

## BRIEF CV



**Professor Dr. Shamsuddin Sulaiman**  
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**Areas of interest:** Manufacturing Engineering;  
CAD/CAM, Mould and Die , Casting Technology

### Academic Qualification:

- Ph.D in Mech. Eng University of Wales Swansea UK
- MSc. in Mech. Eng University of Wales Swansea UK
- B. Eng Universiti Putra Malaysia

### Professional Qualification/ Membership/ Affiliation:

- Registered with Board of Engineer, Malaysia (BEM) (13986)
- Member of The Institution of Engineers, Malaysia (IEM)(M15210)
- Member of The American Society of Mechanical Engineers (ASME) (7009947)
- Member of New York Academy of Sciences

### Appointments:

Sept 2007 – to date	Professor , Dept. of Mechanical and Manufacturing Engineering, Universiti Putra Malaysia
Sept 2003-Aug 2006	Deputy Dean, Faculty of Engineering, Universiti Putra Malaysia
August 1998- August 2007	Associate Professor, Dept. of Mechanical and Manufacturing Engineering, Universiti Putra Malaysia
Feb. 2001 – Nov 2001	Deputy Director, University Research Park/Taman Penyelidikan Universiti (TPU), Universiti Putra Malaysia
1986 –1988	Tutor, Mechanical and Manufacturing Engineering Department, Faculty of Engineering, UPM
April'99-Oct'99	College Master/Pengetua, Kolej Tun Perak, Universiti Putra Malaysia
Jan 1995-August 98	Head, Dept. of Mechanical and Manufacturing Engineering, Universiti Putra Malaysia
March 1992-August 98	Lecturer, Dept. of Mechanical and Manufacturing Engineering, Universiti Putra Malaysia
July 1986-Feb.1992	Tutor, Dept. of Mechanical and Systems Engineering, Universiti Putra Malaysia

### Areas of Interest:

Manufacturing Engineering; CAD/CAM, Mould and Die , Casting Technology

### Research Topics (Project Leader);

Year	Topic/ Sponsor	Amount (RM)
2002 –Dec 2006.	IRPA Experimental Applied Research (as Head of Project) – “Development and Analysis of Casting Product using Network Method of Flow and Solidification Process”. (03-02-04-0415-EA001).	RM168,000

March 2004 - Oct 2005.	UPM Fundamental Research Grant (as a Head of Project) – “Study of Lift and Drag Forces of Aerodynamic Shapes in the Low Speed Wind Tunnel”.	RM50,000.
1991- 1995.	IRPA (as Head of Project) – “Finite Element Analysis for Stress, Thermofluid and Vibrations” (2-07-05-015).	RM550,000
1996-2000	IRPA ( as Head of Project) – “Finite Element Modelling of Casting Process” (03-0204-0023).	RM268,000
Aug 1995 - Jan 1997	Ministry of Human Resources of Malaysia (as Head of Project), “Development of Research Model to monitor skill demand for Metal Machining Industry”.	RM159,471.
Jun 1999 - Jun 2000.	UPM Short Term Research Project (as Head of Project) – “Design and Fabrication of Plastic Injection Mould” .	RM15,000.
Jun 2000 - Jun 2001	UPM Short Term Research Project (as Head of Project) – “Design and Fabrication Wind Tunnel Instrumentation” .	RM10,000.
Jun 2002 - Jun 2003	UPM Short Term Research Project (as Head of Project) – “Design and Fabrication of Three-Component Balance of Wind Tunnel” (55024).	RM15,000.

## **Student Supervision**

### **On-going PhD (as Chairman of Supervisory Committee)**

1. Optimization of closed die forging process, M.Jolgaf, started July 2006.
2. Tail Sand properties and characteristics, Azhar Abdullah, started July 2007
3. Manufacturing Engineering, Taufik, started July 2007.

### **On-going PhD (as Member of Supervisory Committee)**

1. Line Balancing of Production line, Gholamreza, started July 2006.
2. Sweet potato harvester, M.Akhir, started Dec 2005.

### **On-going MS (as Chairman of Supervisory Committee)**

1. Development of Super Alloy machining, Poria, started May 2006.
2. Design and fabrication of Lift and Drag (LD) analyser, Hafizal Abu Bakar, started November 2002.
3. Molten metal flow and solidification of casting process, Nanang Fatchurohman, started July 2007.
4. Genetic Algorithms in machining, Mostafa, started July 2007

5. Die design and fabrication, Zan Zainudin started Dec 2006.
6. Analysis of PIM products defects, Mohd. Afandi started July 2007.
7. Development of SiC reinforced MMC, Tarek Marwan started Dec 2006.
8. Wettability of MMC, Mohammed Omran Wafi started Dec 2006.

**On-going MS (as Member of Supervisory Committee)**

1. Development of feature recognition system for prismatic part, Syarlina Syazlina Saaid started Mei 2003.
2. Filter system for sand casting process, Ehsanreza Bagherian stated July 2007.

**Completed Ph.D (as Chairman of Supervisory Committee)**

1. Implementation of Advanced Manufacturing Technologies (AMTs) in the Small and Medium Scale Industries (SMIs) of Malaysia, Rosnah Mohd Yusof (Nov 2002)
2. Effects of grain refinement on the cooling rate, and microstructural and mechanical properties of Al-Si sand casting, Lim Ying Pio (August 2005).
3. Properties of Metal matrix Composite of Aluminium – 11.8% Silicon Reinforced with different particulates, T.R. Vijayaram (June 2006).
4. Design of composite tube subjected to quasi-static and dynamic impact loadings, Elfetori F. Abdewi (June 2007)

**Completed Ph.D (as Member of Supervisory Committee)**

1. The performance of a disk plow combined with a rotary blade in wet soil, Faizal Amri (Nov 1997).
2. Design, Fabrication and Performance Test of a Peanut Harvesting Machine, Elnougomi Abd. Elgadir Omer (Dec 2000).
3. Rapid Prototyping using a Precision Robotic Manipulator, Tang Sai Hong PhD (Dublin) (Sept 2000)
4. Improving Flexibility in Manufacturing using a Family Ordering System for long lead time components, C.K.Ooi (March 2005)
5. Metamodelling Technique of metal forming process, Fayis (May 2006).

6. Analysis of Thermal Storage Material and Heat Transfer Characteristics, Suditama, May 2007.

**Completed MS (as Chairman of Supervisory Committee)**

1. Development of Auto Wire Bonder Expert System, Ng Yu Ting (May 1997).
2. Computer Aided Engineering in diecasting design, Md. Samsul Abedin (Nov 1997)
3. Using FEM in Optimisation of Die Casting Design, Elfetori F. Abdewi (March 1999).
4. Thermal Analysis of Two and Three-gate Sand Casting Mould, Alex Lim Kheng Hooi (Oct 2001).
5. Design, Fabrication and Analysis of Plasting Injection Moulding Mould, Mohd Khairol Anuar bin Mohd Ariffin (Oct 2001).
6. Robot Manipulation Tracjectory Planning in Complex Position, Mohd. Razali Samin (Jan 2002).
7. Optimisation of machining parameters in Wire Cutting Process for Cooling Jig, Azman Senin (July 2002).
8. Numerical Investigation of Fibre reinforced polymer, Edi sham Zainudin (May 2002)
9. Reverse Engineering of free-form surfaces, Mohamad Irwan Yahaya, May 2003.
10. Wafers fabrication of bipolar transistor, Kader Ibrahim Ab. Wahab July 2003.
11. Design and fabrication of plastic injection mould, Wong Choon Tat , August 2004.
12. Study of flow and forces of aerodynamic shape in the wind tunnel, Nasrol Sapri, Sept 2005.
13. Total Quality management in Perodua, Nur Elya May 2005.
14. Mechanical properties and characterization studies on the ascast quartz particulate reinforced LM6 alloy matrix composites, M.Sayuti, Sept 2005.
15. Improvement of accuracy level of automaotive front fender shield assembly using process failure mode and effect analysis and control plan techniques, Khairul Nizam Md. Tohit April 2006.
16. Design and Analysis of mould for Plastic Injection Moulding, Azmi Harun, May 2006.
17. Design and development of press tool die for sheet metal product. Yuslan Yasok, December 2006.

18. Automated system of a Composite product fabrication, Adel Abulgasm Lahimer. July 2007.

19. Job-shop sequencing for small press shop, Amizi Noor, July 2007.

### **Completed MS (as Member of Supervisory Committee)**

1. Strength and Stiffness of joints in rattan furniture, Wan Tarmeze Wan Ariffin (July 1994).
2. Simulation-based analysis of kinematics, dynamics and control of space robots, Shafina Sultana (Dec 1995).
3. Development of no-clean solder for Radio Frequency power module, Mohabatul Zaman Bukhari (Dec 1996).
4. Design and Fabricate filament winding machine and analysis of cotton/epoxy and pandanus/epoxy., Elsadiq Mahdi Ahmed Saad (Nov 1997).
5. CAD/CAM system for closed die forging Process, Mohamed A.Abdulmawlla (May2000).
6. Emulation of the Space Robotics System on Earth, Ten Seng Teik (July 2001).
7. The Evaluation of Mechinablity and Surface Texture of Tool Steel with Copper Electrode in Electro Discharge Machine, Mohd Ahadlin Mohd Daud (Oct 2001)
8. Development of hole recognition system using rule-based technique, Tan Chee Fai (Oct 2001)
9. Development of an intelligent painter robot using Cartesian coordinate approach for construction industry, A.K.M.Parves Iqbal (Nov 2002).
10. Development of 2D CAD software based on ISO technical drawing standard, Pitoon Nopnakorn July 2003.
11. Rapid Prototyping system of composite material products, Lee Hoo Boon August 2003.
12. Clutch pedal design and fabrication for Injection moulding for polyamide-based short fibre reinforced composite, Sharifah Imihezri Syed Shaharudin 2005.
13. Design and development of labour productivity monitoring system in manufacturing, Mohandas a/l Krisnan, May 2007.
14. Rigid Plastics FEA in metal forming processes, Mohd Fauzi Hashim, May 2007

**b. Undergraduate supervision – 56 BE projects – all completed**

**Research Products/ patent:**

LD Analyser (Three-Component Balance for Wind Tunnel)  
Emergency Tube for Motorcycles  
Corrugated Composite Tubes Machine PI 20063841  
Software TNAS (Thermal Network Analysis Software)

**Publications:**

**a. Refereed International Journal**

1. Elfetori F.Abdewi, Shamsudeen Sulaiman, A.M.S.Hamouda and E.Mehdi, "Quasi-static axial and lateral crushing of radial corrugated composite tubes", Int. Journal of Thin-walled Structures, article in press. 2007.
2. S.M.Sapuan, S.S.S.Imihezri, **S.Sulaiman**, M.Hamdan and E.S.Zainudin, "Comparison of simulated and actual product of polymer composite automotive clutch pedal", Int. Journal of Mechanical and Materials Engineering (IJMME), Vol 2 (2007) No 1, pp29-39
3. **S.Sulaiman**, M.Sayuti and R.Samin, "Mechanical properties of the as-cast quartz particulate reinforced LM6 Alloy matrix composite", Accepted for publication in Int. Journal of Materials and Processing Technology Special Volume 2007.
4. S.H.Tang, Y.J.Tan, S.M.Sapuan, **S. Sulaiman**, N.Ismail and R. Samin, "The use of Taguchi method in the design of plastic injection mould for reducing warpage", Int. Journal of Materials and Processing Technology, Vol 182 (2007), pp 418-426.
5. K.N.M.Tohit, **S.Sulaiman**, N.Ismail, M.Y.Ismail and S.M.Sapuan, "Improvement of accuracy level using process failure mode and effect analysis and control plan techniques for automotive fender shield assembly", Journal of Scientific and Industrial Research (2007)
6. Thoguluva Raghavan Vijayaram, **Shamsuddin Sulaiman**, Megat Mohamad Hamdan Megat Ahmad and Abdel Magid Salem Hamouda, "Processing, Properties and Metallographic Studies of Combined Tungsten Carbide and Alluminium Silicate Particulates Reinforced Aluminium-11.8% Silicon Alloy Matrix Hybrid Composite Castings", Indian Foundry Journal, Vol. 53 No. 2 February 2007, pp33-41.
7. E,F.Abdewi, **S.Sulaiman**, A.M.S.Hamouda and E.Mahdi, 'Behaviour of axially and laterally crushed corrugated composite tubes', Submitted to Int. Journal of Mechanical Engineering Science, JMES435, July 2006.
8. Thoguluva Raghavan Vijayaram, Mohamad Sayuti, **Shamsuddin Sulaiman** and Abdel Magid Salem Hamouda, "Mechanical properties and characterisation studies on the ascast quartz particulate reinforced aluminium- 11% silicon alloy matrix composites", Submitted for publication in the Journal of Alloys and Compounds Elsevier, UK.
9. E,F.Abdewi, **S.Sulaiman**, A.M.S.Hamouda and E.Mahdi, 'Quasi-Static axial and lateral crushing of radial corrugated composite tubes', Int. Journal of Thin-Walled Structure, (In press April 2006)

10. T.R. Vijayaram, **S.Sulaiman**, A.M.S.Hamouda, and M.H.M.Ahmad, "Fabrication of fiber reinforced metal matrix composites by squeeze casting technology", *Int. Journal of Materials and Processing Technology* , 178 (2006) 34-38.
11. E.F.Abdewi, **S.Sulaiman**, A.M.S.Hamouda and E.Mahdi, "Effect of geometry on the crushing behaviour of laminated corrugated composite tubes", *Int. Journal of Materials and Processing Technology* , 172(2006) 394-399.
12. T.R. Vijayaram, **S.Sulaiman**, A.M.S.Hamouda, and M.H.M.Ahmad, "Numerical simulation of casting solidification in permanent metallic moulds", *Int. Journal of Materials and Processing Technology* , 178(2006) 29-33.
13. S.S.S. Imihezi, S.M.Sapuan, **S.Sulaiman**, M.M.Hamdan and E.S. Zainudin, " The simulation study of the effect of single and double gated molds on pressure and temperature in injection molding of polymeric composite clutch pedals", *Int. Journal of Multidispline Modeling in Mat and Str.*, Vol. 2, No. 3, pp. 355-362 (2006)
14. T.R. Vijayaram, **S.Sulaiman**, A.M.S.Hamouda, and M.H.M.Ahmad, "Foundry quality control aspects and prospects to reduce scrap rework and rejection in metal casting manufacturing industries", *Int. Journal of Materials and Processing Technology* , *Int. Journal of Material Processing Technology*, 178 (2006), pp39-43.
15. T.R. Vijayaram and **S.Sulaiman**, "Quantification and analysis of surface roughness parameters on selected engineering components by mechanical measurement methodology", Submitted to *Int. Journal of Instrumentation System and Automation (ISA)* May 2005.
16. E.F.Abdewi, **S.Sulaiman**, A.M.S.Hamouda and E.Mahdi, "Effect of shape and geometry on the energy absorption capability of fiberglass composite tubes", Submitted to *Int. Journal of Composites Science and Technology*, August 2005.
17. Hafizal Abu Bakar, **Shamsuddin Sulaiman**, S.M. Sapuan Salit and T.R. Vijayaram, "Redesigning and construction of three-component balance for low speed wind tunnel", *Asean Journal of Science and Technology for Development* July 2005.
18. T.R. Vijayaram, **S.Sulaiman**, A.M.S.Hamouda, and M.H.M.Ahmad, "Technological advances in squeeze casting technique for processing light metals, alloys and metal matrix composites", *La Metallurgia Italiana Journal*, May 2005.
19. C.F.Tan, N. Ismail, S.V.Wong, **S.Sulaiman** and M.R.Osman, "Development of hole recognition system from step file", *AJSTD* Vol. 22 Issue 3, 2005, pp. 285-295.
20. C.K.Ooi, M.M.H.M.Ahmad, **S.Sulaiman**, "Proposing a non-traditional ordering methodology in achieving optimal flexibility with minimal inventory risk", *Asia Pacific Journal of Marketing and Logistics*, Vol. 17, 1 2005, pp 12-18.
21. T.R. Vijayaram and **S.Sulaiman**, "An experimental investigation to design and from a sand control chart to reduce defects in castings produced by green sand moulding process", *La Metallurgia Italiana Journal*, May 2005.

22. H.B. Lee, S.M.Sapuan, **S.Sulaiman** and M.H.M.Ahmad, "Design process and rapid prototyping of fibre reinforced composite pedal box", Int. Journal of Sudan Engineering Society, August 2005, Vol 51 no 44, pp23-32.
23. S.H.Tang, Y.M.Kong, S.M.Sapuan, R.Samin, **S.Sulaiman**, "Design and thermal analysis of plastic injection moulding", Int. Journal of Materials and Processing Technology , 171 (2006) pp259-267.
24. S.S.S.Imihezri, S.M.Sapuan, **S.Sulaiman**, M.M.Hamdan, E.S. Zainudin, M.R.Osman and M.Z.A.Rahman, "Mould flow and component design analysis of polymeric based composite automotive clutch pedals", Int. Journal of Materials and Processing Technology 171 (2006) 358-365.
25. Y.P.Lim, **S. Sulaiman**, A.M.Hamouda and M.M.H.M.Ahmad,"Grain refinement of LM6 Al-Si alloy sand castings to enhance mechanical properties", Int. Journal of Materials and Processing Technology, Vol 162-163 (2005) pp435-441.
26. S.S.S. Imihezri, S.M.Sapuan, **S.Sulaiman** and M.Hamdan, "Simulation of fill time injection moulding process for composite pedals using mould flow analysis software", Mech. Eng. Res. Journal, Vol. 5 (2005), pp 7-10.
27. S.S.S. Imihezri, S.M.Sapuan, **S.Sulaiman**, M.M.H.M.Ahmad, M.R.Osman and E.S.Zainudin, 'A simulation work to study the effect of increasing number of gates on air traps and weld line formation in injection moulded composite clutch pedal', Journal of Applied Technology, vol.2 No. 2 October 2004 , pp 105-109.
28. **S.Sulaiman**, Y.P.Lim, T.R. Vijayaram, A.M.S. Hamouda and M.M.Hamdan, "An Experimental Investigation on Alumunium-Silicon Alloy Sand Castings to Study the Microstructure-Property Correlation Influenced by Solidifiatioin Rate", Int. Journal of Materials and Processing Technology, MSH1750, 2004,pp1-13.
29. S.S.S.Imihezri, S.M.Sapuan, M.M.H.M.Ahmad, **S.Sulaiman**, "Design of Composite Clutch Pedal", Int. Journal Sudan Engineering Society, Issue 42 Vol 50, July 2004, pp15-23.
30. S.H.Tang, S.L.Wong, **S.Sulaiman**, P.Young and M.S.J. Hashmi, "Computer-Aided Design in Subtractive and Additive Prototyping", Pertanika J. Sci. & Technol. Supplement 12(2) 2004 pp127-137.
31. **S.Sulaiman**, A.M.S. Hamouda, "Modelling and Experimental Investigation of Solidification Process in Sand Casting", Int. Journal of Materials and Processing Technology, 155-156 (2004), pp1723-1726.
32. C.F. Tan, N.Ismail, M.R.Osman, S.V Wong and **S.Sulaiman**," The Development of Hole Recognition System for Machined parts", Pertanika J. Sci. & Technol. Supplement 12(1) 2004 pp1-8.
33. M.Y.Rosnah, M.M.H.Megat Ahmad, **S.Sulaiman** and Z.Mohamad, "Implementation of Computer-Based Technologies for the Small and Medium Scale Industries of Malaysia", Pertanika J. Sci. & Technol. Supplement 12(1) 2004 pp41-50.

34. E.S.Zainudin, S.M.Sapuan, **S.Sulaiman** and M.M.H.M.Ahmad, "To explore and confirm the validated experimental results in short fibre reinforced injection moulded polycarbonate composite disc using MPI technique", *Int. Journal of Industrial Technology* Vol13 No.2,2004, pp57-63.
35. C.T. Wong, **S.Sulaiman**, N. Ismail and A.M.S Hamouda, "Design and Simulation of Plastic Injection Moulding Process", *Pertanika J. Sci. & Technol. Supplement* 12(2) 2004 pp85-99.
36. Ishak Aris, A.K.M. Parves Iqbal, A.R.Ramli and **S.Shamsuddin**, "Design and Development of a programmable painting robot for houses and buildings", *Journal Teknologi, UTM, No. 42(A), Jun 2005*, pp27-48.
37. N.Ismail, M.R.Osman,C.F.Tan, S.V.Wong and **S.Sulaiman**, "Extractiion of cylindrical features from neutral data format for CAD/CAM integration", *Int. Journal of Engineering and Technology*, Vol. 1, no. 2, 2004, pp.206-212.
38. **Shamsuddin Sulaiman** and Lim Ying Pio, "Validation of MAGMASoft simulation of sand casting process", *Int. Journal of IEM*, Vol. 65 No.1/2, September/December 2004, pp29-38.
39. S.S.S.Imihezri, S.M.Sapuan, M.M.H.M.Ahmad, **S.Sulaiman**, "A study on comparison of 'V' and 'X' ribbing in composite pedal using mold flow analysis software", *Int. Journal of Material and Design*, Elsevier, 2004, pp78-84..
40. Wong Choon Tat, **Shamsuddin Sulaiman**, Napsiah Ismail and A.M.S. Hamouda, "Design and Simulation of Plastic Injection Moulding Process, *Int. Journal of Plastic Molding Technology* 2003, pp.16-20.
41. **S.Sulaiman**, A.M.S. Hamouda and M.K.A.Ariffin, "Design and Fabrication of Plastic Injection Mould", *Int. Journal of Materials and Processing Technology*, 2003, pp115-120.
42. L.H.Boon, K.A.Abbas, S.M.Sapuan, M.M.H.Megat Ahmad, **S.Sulaiman**, "A Development and Comparative Study of Two Rapid Prototyping Processes of An Automotive Composite Pedal Box System, *Int. Journal of Advanced Manufacturing Technology*, Vol 5,2003, pp5-8.
43. M.Y.Rosnah, M.M.H.M. Ahmad, **S.Sulaiman** and Z.Mohamad, "Increasing competitiveness through advanced manufacturing technologies", *Int. J. Manufacturing Technology and Management*, Vol. 5, No. 4, 2003, pp. 371-379.
44. **S.Sulaiman**, S.H.Tang and M.S.J. Hashmi, "Rapid Prototyping System by Precision Robotic Manipulator", *Journal of Intelligent Manufacturing*, (2003). pp56-62.
45. **S. Sulaiman**, M.K.Ariffin, "Design, Analysis and Simulation of Plastic Injection Moulding Product", *Int. Journal of Plastic Molding Technology*, (2003), pp.26-32
46. E.S. Zainudin, S.M. Sapuan, **S.Sulaiman** and M.M.H.M.Ahmad, "Comparison of computational and experimental results on the fibre orientation distribution of short fibre reinforced injection moulded thermoplastic composites", *Journal of Plastics Rubber and Composites*, (2004), pp68-73.
47. L.H.Boon, K.A.Abbas, S.M.Sapuan, M.M.H.Megat Ahmad, **S.Sulaiman** and S.I.S.Shahrudin, "A development and comparative study of two rapid prototyping processes of an automotive pedal box system", *Int. Journal of Ciencia & Tecnologia dos Materials*, 15, no. 1-2, 2003, pp 5-8.

48. E.S. Zainudin, S.M. Sapuan, **S.Sulaiman** and M.M.H.M.Ahmad, "A numerical investigation of fibre orientation in injection moulded thermoplastic composites" *Advances in Material Processing Journal*, Institute of Materials Malaysia, ISBN983-2781-00-0, 2003, pp 1-33.
49. **S.Sulaiman**, A.M.S. Hamouda, "Solidification Analysis of Sand Casting Process", *Journal of Materials Processing Technology, Casting Technology Special Volume*, (2002) pp. 46-52.
50. E.S. Zainudin, S.M. Sapuan, **S.Sulaiman**, M.M.H.M.Ahmad and M. Hamedullah, "A comparison of computational simulation and experimental results in short fibre reinforced injection molded polycarbonate composites", *Journal of Materials Processing Technology* (2002) pp125-130.
51. E.S. Zainudin, S.M. Sapuan, **S.Sulaiman**, M.M.H.M.Ahmad "Fiber Orientation of Short Fiber Reinforced Injection Molded Thermoplastic Composites: A Review", *Int. Journal of Plastic Molding Technology*, March 2002, Vol 6, No. 1.
52. A.M.S.Hamouda, **S.Sulaiman**, C.K. Lau "Finite Element Thermal Analysis on the effect of workpiece geometry on the quenching of ST50 steel", *Int. Journal of Material Processing Technology*, Vol 119(2001) pp. 354-360.
53. **S.Sulaiman**, A.M.S.Hamouda, D.T.Gethin, "An experimental investigation of metal filling system in diecasting process" , *Int. Journal of Material Processing Technology*, Vol 119 Issue 1 (Dec 2001) pp 268-272.
54. **S.Sulaiman**, A.M.S.Hamouda, "Modelling of the thermal history of sand casting process", *Int. Journal of Material Processing Technology*, Vol 113 Issue 1(June 2001) 245-250.
55. **S. Sulaiman**, A.M.S. Hamouda, S.Abedin, "Three-Dimensional Finite Element Thermal Analysis of Die/Mould for Casting Industry Applications", *Int. Journal of Material Processing Technology*, August 2000.
56. M.Jolgaf, A.M.S. Hamouda, **S.Sulaiman** , M.M.Hamdan, "Development of CAD/CAM system for closed die forging Process", Vol 138, *Int. Journal of Material Processing Technology*, pp436-442.
57. M.Jolgaf, A.M.S. Hamouda, **S.Sulaiman**, M.M.Hamdan,"FE analysis of influence of unequal friction, metal filling and residual stresses in closed die forging processes", *Journal of Mechanics and Materials in Design*, Univ. of Toronto, May 2000, p158.
58. A.M.S. Hamouda, **S.Sulaiman**, M.M.Hamdan,"Coupled thermo-mechanical finite element analysis of high speed closed-die forging process", *Journal of Mechanics and Materials in Design*, Univ. of Toronto, May 2000, p201.
59. **S. Sulaiman**, A.M.S.Hamouda, S.Abedin, M.R.Osman, "Simulation of metal Filling Progress During the Casting Process", *Int. Journal of Material Processing Technology* 100 (2000) 224-229.
60. **S. Sulaiman**, A.M.S. Hamouda, S. Abedin," Development of Computer Aided Design System for Casting Process", *Int. Journal of Material Processing Technology*, March 1999.

61. **Shamsuddin Sulaiman**, Tham Chee Keen, "Flow analysis along runner and gating system of casting process", *Int. Journal of Materials Processing Technology*, Vol 63 Jan 1997, pp.690-695.
62. **S.B.Sulaiman**, D.T.Gethin, "Modelling and experimental investigation of heating and shaking subsystem for an oil analysis facility", *Asean Journal of Science and Technology for Development* 14(2)(1997) pp 11-26.
63. A.M.S.Hamouda, **S.Sulaiman** and M.S.J. Hashmi, "Fast Upsetting of circular cylinders of Aluminium Metal Matrix Composites: Experimental Results and Numerical Analysis", *Journal of Materials Processing Tech.* Vol PRO060/1-4, pp.723-727.
64. **Shamsuddin Sulaiman**, D.T. Gethin, "A Network Technique For Analysis Of Thermal Transient Casting Process", *Pertanika Journal of Science & Technology* Vol.4 No.2 1996 pp.251-261.
65. **Shamsuddin Sulaiman**, D.T.Gethin, "An experimental investigation into the metal filling system of pressure diecasting process", *Journal of Institution of Engineers Malaysia (IEM)* March 1996 pp.9-13.
66. **Shamsuddin Sulaiman**, D.T. Gethin, "Expert System for the Casting Process Selection and Analysis Procedure", *Institution of Engineers Malaysia (IEM) Bulletin* April 1995 pp.11-18.
67. **Shamsuddin Sulaiman**, "Casting Thermal Simulation", *Journal Institution of Engineers Malaysia (IEM)* June 1994 (54), pp5-16.
68. **S.B. Sulaiman**, D.T. Gethin, "A Network Technique for metal flow analysis in the filling system of pressure diecasting and its experimental verification on a cold chamber machine", *Journal Instn Mech Engrs* Vol 206 IMechE 1992, pp 261-275.

#### **b. Refereed International Conference Papers**

1. **S.Sulaiman**, M.Sayuti and R.Samin "Mechanical properties of the as-cast quartz particulate reinforced LM6 alloy matrix composites", *Proceeding of 10<sup>th</sup> Int. Conf. on Advances in Materials and Processing Technologies AMPT, Korea, 8<sup>th</sup> – 11<sup>th</sup> October 2007*, pp1733-1742.
2. P. Matoriam, **S.Sulaiman** and MMH. Megat Ahmad, "Using Taguchi quality engineering method to optimize electrical discharge turning", *Proceeding of Conference on applications and design in Mechanical Engineering, 25-26 October 2007 Kangar Perlis, Malaysia*, pp472-476.
3. G.R.Esmaeilian, R.Samin, M.M.H.Megat Ahmad, **S.Sulaiman** and N.Ismail, "Development of traditional assembly line balancing using new model assembly line balancing", *Proceeding of Conference on applications and design in Mechanical Engineering, 25-26 October 2007 Kangar Perlis, Malaysia*, pp13-17.
4. E,F.Abdewi, **S.Sulaiman**, A.M.S.Hamouda and E.Mahdi, 'Lateral collapse of composite radial corrugated tubes', *International Conference on Composite Materials and Nano-Structures, iC2MS'06, 25-29 April 2006, Shah Alam Selangor Malaysia*.
5. T.R.Vijayarm, **S.Sulaiman**, A.M.S.Hamouda and M.M.Megat Ahmad, 'Composite materials characterization using SEM: Current status and future trends', *13<sup>th</sup> Int. Scientific Conference of Electron Microcopy, Penang Malaysia, 21-25 Sept 2006*.

6. E,F.Abdewi, **S.Sulaiman**, A.M.S.Hamouda and E.Mahdi,'An experimental investigation into crushing behaviour of radial corrugated composite tube', Third International Conference on Structural Stability and Dynamics, ICSSD, 19<sup>th</sup>-22<sup>nd</sup> June 2005, Florida, USA.
7. E,F.Abdewi, **S.Sulaiman**, A.M.S.Hamouda and E.Mahdi,'An experimental investigation of the effect of specimen shape and geometry on the energy absorption of fiber glass composite tubes', International Advanced Technology Congress, IATC 2005 6-8 December 2005, Putrajaya Malaysia, pp238-245.
8. L. Ying Pio, **S. Sulaiman**, A.M.Hamouda and M.M.M.Ahmad,"Grain refinement of LM6-Si alloy sand casting to enhancement mechanical properties", Proceeding of 8<sup>th</sup> Int. Conf. on Advances in Materials and Processing Technologies AMPT, 16-19<sup>th</sup> May 2005, Poland, pp.625-629.
9. E,F.Abdewi, **S.Sulaiman**, A.M.S.Hamouda and E.Mahdi, "Effect of geometry on the crushing behaviour of laminated corrugated composite tubes", Proceeding of 8<sup>th</sup> Int. Conf. on Advances in Materials and Processing Technologies AMPT, 16-19<sup>th</sup> May 2005, Poland, pp.1-4.
10. T.R.Vijayaram, **S.Sulaiman**, A.M.Hamouda and M.H.M.Ahmad, "Quality control aspects and prospects to reduce rework and rejection in metallurgical industries", Proceeding of 8<sup>th</sup> Int. Conf. on Advances in Materials and Processing Technologies AMPT, 16-19<sup>th</sup> May 2005, Poland, pp.567-570.
11. T.R.Vijayaram, **S.Sulaiman**, A.M.Hamouda and M.H.M.Ahmad, "Computer simulation of solidification of castings processed in metallurgical engineering foundries", Proceeding of 8<sup>th</sup> Int. Conf. on Advances in Materials and Processing Technologies AMPT, 16-19<sup>th</sup> May 2005, Poland, pp571-577.
12. Lim Ying Pio, **Shamsuddin Sulaiman**, "The simulation of sand castings process with MAGMASOFT", Proceeding of the 2<sup>nd</sup> INTERNATIONAL Conference on Mechatronics, ICOM'05, 10-12 May 2005, Kuala Lumpur, Malaysia, pp789-796.
13. Thoguluva Raghavan Vijayaram, Mohamad Sayuti, **Shamsuddin Sulaiman** and Abdel Magid Salem Hamouda, "Quantification of mechanical properties and characterisation of fracture surfaces on the ascast quartz particulate reinforced aluminium- 11% silicon alloy matrix composites", Abstract published in ICCE12 Spain International Conference Proceedings, 2005.
14. N.Ismail, M.R.Osman, C.F.Tan, S.V.Wong, **S.Sulaiman**, "Extraction of cylindrical features from neutral data format for CAD/CAM integration", Proceeding of Int. Eng. Convention 2004, 22-25 August 2004, Amman Jordan.
15. R. Samin, N.Ismail, **S.Sulaiman**, R.Ali, M.M.Hassan, "Robot Industry trajectory planning using MSC Visual Nastran", Proceedings of the 19<sup>th</sup> International Conference on CAD/CAM, Robotics and Factories of the future (CARS & FOF 2003) 22-24 July 2003 Kuala Lumpur, pp. 911-918
16. Suditama Sulaiman, M.M.H.Megat Ahmad, **S.Sulaiman**, N.Adam,"Experiment Analysis of Thermal Storage Material and Heat Transfer Characteristic pipes arrange heated immerse in the material Thermal Storage", 3<sup>rd</sup> Int. Conf. On Advances in Strategic Technologies (ICAST 2003) 12-14<sup>th</sup> August 2003, Kuala Lumpur. Pp1045-1048.

17. **S.Sulaiman**, A.M.S. Hamouda and M.K.A.Ariffin, "Design and Fabrication of Plastic Injection Mould", Proceeding of AMPT2003, 8-11 July 2003, Dublin Ireland, pp1603-1605.
18. **S.Sulaiman**, A.M.S. Hamouda, "Modelling and Experimental Investigation of Solidification Process in Sand Casting", Proceeding of AMPT2003, 8-11 July 2003, Dublin Ireland, pp531-534.
19. **Shamsuddin Sulaiman**, "Numerical Analysis of Solidification in Casting Process", Proceeding of The 3<sup>rd</sup> Int. Conf. On Numerical Analysis in Engineering, 13-15 March 2003, Batam Indonesia, pp2.7-2.10.
20. **Shamsuddin Sulaiman**, "An Application of Network Method in Thermal Transient Casting Process", Proceeding of The 3<sup>rd</sup> Int. Conf. On Numerical Analysis in Engineering, 13-15 March 2003, Batam Indonesia, pp2.11-2.19.
21. Razali Samin, Napsiah Ismail Ismail, **Shamsuddin Sulaiman**, Roslizah Ali, Md. Mahmud Hasan, "Robot Manipulation Trajectory Planning for Complex Positions", Proceeding of The Second World Engineering Congress 2002, 22-25 July 2002, Kuching Sarawak Malaysia, pp425-430.
22. Tang S.H., **S.Sulaiman**, Chia A.P. "Industrial Robot Selection System – A Preliminary Study", Proceeding of The Second World Engineering Congress 2002, 22-25 July 2002, Kuching Sarawak Malaysia, pp416-418.
23. Rosnah Mohd Yusuff, M.M.H.Ahmad, **S.Sulaiman**, Z.Mohamad, "Implementation of Computer-Based Technologies for the Small and Medium Scales Industries of Malaysia", Proceeding of The Second World Engineering Congress 2002, 22-25 July 2002, Kuching Sarawak Malaysia, pp102-105.
24. Tan Chee Fai, Napsiah Ismail, Mohd Rasid Osman, Wong Shaw Voon, **Shamsuddin Sulaiman**, "The Development of Hole Recognition System for Machined Part", Proceeding of The Second World Engineering Congress 2002, 22-25 July 2002, Kuching Sarawak Malaysia, pp19-22.
25. Tang S.H., **Sulaiman.S.**, Hashmi M.S.J, "Computer-Aided Design in Subtractive and Additive Prototyping", Proceeding of The Second World Engineering Congress 2002, 22-25 July 2002, Kuching Sarawak Malaysia, pp342-346.
26. Wong Choon Tat, **Shamsuddin Sulaiman**, Napsiah Ismail, A.M.S. Hamouda " Design and Simulation of Plastic Injection Moulding Process", Proceeding of The Second World Engineering Congress 2002, 22-25 July 2002, Kuching Sarawak Malaysia, pp193-198.
27. M.K.A.Ariffin, **S. Sulaiman**, M.M.Hamdan, Z.Leman and N.Ismail "Design, Analysis and Fabrication of Plastic Injection Mould for Tensile Test Specimen", Proceeding of The Second World Engineering Congress 2002, 22-25 July 2002, Kuching Sarawak Malaysia, pp329-332.
28. **S. Sulaiman**, Y.B .Leong, "Development of Thermal Analysis Software of Casting Process, Proceeding of The Second World Engineering Congress 2002, 22-25 July 2002, Kuching Sarawak Malaysia, pp189-192.

29. **S.Sulaiman**, "Modelling of Thermal History of Sand Casting Process", Int. Conf. Of AMPT01, 19-21 Sept 2001, Madrid Spain.
30. **S.Sulaiman**, "An experimental investigation of temperature history of sand casting process", Int. Conf. Of AMPT01, 19-21 Sept 2001, Madrid Spain.
31. Tan Chee Fai, Napsiah Ismail, Mohd Rasid Osman, Wong Shaw Voon, **Shamsuddin Sulaiman**, "The implementation of feature recognition system for CAD/CAM Integration", SCORED 2001 UTM.
32. **Shamsuddin Sulaiman**, "Simulation and verification of thermal transient of sand casting process", International Conf. On Mechatronic 2001, 13-14 Feb 2001 Kuala Lumpur.
33. M.K.A.Mohd Ariffin, **S.Sulaiman**, M.M.H.M.Ahmad, "Plastic Flow Simulation of plastic injection Moulding Process", International Conf. On Mechatronic 2001, 13-14 Feb 2001 Kuala Lumpur.
34. Tang, S.H, **Sulaiman**, S. Hashmi, M.S.J. "Precision Robotic Manipulator based Rapid Prototyping System", Proceeding of the IASTED Int. Conf. Robotics and Automation 2000, August 14-16, 2000, Honolulu, Hawaii USA.
35. **S.Sulaiman**. A.M.S.Hamouda, "Modelling of thermal history of sand casting process", 5<sup>th</sup> Asia Pacific Conference on Material Processing 25-27 June 2001 Seoul, Korea.
36. **S.Sulaiman**, A.K.H.Lim, C.L.Tan "An experimental investigation of temperature history of sand casting process", Proceeding of ICAMT2000 UTM, pp299-304.
37. **S.Sulaiman**, A.K.H.Lim, "Modelling of Thermal Analysis of Sand Casting Process", Proceeding of ICAMT2000 UTM, pp595-600.
38. **S.Sulaiman**, A.M.S.Hamouda, "An experimental investigation of temperature history of sand casting process", Int. Conference on Advances in Strategic Technologies- 2000 UKM Kuala Lumpur 15-17 August 2000.
39. C.K.Ooi, M.M.H. Megat Ahmad, M.R.Osman, M.Y.Rosnah, **S.Sulaiman**, M.Y.Ismail, "The Effectiveness of Managing Long Lead-Time Parts by Family Ordering", Proceeding of World Engineering Congress 19-22<sup>nd</sup> July 1999, Kuala Lumpur, pp459-464.
40. M.A.Hossain Mollah, S.M.Sapuan, **S.Sulaiman**, "Design Aspects of A Composite Material Country Boat", Proceeding of World Engineering Congress 19-22<sup>nd</sup> July 1999, Kuala Lumpur, pp429-434.
41. **S.Sulaiman**, M.R.Osman, Y.K.Chin, "Design and Development of an Automated Orientation Detection System with Robot Arm and PLC Integration", Proceeding of World Engineering Congress 19-22<sup>nd</sup> July 1999, Kuala Lumpur, pp363-367.
42. Y.C.Low, M.R. Osman, **S.Sulaiman**, N.Ismail, " Investigation Of The Need For Local Plastic Injection Moulding (PIM) Robot", ", Proceeding of World Engineering Congress 19-22<sup>nd</sup> July 1999, Kuala Lumpur, pp357-361.

43. **S.Sulaiman**, A.M.S.Hamouda, D.T.Gethin, "An experimental analysis of metal filling in diecasting process", Proceeding AMPT '99, 3<sup>rd</sup> – 6<sup>th</sup> August '99, Dublin, Ireland.
44. **S.Sulaiman**, W.K.Binienda, Y.Wang, "Internal Pressure Effect on Residual Stresses for Filament Wound Composite Tubes", Proceeding of World Engineering Congress 19-22<sup>nd</sup> July 1999, Kuala Lumpur., pp51-55.
45. Elfetori F. Abdewi, **S.Sulaiman**, A.M.S.Hamouda, "Computational Study on the Effect of Thermal Stresses on Die Casting Design", Proceeding of World Engineering Congress 19-22<sup>nd</sup> July 1999, Kuala Lumpur, pp337-343.
46. **S. Sulaiman**, A.M.S.Hamouda, S.Abedin, "Simulation of Metal Filling Progress During Casting Process", 4<sup>th</sup> Asia Pacific Conference on Material Processing, Singapore, 19-21 May 1999.
47. A.M.S.Hamouda, **S.Sulaiman**, , C.K.Lau, "Finite Element analysis on the effect of workpiece geometry on the quenching of ST50", Proceeding Int. Conf. Of Advances in Materials and Processing Technology (AMPT99), 3<sup>rd</sup> – 6<sup>th</sup> August '99, Dublin, Ireland.
48. F.Hassan, **S.Sulaiman**, A.M.S.Hamouda, "Casting materials: Recent advances and application ", Int. Conf. Of Advances in Materials and Processing Technology (AMPT98), 24-29 August 1998, Kuala Lumpur, pp134-144.
49. Elfetori F. Abdewi, **S.Sulaiman**, A.M.S. Hamouda, Megat M.Hamdan,"Finite Element Analysis and Optimization of Die Casting Design", Int. Conf. of Advances in Materials and Processing Technology (AMPT98), 24-29 August 1998, Kuala Lumpur,pp1006-1016.
50. **S. Sulaiman**, A.M.S. Hamouda, S.Abedin, "Three-Dimensional Finite Element Thermal Analysis of Die/Mould for Casting Industry Applications", Int. Conf. of Advances in Materials and Processing Technology (AMPT98), 24-29 August 1998, Kuala Lumpur, pp1017-1028.
51. **S. Sulaiman**, A.M.S.Hamouda and S.Abedin, "Development of Computer Aided Design (CAD) system for casting process", Proc. of Int. Conf. on Advances in Materials and Processing Technologies, AMPT-97, Portugal, June 1997.
52. M.D.Huda, R.Puyani, **S.Sulaiman** and M.S.J.Hashmi, "Development of a mathematical model for zinc oxide varistor for low weight loss and shrinkage rate", Proceeding of Int. Conf. on Advances in Materials and Processing Technologies, AMPT-97, Portugal, June 1997.
53. M.D.Huda, R.Puyani, **S.Sulaiman** and M.S.J.Hashmi, "Optimization of sintering process for improved electrical characteristics of Zinc Oxide Varistors", Proc.of Int. Conf. FAIM'96 Georgia USA pp.739-747.
54. **Shamsuddin Sulaiman**, Tang Sai Hong, "Gating system design in sand casting", Proceeding of the 7th Int. Conf. on Machine Design and Production, Turkey Sept 11-13 1996.
55. **Shamsuddin Sulaiman**, Tham Chee Keen, "Flow analysis along runner and gating system of casting process", Proceeding of Int. Con. on Material Processing, Hong Kong 12-14 Nov. 1996.

56. A.M.S.Hamouda, **S.Sulaiman** and M.S.J. Hashmi, "Fast Upsetting of circular cylinders of Aluminium Metal Matrix Composites: Experimental Results and Numerical Analysis", Proc. of the 6<sup>th</sup> Int. Conference on Metal Forming '96, Krakow Poland, Jun23-26 1996 pp.723-727.
57. **Shamsuddin Sulaiman**, "Expert System for Manufacturing Process", Proc. Pacific Conf. on Manufacturing December 19 - 22, 1994, Jakarta Indonesia pp.339-346.
58. **Shamsuddin Sulaiman**, Shahnor Basri, "An Application of Expert System in the Casting Process", 5th International Conf. on Machine Design and Production September 16-18 1992, METU, Ankara-Turkey.
59. **S. Sulaiman**, D.T. Gethin, "An Application of a Thermal Network Analysis for Casting Simulation", Proceedings of the 7<sup>th</sup> International Conference on Numerical Methods in Thermal Problems 1991. (Eds. Lewis, R.W., Chin J.H. and Homsey G.H), pp248-258.

### c. National Conference/Seminar

1. S.S. Imihzri, S.M.Sapuan, M.M.H.M.Ahmad, **S.Sulaiman**, "A comparison study on increasing injection location for glass fiber reinforced PA 6,6 composite automotive clutch pedal", Proceeding of 3<sup>rd</sup> National Technical Postgraduate Symposium 2004 Dec 15<sup>th</sup> Kuala Lumpur.
2. Tang Sai Hong, Wong Su Luan, Paul Young, Shamsuddin Sulaiman and M.S.J.Hashmi, "Hardware design and interfacing of a robot assisted subtractive prototyping system", Journal Teknologi, 40(A) jun 2004: 33-50.
3. S.S. Imihzri, S.M.Sapuan, M.M.H.M.Ahmad, **S.Sulaiman** "Mould Design Consideration for Injection Moulding of Short Glass Fiber Reinforced Polyamide Composite for Clutch Pedal", Proceeding of Advanced Technology Congress 2003, 20-21 May 2003, Putrajaya.
4. I. A. Manaf, N.Ismail, **S.Sulaiman** "Reverse Engineering Technique for Modelling Free form Feature Surfaces" Proceeding of Advanced Technology Congress 2003, 20-21 May 2003, Putrajaya.
5. P. Nopnakorn, N.Ismail, MMHM Ahamad, **S.Sulaiman** "A Prototype 2D Drafting System in ISO Mechanical Engineering Drawing Constraint" Proceeding of Advanced Technology Congress 2003, 20-21 May 2003, Putrajaya.
6. S.S.S.Imihezri, S.M.Sapuan, M.H.M. Ahmad and **S.Sulaiman**, "Product design consideration for short glass fibre reinforced composite clutch pedal" Proceeding of Advanced Technology Congress 2003, 20-21 May 2003, Putrajaya.
7. C.F.Tan, N.Ismail, S.V.Wong, **S.Sulaiman** and M.R.Osman "Development of A knowledge-based Feature Recognition for System for Mechanical Parts" Proceeding of AIAI Conf. 24-25 June 2003, Kuala Lumpur.
8. Ishak bin Aris, A.K.M.Parves iqbal, **Shamsuddin Sulaiman**, Abd. Rahman Ramli and Md Mahmud Hassan, "Development of a painter robot for construction industry", Proceeding of AIAI Conf. 24-25 June 2003, Kuala Lumpur.
9. H.B.Lee, S.M. Sapuan, **S.Sulaiman**, M.M.H.M.Ahmad, "Design and Rapid Prototyping Process for a Polymeric Based Composite Automotive Pedal Box System", Proceeding of Symposium on Concurrent Engineering Manufacturing System for Polymeiric-based Composite

Automotive Components, 25<sup>th</sup> July 2003, Faculty of Engineering UPM, Editor Mohd Sapuan Salit, pp5-20.

10. S.S.S.Imihezri, S.M.Sapuan, M.H.M. Ahmad and **S.Sulaiman**, “Product Design Consideration for Short Glass Fiber Reinforced Composite Clutch Pedal”, Proceeding of Symposium on Concurrent Engineering Manufacturing System for Polymeiric-based Composite Automotive Components, 25<sup>th</sup> July 2003, Faculty of Engineering UPM, Editor Mohd Sapuan Salit, pp55-63.
11. N. Ismail, C.F.Tan, S.V.Wong, M.R.Osman, **S.Sulaiman**, “ Rule-Based Feature Extraction and Recognition from STEP File”, 2<sup>nd</sup> Student Conference on Research and Development (SCOReD2002), July 16-17, 2002, Shah Alam, Malaysia.
12. **Shamsuddin Sulaiman**, A.K.Lim, Lai Tze Siung, Tan Chen Loon, “ Experimental and Thermal Transient of Sand Casting Process”, MechE Seminar on Information Technology in Mechanical and Manufacturing Engineering, 4<sup>th</sup> Oct 2001, UPM.
13. **S. Sulaiman**, Wong Choon Tat, “Mould design and fabrication for plastic injection moulding”, Malaysian Science and Technology Congress (C) 2001, Penang.
14. **S. Sulaiman**, Wong Choon Tat, “Design, Analysis and Simulation of plastic product”, Malaysian Science and Technology Congress(B) 2001, Melaka.
15. Elnougomi A.O, Desa Ahmad, Azmi Yahya, **Shamsuddin S.**, “Development of tractor mounted peanut harvesting equipment”, UPM Engineering Research Seminar and Exhibition, 2-3 Oct 2001.
16. A.M.S. Hamouda, **S. Sulaiman**, “The Coming Era of Intelligent Materials: Business Opportunities”, Malaysian Science and Technology Congress ‘97, Genting Highlands, 13 - 15 October 1997.
17. **Shamsuddin Sulaiman**, “Thermal Network Analysis for Casting Process in High Pressure Die Casting”, National Conference on Engineering Education and Research, 15-16 June 1993, UPM.
18. **S.Sulaiman**, A.M.S.Hamouda and M.H.Megat, “Thermal Network Analysis Software TNAS”, Report and Manual presented in Expo Science and Technology, 2-4 Nov 2002, PWTC Kuala Lumpur.

#### **d. Report/Monograph/Manual**

1. **Shamsuddin Sulaiman**, “Drawing Die – Die Design Principles”, Jabatan Kejuruteraan Mekanikal dan Pembuatan, U.P.M 1998.
2. **Shamsuddin Sulaiman**, “Plastic Injection Moulding – Mould Costing”, Jabatan Kejuruteraan Mekanikal dan Pembuatan, U.P.M 1998.
5. **Shamsuddin Sulaiman**, “Plastic Injection Moulding – Plastic Materials”, Jabatan Kejuruteraan Mekanikal dan Pembuatan, U.P.M 1998.
6. **Shamsuddin Sulaiman**, “Plastic Injection moulding – Mould Manufacturing Process”, Jabatan Kejuruteraan Mekanikal dan Pembuatan, U.P.M 1998.

7. **Shamsuddin Sulaiman**, "Plastic Injection Moulding – Mould Design", Jabatan Kejuruteraan Mekanikal dan Pembuatan, U.P.M 1998.
6. **Shamsuddin Sulaiman**, "Metal machining", Jabatan Kejuruteraan Mekanikal dan Pembuatan, U.P.M 1998.
7. **Shamsuddin Sulaiman**, Yaacob Md. Salleh, Tajul Ariffin, "Training in Automation Technology", Department of Mechanical and Manufacturing Engineering, UPM 1996.
8. Wieslaw K. Binienda, **Shamsuddin Sulaiman**, Y.Wang, "The reduction of residual stresses in filament wound composite tubes", Research report for Asian Development Bank, The University of Akron Ohio and UPM 1995.
1. **Shamsuddin Sulaiman**, "Metal flow analysis of casting process", Research Report for IRPA RM6 and Department of Mech. and Manufacturing Engineering, UPM 1995.
2. **Shamsuddin Sulaiman**, "Thermal analysis of casting process", Research Report for IRPA RM6 and Department of Mech. and Manufacturing Engineering, UPM 1995.
3. **Shamsuddin Sulaiman**, "Establishing the basis for heating and shaking subsystems of oil analysis facility", Research Report, Department of Mech. and Manufacturing Engineering, UPM 1991.
12. **Shamsuddin Sulaiman**, Barkawi Sahari, Mohd Rasid Osman, "Methodology Report of Development of Research Model to monitor skill demand for Metal Machining Industry", Human Resources Ministry of Malaysia. Dec. 1996.
13. **Shamsuddin Sulaiman**, Barkawi Sahari, Mohd Rasid Osman, "Activity Report of Development of Research Model to monitor skill demand for Metal Machining Industry", Human Resources Ministry of Malaysia. August 1996.
14. **Shamsuddin Sulaiman**, Barkawi Sahari, Mohd Rasid Osman, "Final Report of Development of Research Model to monitor skill demand for Metal Machining Industry", Human Resources Ministry of Malaysia. Dec. 1996.
15. **Shamsuddin Sulaiman**, "Training needs in Plastic Industry", Report for MLVK/JICA, 1996.
16. Barkawi Sahari, Shahnor Basri, **Shamsuddin Sulaiman**, "Finite Element Analysis for Stress, Thermofluid and Vibration", Report for IRPA RM6, 1996.
17. **Shamsuddin Sulaiman**, "An Analysis of Thermal Behaviour and Molten metal flow with Expert System Applications in Pressure Diecasting", Ph. D Thesis, Dept. of Mech. Eng., University College of Swansea UK, Feb. 1992.
18. **Shamsuddin Sulaiman**, "Design of Sample Handling System for an Oil Analysis Facility", M.Sc Thesis, Dept. of Mechanical Eng., University College of Swansea UK, 1988.
19. **Shamsuddin Sulaiman**, "Rekabentuk dan Pembinaan Sebuah Terowong Angin Halaju Rendah (Design and Fabrication of a low speed wind tunnel)", Final Year Project Bac. Eng. (Agric.) UPM 1986.

#### e. Books

1. E.S. Zainudin, S.M. Sapuan, **S.Sulaiman**, M.M.H.M.Ahmad, "A numerical investigation of short fibre orientation in injection-moulded thermoplastic composites", Azhari C. H. Ed., Advances in Materials Processing, Chapter in book published by Institute of Materials Malaysia (IMM) (2002).
2. A.M.S.Hamouda, **S.Sulaiman**, M.Ahmadun, "Advances in Material and Processing Technologies", Volume 2, SIRIM Press, 1998.
3. A.M.S.Hamouda, **S.Sulaiman**, M.Ahmadun, "Advances in Material and Processing Technologies", Volume 1, SIRIM Press, 1998.
4. Shahnor Basri, **Shamsuddin Sulaiman**, A. Rahim Md. Amin, "Sistem Pengeluaran - Satu Pengenalan (Production System - An Introduction)", Book published by Dept. of Mechanical and Systems Engineering UPM 1987.

#### Awards & Recognitions:

- a. An excellence Service Award 1998
- b. An excellence Service Award 1999
- c. An excellence Service Award 2001
- d. An excellence Service Award 2002
- e. An excellence Service Award 2003
- f. An excellence Service Award 2004
- g. An excellence Service Award 2005
- h. An excellence Service Award 2006
- i. Gold Medal Research Award – R&D Exhibition of Faculty of Engineering UPM 2002
- j. Silver Medal Research Award – R&D Exhibition of Faculty of Engineering UPM 2002
- k. Gold Medal Research Award – Invention and Research Exhibition 2002 UPM
- l. Silver Medal Research Award – Invention and Research Exhibition 2002 UPM
- m. Silver Medal Research Award (TNAS) – Invention and Research Exhibition 2005 UPM
- n. Silver Medal Research Award (Corrugated Tubes Machine) – Invention and Research Exhibition 2005 UPM
- o. Bronze Medal Research Award (Analysis and fabrication of injection moulded glass reinforced Polyamide composite automotive clutch pedal) – Invention and Research Exhibition 2005 UPM
- p. Bronze Medal Research Award (Development of intelligent process planning system for prismatic parts) – Invention and Research Exhibition 2005 UPM
- q. Silver Jubilee Medal with zirconia, Research Award – Poland May 2005
- r. Silver Medal Research Award – Expo S&T 2002 Ministry of Science, Technology and the Environment of Malaysia.
- s. Who's Who in the World 20<sup>th</sup> Edition 2003.
- t. Asian Development Award for Training in Akron Ohio USA 1995
- u. Fellowship program in China-UNESCO 1995