, Economic machining of metals. Design of manufacturing systems, Design for manufacture and assembly, Management of Technology

Research grants:

Year	Grantor	Project Title	Involvement	Amount
2004-2007	IRPA	Development of thin coating for cutting tool	Project Leader	RM 609,000
2004-2005	KUTKM Short Term	Development of a framework aligning manufacturing strategy and e-manufacturing	Project Leader	RM 25,600
2004-2005	KUTKM Short Term	Development and performance analysis of design for manufacture and assembly methodology	Project Leader	RM 26,600
2003-04	KUTKM Short Term	A study on the productivity improvement of Melaka SME's	Project Leaser	RM 23,000
2001 – 2004	National Biotechnology Directorate	Development of diagnostic tests for enteric pathogens: a genomic approach	Project Leader (engineering) & researcher	RM 43,000 (out of total RM2.5m)
1999 – 2002	IRPA Grant #07-02-05-9011	A Study on the Management of New Product Development	Project Leader& researcher	RM120,000
	IRPA Grant #04-02-05-9004	The Development of and Intelligent Systems for the Design Evaluation and Improvement of Product Manufacturability and Assemability	Project Leader& researcher	RM 221,000
	IRPA Grant # 03-02-05-9012	A Study on New Ceramic Composite as Alternative Materials for Metal	Project Leader& researcher	RM107,000

		Cutting Tool		
1997-1999	USM Short-term Grant	A Study on New Product Development	Project Leader & researcher	RM18,000
1996 - 1998	USM Short-term Grant	A study of manufacturing strategy-technology relationships	Project Leader & researcher	
1992-1996		Design of manufacturing systems	Researcher	
1987-1990	IRPA Grant # 2-07-06-03	Aspects of localised corrosion and the necessary protection steps	Researcher	RM1,400,000

PUBLICATIONS:

Thesis

The Application of Quality Function Deployment Principles in Manufacturing Systems Design, Ph.D. Thesis, 1996, The University of Liverpool.

Fatigue Properties of Zinc Coated Steels, M.Sc Dissertation, 1984, Loughborough University of Technology.

Books

Translation: 'Materials for Engineering - Concept and Applications', Van Vlack, Addison Wesley, Dewan Bahasa & Pustaka, 1995.

Chapters in Book

1. IT Challenges for the SMEs – The Case of Advanced Manufacturing Technologies, in 'SMEs in the Information Age: Asian Perspective, Editor: M. A. Abdullah, 2002.
2. Prospects for improving SME's performance through concurrent engineering, 'Small and Medium Enterprises in Asian Pacific Countries', Vol. III, Eds. M. A. Abdullah and M. I. Bakar, Nova Science Publishers, Inc., 2000.
3. Prospects for new product development within SME's, 'Small and Medium Enterprises in Asian Pacific Countries', Vol. III, Eds. M. A. Abdullah and M. I. Bakar, Nova Science Publishers, Inc., 2000.(co-author: N. Mohamad)

Articles in Journals and Proceedings:

1. N. Mohamad, S. N. Othman, N, A. Bakar and M. R. Muhamad, Sustaining competitiveness through product development activities within Malaysian automotive

suppliers, Proceedings of International Conf. on Technology and Operations Management, ITB, Bandung, 1-2 Dec 2006, pp 364-369,

2. Puvanasvaran, A. P., M. R. Muhamad, M.H.M.A. Megat, S.H. Tang and A.M.S. Hamouda, Development of lean process management system to create problem solving capability among employees, Proceedings ICOMAST 2006, International Conference of Manufacturing Science and Technology, August 28-30, 2006
3. (with A. B. Mohd Hadzley, B. Esmar, P.S. Sivarao, A. R. Md. Nizam and I. Ismawati) Wear characteristics of alumina/TiC cutting tool in the machining of AISI 1045 steel, 5th International Materials Technology Conference and Exhibition, Kuala Lumpur, Julai 2006
4. (with N. A. Mohamad, N. A. Mohd Lair) Optimising transportation across a supply chain, Journal of Technology Management and Entrepreneurship, Vol. 4/1, 2006, pp 75-90.
5. (with A. R. Ramly, B. Wardono and P.I. Tanaya) A prototype quick cost estimator system for plastic injection molding, TECHPOST, 2006
6. (with B. Esmar, P.S. Sivarao, A. B. Mohd Hadzley, A. R. Md. Nizam and I. Ismawati) Properties of PVD TiAlN Coatings: a Survey, Proceedings of International Conference on Manufacturing Science and Technology, August 28-30, Melaka
7. (with B. Esmar, P.S. Sivarao, A. B. Mohd Hadzley, A. R. Md. Nizam and I. Ismawati) Performance analysis of TiN/TiC coated alumina inserts in turning, Proceedings of International Conference on Manufacturing Science and Technology, August 28-30, Melaka
8. (with A.P. Puvanasvaran, MHMA Megat, S. H. Tang, and AMS Hamouda) A framework to develop tools and techniques requirements methodology towards sustainability change, Proceedings of the First International Conference and 7th AUN/SEED-Net FIELDWISE SEMINAR on Manufacturing and Material Processing, 14-15 March 2006, University Malaya, Kuala Lumpur, pp 526-530
9. (with H. Attan and M. Samsudin) Applying Concurrent Engineering in the Design of Vehicle Chassis, Proceedings of National Conf. on Advances in Mechanical Engineering, 18-20 May 2005, Kuala Lumpur, pp 65-74.
10. N. Mohamad, M. R. Muhamad, N. A. Bakar, Ahmad Rahman S. and Hashim, H. Effects on innovativeness of suppliers from involvement in customer's product development activities, Int. Conf. on Manufacturing Research, UK, 2005.
11. M. R. Muhamad and H. Ashari, The alignment of competitiveness, process structure and IT Applications and Its Effects on Firm Performance: A proposed Conceptual Model. International Industrial Engineering Conference, Istanbul, 2005.
12. M. Mokhtar, M. R. Muhamad, Z. A. Khan and S. Kamarudin, A Comparative Study of Continuous Wave and Pulsed Wave CO₂ Laser Cutting of a Polymer Matrix Composite Material, Int. Advanced Technology Congress, Dec 6-8, 2005, Putrajaya.
13. Rahmatullah, M. R. Muhamad and P. Simbolon, Development of a methodology to enhance design for assembly, Seminar Nasional Teknoin, Jogjakarta, 2005

14. Rahmatullah, M. R. Muhamad and I. Efendi, The use of ICT in Design and Manufacture, Seminar Nasional Teknoin, Jogjakarta, 2005
15. (with Z. Ebrahim) Integrating Lean Management and Quality Management – an Analysis of the Critical Links, Proceedings of National Conf. on Advances in Mechanical Engineering, 18-20 May 2005, Kuala Lumpur, pp 667-678.
16. Application of QFD principles in manufacturing system design, Journal of Technology Management and Entrepreneurship, Vol 3/2, 2005, pp 41-65.
17. (with G. Zakri) Matching Economic Values and Functionalities in Product Design, Second Int. Industrial Engineering Conf. Riyadh, S. Arabia, 19-21 December 2004.
18. (with N. Mohamad, H. Hussain, A. R. Songip and S. N. Othman) Collaborative Product Development Implementation Between Malaysian Auto Suppliers and Their Customers, Second Int. Industrial Engineering Conf. Riyadh, S. Arabia, 19-21 December 2004.
19. (with M. N. Abd. Rahman) Empowering the Muslim Ummah Through Technological Innovation, Int. Engineering Convention, Amman, Jordan, 24-26 August 2004.
20. (with M. N. Abd. Rahman) Managing Idea Generation Process in the Upstream R&D, Conference on Research Management, International Islamic University, Kuala Lumpur, 9-10 September 2003
21. (with M. Sobron Yamin Lubis and R. Othman) Wear behaviour of ceramic cutting tools in the machining of stainless steels, 3rd International Conference on Recent Advances in Materials, Minerals and Environment (RAMM 2003), Penang.
22. (with M. Sobron Yamin Lubis) Penilaian Kemampuan Pahat Potong Keramik Pada Pemesinan Stainless Steel, Seminar Nasional Tahunan Teknik Mesin 2002, 15-16 Oktober 2002, Surabaya, Indonesia.
23. (with Rahmatullah) The Use of ICT in Design and Manufacturing, National Seminar on ICT, Universiti Utara Malaysia, 9-10 October 2002.
24. (with M. N. Abd. Rahman) Holistic View of New Product Development Strategic Planning Process, International Conference on Manufacturing, ICM2002, 9-11 August 2002, Dhaka, Bangladesh.
25. (with S. Ariyanti), Penyelidikan Terhadap Faktor-faktor Yang Mempengaruhi Pembangunan Produk Baru Pada Industri Pembuatan di Malaysia, Seminar Nasional Teknik Industri dan Manajemen Produksi, 6-7 Ogos 2002, Surabaya, Indonesia.
26. (with N. Mohamad, S. Norezam and N. A. Bakar), Supplier collaboration in product development – a case of Malaysian automobile industries, Proceedings Second World Engineering Congress, 22-25 July 2002, Kuching, Sarawak, pp 43-48.
27. (with S. Ariyanti and N. Mohamad) New Product Development as an Impetus to Science and Technology Advancement, Proceedings Second World Engineering Congress (Manufacturing Engineering, Automation & Robotics), 22-25 July 2002, Kuching, Sarawak, pp 92-96.

28. (with Z. Ghazali) Design Evaluation System Development for Manufacture and Assembly, Proceedings of Mechanical Engineering Research Colloquium, School of Mechanical Engineering, USM, May 2002, pp 55-64
29. (with A. Husain) Application of Feature Based Technology in Design for Assembly Planning, Proceedings of Mechanical Engineering Research Colloquium, School of Mechanical Engineering, USM, May 2002, pp 30-37
30. (with Rahmatullah) The Development of an Evaluation System for DFA, Proceedings Mechanical Engineering Research Colloquium, School of Mechanical Engineering, USM, May 2002, pp 21-29
31. (with M.N. Abd. Rahman) The Fuzzy Front End of New Product Development, Proceedings of Mechanical Engineering Research Colloquium, School of Mechanical Engineering, USM, May 2002, pp 65-76
32. (with M.N. Abd. Rahman) Product Design for Sustainable Environment, 4th Asian Science and Technology Congress, 2002, 25-27 April, Kuala Lumpur.
33. (with S. Ariyanti) The role of IT in new product development, Malaysian Science and Technology Congress 2001, Symposium C: Information and Communication Technology, 8-10 November 2001.
34. (with M. M. Rizwan) Integrated Design for Assembly Methodology, Malaysian Science and Technology Congress 2001, Symposium B: Physical Sciences and Engineering, 8-10 October 2001.
35. (with N. Mohamad) Entrepreneurship and product innovation in the Malaysian SME's, First National Conference on Entrepreneurship and Small Businesses, Langkawi, 8-9 September 2001.
36. (with Z. Ghazali, F. M. Hashim & B.M.B. Mohamad) Project planning through functional modeling approach, National Seminar on Project Management 2001, Langkawi,
37. (with M. M. Rizwan) Integrated Design for Assembly Methodology, *Proceedings of the Brunei Int. Conf. on Engineering and Technology*, 9-11 October 2001, pp 517-528.
38. (with N. Mohamad) Lessons from technological innovation- the case of new product development, *Proceedings of 17th Int. Conf. On CAD/CAM, Robotics and Factories of the Future*, Durban, S. Africa. pp 590-597.
39. (with I. P. Almanar) A Study of Pre-calibrated Technique for Compensation of Geometrical Errors on Large Machine Tools, *First International Conference on Mechatronics, ICOM 01, IIUM*, Februari 2001.
40. QFD as a Product Design Quality Tool, *Proc. National Design Seminar 2001 – Design for the New Millenium*, Johor Bahru, Januari 2001, pp 1-7.
41. An Approach for Improving the Transparency and Traceability of Managerial Decision Making, *Proceedings of the National Conference on Management Science/Operations Research, School of Mathematical Science USM and MSORSM*, Penang, 20-22 November 2000, pp 17-23.

42. (with N. Mohamad & N. A. Bakar), Fostering an Innovative Climate for the Development of New Products Among the Malaysian SMEs, *The 4th Biennial Conference on Current Trends in Entrepreneurship Research*, Ahmedabad, India, 8-10 November 2000.
43. (with R. Othman & S. Omar), Ceramic Cutting Tool Materials, *J. Solid State Science and Technology Letters*, Vol. 7, No. 2 (Suppl.) 2000, *The XVII Regional Conference on Solid State Science and Technology*, 20-22 November 2000.
44. (with R. Othman & S. Omar), In-Situ Synthesis of Al₂O₃-TiC Composite Powders, *Jurnal Sains Nuklear Malaysia*, Vol.187, No. 2 (Suppl.,) Dec. 2000, pp. 330-335.
45. (with L. A. M. Raj), PC Implementation of Integrated Manufacturing System, *Proceedings World Engineering Congress (Mechanical and Manufacturing Engineering)*, Kuala Lumpur, 1999, pp 519-524.
46. (with M. Sobron, Yamin Lubis), Incorporating Surface Finish Quality in the Evaluation of Machining Cost, *Proceedings World Engineering Congress (Mechanical and Manufacturing Engineering)*, Kuala Lumpur, 1999, pp 551-554.
47. (with N. Mohamad) Organizational Issues of New Product Development in Malaysian Manufacturing Industries, *Proceedings World Engineering Congress (Mechanical and Manufacturing Engineering)*, Kuala Lumpur, 1999, pp 525-529.
48. An overview of manufacturing strategy, *IEM (Perak) Annual Bulletin*, 1999, pp 55-59.
49. Manufacturing Competitiveness Through Concurrent Engineering, *Proceeding of the 17th CAFEO: The Challenges for Engineers in the New Millennium*, Singapore, 18-20 Nov. 1999, pp 91-102.
50. Managing technological innovation for sustainable industrial development, *Proceeding of the 16th CAFEO: ASEAN Engineers and Architects: Primemovers of the Next Millennium*, Pampanga, Phillipines, 21-24 Nov. 1998, pp 189-196.
51. Concurrent engineering practices among the Malaysian small and medium scale enterprises, *First Int. Conf. On Stimulating Manufacturing Excellence in Small and Medium Scale Enterprises*, Sheffield, April 1998.
52. Overcoming Barriers to AMT Implementation, *Asia-Pacific CAD/CAM Seminar-Workshop '97*, SIRIM, December 1997.
53. Managing Advanced Manufacturing Technology, *Malaysian Science and Technology Congress*, Johor Bahru, Oct. 1997.
54. (with L. A. M. Raj) A review of CIM implementation, *Malaysian Science and Technology Congress*, Johor Bahru, Oct. 1997.
55. Customer Oriented Design of Engineering Curriculum, *Proceedings of Int. Conference on Global Challenges in Engineering Education – Role of Islamic Countries*, KL, July 1997, pp 79-83.
56. (with N. Mohamad) New product development as a vehicle for competitive positioning and its impact on engineering education, *Proceedings of Int. Conference on Global Challenges in Engineering Education Role of Islamic Countries*, KL, July 1997, pp 207-211.

57. The deployment of strategic requirements in manufacturing systems design, Fifth Int. Conf. On FACTORY 2000, Cambridge, April 1997.
58. Manufacturing Competitiveness Through Concurrent Engineering, Annual Bulletin, Institution of Engineers Malaysia (Perak Branch), Dec. 1997.
59. Shifting manufacturing quality control upstream – product design quality control using QFD, National Statistics Conf., KL, Nov. 1996.
60. (with K K B Hon) A Framework for the Deployment of Strategic Systems Requirements in Manufacturing System Design, Advances in Manufacturing Technology, X, Bramley et. al. (eds), 1996, pp 121-125.
61. Are you truly meeting your customer's requirements? The case for QFD, Annual Bulletin, Institution of Engineers Malaysia (Perak Branch), Dec. 1996.
62. (with Geddam, A. and S Sahudin) 'Industry-Oriented to Manufacturing Education in Undergraduate Courses of Mechanical Engineering, Proceedings of AESEAP/FIESEAP Int. Conf. on Engineering Education, Christchurch, New Zealand, 1991.
63. Management Awareness in Engineering Education, Proceedings of AESEAP/FIESEAP Int. Conf. on Engineering Education, Penang, 22-24 May 1990, pp 87-91.
64. (with A Suhail) Entrepreneurship Development in Engineering Education, Proceedings of AESEAP/FIESEAP Int. Conf. on Engineering Education, Penang, 22-24 May 1990, pp 59-64.
65. Fatigue failure in engineering, Annual Bulletin, Institution of Engineers Malaysia, Perak Branch, December 1989.

RESEARCH/TECHNICAL REPORTS:

1. June 1999, USM Short Term Research Report: Manufacturing Strategy in the Malaysian Manufacturing Industries.
2. May 1991, Technical Report on the Feasibility of Developing Presswork Metal Products for Small Scale Industry, Entrepreneurship and Guidance Department, MARA.
3. March 1991, Technical Report on the Performance of Metal Fabrication Workshop for Small Scale Industry, Entrepreneurship and Guidance Department, MARA.
4. July 1988, Technical Report on the Welding Tests of Construction Steel.

OTHER ACADEMIC RESPONSIBILITIES:

Editorial Board, Journal of Technology Management and Entrepreneurship, KUTKM

LECTURES/SHORT COURSES:

Coordinator:

2000, Design of Manufacturing Systems, USM,P. Pinang.

Resource Person:

September 2002, Welding and NDT, 'Steam Plant Operation', Grade II, Johor Baru

April 2002, Welding and NDT, 'Steam Plant Operation', Grade II and Grade I, Penang.

April 2001, Materials for Boiler Manufacturing and Welding and NDT, 'Steam Plant Operation', Grade I and II, ASEAN Bintulu Fertilizer, Bintulu, Serawak.

Mac 2001, Materials for Boiler Manufacturing and Welding and NDT, 'Steam Plant Operation', Grade I and II, Ipoh

Feb 2001, Materials for Boiler Manufacturing and Welding and NDT, 'Steam Plant Operation', Grade I and II, Kota Kinabalu

June 2000, Materials for Boiler Manufacturing and Welding and NDT, 'Steam Plant Operation', Grade II, Kuantan.

April 1999, Materials for Boiler Manufacturing and Welding and NDT, 'Steam Plant Operation', Grade II, Lahad Datu, Sabah.

November 1999, Materials for Boiler Manufacturing and Welding and NDT, 'Steam Plant Operation', Grade II, USM, Tronoh.

1996, Competitive Product Design and Development, USM/FMM, Ipoh.

1995, Quality Function Deployment, IGDS Program, The University of Liverpool.

1991, Quality Control for Industries, USM.

CONSULTANCY WORK

Year	Project	Client	Involvement	Project Value
December 2006 – June 2010	Technology provider to Kolej Kemahiran Tinggi MARA, Kuantan	MARA	Project Leader and Consultant	RM 6.7 million
April-August 2002	Performance Study of BGA Dicing Handler System	Greotech Sdn. Bhd., Penang	Consultant	RM16,000
October 2001- November 2002	A study on the needs and requirements of Kulim Techno Centre	Kulim Technology Park Corporation	Project Leader and Consultant	RM175,000
1999 – 2002	Equipment requirements for University Technology Petronas	ITP Sdn. Bhd	Consultant (manufacturing, metrology and foundry labs,	RM2.2 million

			engineering workshop)	
August 1997- August 2000	Re-engineering of electroplating head	Dynacraft Industries Sdn. Bhd. P. Pinang	Project Leader and Consultant	RM86,000
Januari - April 1998	Manufacturing and quality improvement of aluminium die-cast line	Metalcast Non-ferrous, Kampar, Perak	Project Leader and Consultant	RM12,000
Januari 1997	Training on Quality Function Deployment	Domain Solutions Pte. Ltd. Singapore	Project Leader and Consultant	RM4,000
September 1990 - Jun 1991	Panel of Technical Experts for the SMI's	MARA.	Consultant	Voluntary

SERVICES TO THE PUBLIC

Academic

Date	Services
2003	International Advisory Committee, 19 th Int. Conf. on CAD/CAM, Robotics and Factories of the Future
2002	IEM Panel member for Paper 300A-Engineer in Society
2001 – present	Development of Teaching Modules for ITTAR, Prai (Mathematics, Engineering Materials, Management, FMS)
2001 – present	JMTI Technical Advisory Committee
2000 – 2002	Module Leader/Lecturer: Management of Change, Executive Masters Program, IIUM
2000 – present	JMTI Technical Advisory Sub-Committee for Mechatronics Engineering
1999	Curriculum Committee (Diploma), Hitech-Utama Sdn. Bhd.
1998 - Present	Referee, Industrial Technology Journal, SIRIM
1998 – 2001	External examiner (Diploma), UNISMA College.
1998 – present	Examiner, IEM/BEM Examination (Paper: Engineer in Society)
1998	Member, Committee on Development of Malaysian National Occupational Skill Standards for Manufacturing Automation/Mechatronics, Majlis Latihan Vokasional Kebangsaan, Kementerian Sumber Manusia.
1998	Curriculum Committee (Diploma), Ingress College.
1997 – present	Referee, IEM Journal
1997- present	External Moderator (Diploma - Manufacturing), INTI College.
1997- 1998	Part-time lecturer, Universiti Teknologi Petronas (Introduction to Materials Science)

Non-Academic

Date	Services
2002/03	Member, PIBG SMKA Arau, Perlis
2001/02	Member, PIBG SMKA Arau, Perlis Member, PIBG SMKA Kerian, Perak
2000/01	Deputy Chairman, PIBG SMKA Sultan Azlan Shah, Bota, Perak
1997/99	Chairman, Parent-Teacher Association, Sekolah Rendah Al-Hidayah, Ipoh.
1997	A member of Panel of Judges in Design Competition for Boarding Schools.