



FACULTY OF COMPUTING • UNIVERSITI TEKNOLOGI MALAYSIA •  
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# NORHAIDA MOHD SUAIB

## PERSONAL DETAILS

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OFFICE ADDRESS N28, Faculty of Computing,  
(MAILING ADDRESS) Universiti Teknologi Malaysia,  
81310 UTM Skudai,  
Johor, Malaysia.

PHONE NUMBER +607-5532319  
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## EDUCATION

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2015 Universiti Teknologi Malaysia Johor, Malaysia  
*PhD. in Computer Science (Computer Graphics)*

- Title of Thesis: “An Improved Time-Critical Collision Culling Scheme for Multi-Rigid Body and Humanoid Model”

1997 University of Hull Hull, UK  
*MSc. in Computer Graphics & Virtual Environments*

- Title of Dissertation : “An Investigation into Fractal Plant Generator”

1995 Universiti Teknologi Malaysia Johor, Malaysia  
*BSc. in Science & Computer with Education (Mathematics) – 1<sup>st</sup> Class Hons*

- Gold Award – Anugerah Tuanku Canselor (UTM 19<sup>th</sup> Convocation)

1985 - 1989 Tunku Kurshiah College Negeri Sembilan, Malaysia  
*Secondary School*

1979 - 1984 Sekolah Kebangsaan Bandar Mersing Johor, Malaysia  
*Primary School*

## AREA OF SPECIALIZATION

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computer graphics – algorithm & techniques, interactive computer graphics, collision detection, visual computing

## PROFESSIONAL EXPERIENCE

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2013 - current Universiti Teknologi Malaysia Johor, Malaysia  
*Lecturer – Department of Software Engineering (specializing in Computer Graphics & Multimedia)*

- DS45 (2013 – 2015), DS52 (2016 – current)

- Program Coordinator (Bachelor of Computer Science (Graphics & Multimedia Software) – SCSV) (2014 – 2016)

1997 - 2012      Universiti Teknologi Malaysia      Johor, Malaysia  
*Lecturer – Department of Computer Graphics & Multimedia*

- DS45

1995 - 1997      Universiti Teknologi Malaysia      Johor, Malaysia  
*Tutor – Department of Computer Graphics & Multimedia*

- DA41

1994 - 1995      Universiti Teknologi Malaysia      Johor, Malaysia  
*Research Assistant – Working Student Scheme*

- “Quality Assurance for Higher Learning Institute”  
 Project Leader : Prof Dr. Abu Azam Mohd Yassin

## **TEACHING EXPERIENCE**

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SUBJECTS TAUGHT	
	MCG 0023 – Computer Graphics (Postgraduate Level – MSc.)
	SCV 4543/SCSV 4543 – Advanced Computer Graphics (Undergraduate Level)
	SCV 3113/SCSV 3113 – Geometric Modelling (Undergraduate Level)
	SCSV 3123 – Real-Time Computer Graphics (Undergraduate Level)
	SCV 2213/SCSV 2213 – Fundamental of Computer Graphics (Undergraduate Level)
	SCSV 1113 – Mathematics for Computer Graphics (Undergraduate Level)
	SCG 3023 – Introduction to Computer Graphics (Undergraduate Level)
	SCK 2613 – Fundamentals of Computer Graphics (Undergraduate Level)
	SCG 4053/5103 – Virtual Reality (Undergraduate Level)
	SCG 4323 – Graphics System in CAD/CAE (Undergraduate Level)
	SCG 4343/5223 –Scientific Visualization (Undergraduate Level)
	SZK 2613 - Introduction to Computer Graphics (Undergraduate Level)
	SCP 3112 – Programming Technique II (Undergraduate Level)
	DCG 2043 – Man-machine Interface (Undergraduate Level)
	DCG 2103 – Graphical User Interface (Undergraduate Level)
	SCP 2023 – Programming Techniques (Undergraduate Level)
	DCP 1062 – Programming Basics (Undergraduate Level)

DCP 1043/2052 – FORTRAN (Undergraduate Level)

ISK 4833 – Computer Graphics (Undergraduate Level)

SUBJECT COORDINATOR SCSV 4543 – Advanced Computer Graphics  
SCV 3113/SCSV 3113 – Geometric Modelling  
SCSV 3123 – Real-Time Computer Graphics  
SCSV 2213 – Fundamental of Computer Graphics  
SCG 3023 – Introduction to Computer Graphics  
SZK 2613 - Introduction to Computer Graphics  
SCSV 1113 – Mathematics for Computer Graphics

## RESEARCH EXPERIENCE

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INTERNATIONAL GRANT: (EU) MARIE SKLODOWSKA-CURIE RESEARCH & INNOVATIN STAFF EXCHANGE (RISE)	1 Jan 2016 – 31 Dec 2020 <i>High Dimensional Heterogeneous Data-based Animation Techniques for Virtual Heritage Digital Content</i> • Malaysian Partner (Partnership between Bournemouth University (United Kingdom), Universite d’Artois (France), Vietnam National University, Can Tho University (Vietnam), Chiang Mai University (Thailand) and University Teknologi Malaysia (Malaysia))	DLV-691215
TRANS-DISCIPLINARY RESEARCH GRANT SCHEME (TRGS)	Phase 1/2015 application approved [duration: to be updated] <i>Sustainability of Tourism Activities for Kilim Geoforest Park</i> • Researcher ○ Sub-group 3: “Assessment of mangrove habitat and river shoreline erosion due to boat generated wave and sea level rise”	Vot – t.b.u
RESEARCH UNIVERSITY GRANT (RUG)	1 July 2014 – 30 June 2015 <i>Pressure-sensitive pen-based virtual reality interaction for virtual heart model manipulation</i> • Project Leader	Vot 09H18
	1 Apr 2012 – 31 March 2013 <i>Hybrid Collision Culling for Massive Rigid Body Simulation</i> • Project Leader	Vot 05J21
FUNDAMENTAL RESEARCH GRANT SCHEME (FRGS - FUNDED BY MOHE)	1 Nov 2015 – 30 Oct 2017 <i>A Novel Range Point of Contact Method in Single Phase Collision Detection Scheme for Rigid Bodies Virtual Reality Simulation.</i> • Researcher	FRGS/1/2015/ICT05/UTEM/03/1

- 1 July 2014 – 30 June 2016 Vot 4F559  
*A New Ontology Enrichment Algorithm for Hierarchical Classification of Biomedical Literature.*  
 • Researcher
- 1 September 2007 – 31 August 2009 Vot 78202  
*A New NURBS Skinning Method*  
 • Project Leader (1 Sept 2007 – 13 Apr 2008) – released due to study leave  
 • Researcher (from 14 Apr 2008 onwards)
- 1 September 2007 – 31 August 2009 Vot 78199  
*A New Deformable Technique with Hybrid NURBS Parameterization*  
 • Researcher
- SCIENCEFUND PROJECTS (FUNDED BY MOSTI) 1 July 2013 – 30 June 2015 Vot 4S089  
*Real-time Character Motion Control Using Data Gloves [01-01-06-SF1161]*  
 • Researcher
- 1 October 2007 – 31 March 2009 Vot 79229  
*A Biologically Inspired Computational 3D Articulated Figure Animation*  
 • Project Leader
- 1 October 2007 – 31 March 2009 Vot 79237  
*The Development of a Hierarchical Heterogeneous Bounding Volumes Tool for Detecting Object Interference in Urban Simulation*  
 • Researcher
- IRPA PROJECTS (FUNDED BY MOSTI) 13 December 2003 – 30 June 2006 Vot 74224  
*The Development of Deformable Bodies Collision Response for Virtual Environment*  
 Project Leader
- 1 February 2002 – 31 January 2005 Vot 74019  
*The Development of Real-Time Collision Detection for Virtual Environment*  
 • Project Leader
- 1 July 2002 – 30 June 2004 Vot 74079  
*The Development of Cloud Modelling and Motion Analysis in Virtual Environment*  
 • Researcher
- 1 July 2002 – 30 June 2004 Vot 74077  
*The Development of a Real-Time Terrain Modeling and Visualization*  
 • Researcher

	1 July 2002 – 30 June 2004	Vot 74132
	<i>The Development of Motion Planning Algorithm for Animated Characters in Virtual Environment</i>	
	• Researcher	
	1 July 2002 – 30 June 2005	Vot 74078
	<i>The Development of a Real-Time 3D Multimedia Game Engine</i>	
	• Researcher	
	1 July 1999 – 30 June 2001	Vot 72156
	<i>Developing A Model of an Intelligent Distance Learning System</i>	
	• Researcher	
SHORT TERM GRANTS / UPP	1999	Vot 71411
	<i>Software Engineering Methodologies for Modelling Complex Real-Time Systems</i>	
	• Researcher	
	1996	Vot 71389
	<i>Radiology Information System</i>	
	• Researcher	

## PAPERS AND PUBLICATIONS

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- PROCEEDINGS:  
INTERNATIONAL  
CONFERENCES  
(\*last 10 years)
1. **Norhaida Mohd Suaib**, Fawwaz Mohd Nasir (2014). “*Broad Phase Collision Detection using Multi-core Processor*”, The 3rd International Conference on Interactive Digital Media, 2-4 December 2014, Sutera Harbour, Kota Kinabalu, Sabah, Malaysia.
  2. **Norhaida Mohd Suaib**, Nazreen Abdullasim, Iznora Aini Zolkifly, Abdullah Bade (2014). “*Collision Detection: Review of Methods and Recent Advances in Crowd Simulation*”, The 3rd International Conference on Interactive Digital Media, 2-4 December 2014, Sutera Harbour, Kota Kinabalu, Sabah, Malaysia.
  3. **Norhaida Mohd Suaib**, Abdullah Bade, Dzulkifli Mohamed, Masaki Oshita, Nik Isrozaiddi Nik Ismail (2014). “*Evaluating Sphere-encapsulated or-Dops Collision Culling for Humanoid Model Simulation*”, The 4th IEEEJ International Workshop on Image Electronics and Visual Computing 2014 (IEVC2014), 7-10 October 2014, Koh Samui, Thailand.
  4. **Norhaida Mohd Suaib**, Abdullah Bade, Dzulkifli Mohamed (2013). “*Sphere Encapsulated Oriented-Discrete Orientation Polytopes (or-Dops) Collision Culling for Multi-, Rigid Body Simulation*”, The 2nd International Conference on Interactive Digital Media, 2-4 December 2013, Pullman Hotel, Kuching, Sarawak, Malaysia. *Best Paper Award*
  5. **Norhaida Mohd Suaib**, Abdullah Bade, Dzulkifli Mohamed (2012). “*Hybrid Collision Culling by Bounding Volumes Manipulation in Massive Rigid*

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*Body Simulation*”, The 1st International Conference on Interactive Digital Media, 3-4 December 2012, Bayview Hotel, Langkawi, Malaysia.

6. Lim Kok Cheng, Iznora Aini Zolkiply, **Norhaida Mohd Suaib** (2012). “*Evaluating the effects of improved collision handling method in Virtual Reality Musical Museum based on user experience measurement*”, The 1st International Conference on Interactive Digital Media, 3-4 December 2012, Bayview Hotel, Langkawi, Malaysia.
7. Hamzah Asyrani Sulaiman, Abdullah Bade, **Norhaida Mohd Suaib** (2010). “*Balanced Hierarchical Construction in Collision Detection for Rigid Bodies*”, 2010 International Conference on Science and Social Research (CSSR 2010), art. no. 5773702, pp. 1132-1136, Kuala Lumpur, Malaysia. ISBN: 978-1-4244-8986-2.
8. Hamzah Asyrani Sulaiman, Abdullah Bade, **Norhaida Mohd Suaib** (2010). “*Fast Traversal Algorithm for Detecting Object Interference Using Hierarchical Representation between Rigid Bodies*”, Second International Conference on Computer Research and Development 2010 (ICCRD 2010), pp.7-11, Kuala Lumpur, Malaysia. ISBN: 978-0-7695-4043-6.
9. Hamzah Asyrani Sulaiman, Abdullah Bade, and **Norhaida Mohd Suaib** (2009). “*Bounding-Volume Hierarchies Technique for Detecting Object Interference*”. 2009 Second International Conference on Environmental and Computer Science (ICECS 2009), Dubai, UAE, Dec 28-30, 2009. ISBN 978-1-4244-5590-4.
10. **Norhaida Mohd Suaib**, Abdullah Bade, Dzulkipli Mohamad, Hamzah Asyrani Sulaiman (2009). “*On Faster Bounding Volume Hierarchy Construction for Avatar Collision Detection*”. 2009 International Conference on Graphic and Image Processing (ICGIP 2009), Kota Kinabalu, Malaysia, Nov. 13-15, 2009.
11. Rafidah Abd Rahim, **Norhaida Mohd Suaib**, Abdullah Bade (2009). “*Motion Graph for Character Animation: Design Considerations*”. 2009 International Conference on Graphic and Image Processing (ICGIP 2009), Kota Kinabalu, Malaysia, Nov. 13-15, 2009.
12. **Norhaida Mohd Suaib**, Abdullah Bade, Dzulkipli Mohamad (2009). “*Improving Avatar Collision Detection Performance for Virtual Environment Applications*”. Proceedings of the 2nd International Conference On Advanced Computer Theory and Engineering (ICACTE 2009), Cairo, Egypt. September 25 - September 27, 2009. Vol.26. ISBN: 978-0-7918-0297-7 ASME Press.
13. **Norhaida Mohd Suaib**, Abdullah Bade, Dzulkipli Mohamad, Hamzah Asyrani Sulaiman (2009). *Bounding Volume Hierarchy Improvement for Avatar Collision Detection in Virtual Environment: Learning from Ray Tracing and Deformable Objects*. The 1st workshop on Interactive Digital Media in Malaysia (IDM'09). Johor Bahru, Malaysia, May 14, 2009.
14. Abd Rahim. R, **Suaib. N**, Bade. A. (2009). “*Motion graph for synthesizing human motion: a comparative study*”. The 1st workshop on Interactive Digital Media in Malaysia (IDM'09). Johor Bahru, Malaysia, May 14,

15. **Norhaida Mohd Suaib**, Abdullah Bade, Dzulkifli Mohamad, Daut Daman, Mohd Shahrizal Sunar (2008). *Collision Detection for Avatars in Virtual Environments: A Comparative Study*. ASIAGRAPH 2008 Proceedings, Tokyo, Japan, October 23 – 25, 2008.
16. **Norhaida Mohd Suaib**, Abdullah Bade, Dzulkifli Mohamad (2008). *Collision Detection Using Bounding Volume For Avatars In Virtual Environment Applications*. The 4th International Conference on Information & Communication Technology and Systems (ICTS) 2008, Surabaya, Indonesia. August 5th, 2008.
17. Rahim, R. A., **N. M. Suaib**, et al. (2008). *Motion Transition for Animated Virtual Human*. The 4th International Conference on Information & Communication Technology and Systems (ICTS) 2008, Surabaya, Indonesia. August 5th, 2008.
18. Rahim, R. A., **N. M. Suaib**, et al. (2008). *3D Articulated Figure Animation*. Proceeding of The Computer Games, Multimedia and Allied Technology 08 (CGAT'08). Singapore, 28-30th April 2008.
19. Abdulah Bade, **Norhaida M. Suaib**, Abdullah M. Zin, T. Mohammad T. Sembok (2006). *Oriented Convex Polyhedra for Collision Detection in 3D Computer Animation*. The 4th International Conference on Computer Graphics and Interactive Techniques 2006 (GRAPHITE 2006), 30 November - 2 December 2006, Malaysia. ACM ISBN:1-59593-564-9
20. Syaiful Nizam Yahya, **Norhaida Mohd Suaib**, Abdullah Bade and Siti Mariyam Shamsuddin (2006). *Solid Deformation Modeling Techniques*. The International Conference on Computing and Informatics (ICOCI 2006), 6 – 8 June 2006, Malaysia.
21. Abdulah Bade, Saandilian Devadass, Daut Daman, **Norhaida M. Suaib** (2005). *Collision Response Between Deformable Objects In Computer Games Environment*. The 4th International Symposium on Digital Earth 2005 (ISDE 2005), 28 - 31 March 2005, Japan.

POSTER PRESENTATION:  
INTERNATIONAL  
CONFERENCES

1. Abdullah Bade, Saandilian Devadas, Daut Daman, **Norhaida Mohd Suaib** (2004). *Modeling of Deformable objects: Techniques and models*. International Conference on Computer Graphics, Imaging and Visualization (CGIV04), Penang on 26 – 29 August 2004, Grand Plaza Parkroyal Hotel, Penang, Malaysia.
2. Syaiful Nizam Yahya, **Norhaida M. Suaib**, Abdullah Bade and Siti Mariyam Shamsuddin (2006). *Dynamic Selection-based Method for Physical-based Deformation*. The 4th International Conference on Computer Graphics and Interactive Techniques 2006 (GRAPHITE 2006), 30 November - 2 December 2006, KL Convention Center, Kuala Lumpur, Malaysia. ISBN 983-42004-1-2

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PROCEEDINGS:  
NATIONAL  
CONFERENCES  
(\*last 10 years)

1. **Norhaida Mohd Suaib**, Abdullah Bade, Dzulkifli Mohamad, Hamzah Asyrani Sulaiman (2009). *Bounding Volume Hierarchy for Avatar Collision Detection: Design Considerations*. The 5th Postgraduate Annual Research Seminar (PARS '09). Faculty of Computer Science & Information System, UTM. June 15 – 18, 2009.
2. Hamzah Asyrani Sulaiman, Abdullah Bade, Daut Daman, **Norhaida Mohd Suaib** (2009). *Collision Detection using Bounding-Volume Hierarchies in Urban Simulation*. The 5th Postgraduate Annual Research Seminar (PARS '09). Faculty of Computer Science & Information System, UTM. June 15 – 18, 2009.
3. **Norhaida Mohd Suaib**, Abdullah Bade, Dzulkifli Mohamad (2008). *Collision Detection: A Survey Of Techniques And Applications*. Simposium Kebangsaan Sains Matematik ke -16. Kota Bharu, Kelantan. 3 - 5 Jun 2008.
4. **Norhaida Mohd Suaib**, Abdullah Bade, Dzulkifli Mohamad (2008). *Collision Detection: Applications and Techniques*. The 4th Postgraduate Annual Research Seminar (PARS '08). Faculty of Computer Science & Information System, UTM. 30/6 - 3/7/08.
5. **Norhaida Mohd Suaib** and Syaiful Nizam Yahya (2004). *L-Systems Parser Design*. 2nd National Conference On Computer Graphics & Multimedia 2004 (CoGRAMM'04). 8 - 10 December 2004, Bangi, Selangor.
6. A.Bade, Saandilian Devadas, Daut Daman and **Norhaida Mohd Suaib** (2004). *Collision Response between Deformable Objects in Computer Games Environment*. 2nd National Conference On Computer Graphics & Multimedia 2004 (CoGRAMM'04). 8 - 10 December 2004, Bangi, Selangor.
7. **Norhaida Mohd Suaib**, Abdullah Bade and Daut Daman (2004). *Kajian Keberkesanan Teknik Pengesanan Pelanggaran Hibrid bagi Persekitaran Maya Interaktif*. 2nd National Conference On Computer Graphics & Multimedia 2004 (CoGRAMM'04). 8 - 10 December 2004, Bangi, Selangor.
8. A.Bade, Saandilian Devadas, Daut Daman and **Norhaida Mohd Suaib** (2004). *Collision Response between Deformable Objects*. Malaysian Science and Technology Congress 2004, 5 – 7 October 2004, Seri Kembangan, Selangor.

JOURNALS:

1. **Norhaida Mohd Suaib**, Abdullah Bade, Dzulkifli Mohamed. *Sphere Encapsulated Oriented-Discrete Orientation Polytopes (S-Dop) Collision Culling for Multi-, Rigid Body Simulation*, Jurnal Teknologi (Sciences & Engineering) 75:2 (2015) 95-101. [SCOPUS-indexed](#)
2. **Norhaida Mohd Suaib**, Fawwaz Mohd Nasir. *Broad Phase Collision Detection using Graphics Processing Unit*, Jurnal Teknologi (Sciences &



Engineering) to appear. *SCOPUS-indexed*

3. Nazreen Abdullasim, **Norhaida Mohd Suaib**, Abdullah Bade, Iznora Aini Zolkifly. *Collision Detection in Crowd Simulation*, Jurnal Teknologi (Sciences & Engineering) to appear. *SCOPUS-indexed*
4. Nazreen Abdullasim, **Norhaida Mohd Suaib**, Abdullah Bade, Zhigeng Pan and Qingshu Yuan (2014). *Dynamic Field of View as Collision Detection for Autonomous Multi-agent*, International Journal of Interactive Digital Media (IJIDM), Vol 2, No 1, April 2014. (ISSN: 2289-4098; eISSN: 2289-4101)
5. Lim Kok Cheng, Iznora Aini Zolkifly, **Norhaida Mohd Suaib** (2014). *Evaluating the Effects of Improved Collision Handling Method in Virtual Reality Musical Museum based on User Experience Measurement*, International Journal of Interactive Digital Media (IJIDM), Vol 2, No 2. (ISSN: 2289-4098; eISSN: 2289-4101)
6. **Norhaida Mohd Suaib**, Abdullah Bade, Dzulkifli Mohamed (2013). *Hybrid Collision Culling by Bounding Volumes Manipulation in Massive Rigid Body Simulation*, TELKOMNIKA Indonesian Journal of Electrical Engineering, Vol 11, No 6: June 2013
7. Syaiful Nizam Yahya, **Norhaida Mohd Suaib**, Abdullah Bade, Siti Mariyam Hj. Shamsuddin (2006). *Solid Deformation Modeling Techniques*. Asian Journal of Information Technology, vol. 5, no. 3, pp. 324 – 338
8. Abdullah Bade, **Norhaida Mohd Suaib**, Abdullah Mohd. Zin, Tengku Mohd Tengku Sembok (2006). *An Alternative Bounding Volume Approach for Detecting Collision in Computer Animation*. Malaysian Journal of Computer Science and Information Technology, Faculty of Computer Science & Information Technology, Universiti Malaya. Vol. 19, no. 2, pp 127 – 140. (ISSN 0127-9084).
9. **Norhaida Mohd Suaib**, A.Bade, Daut Daman, Mohd Shahrizal Sunar. (2003). *Tinjauan Terhadap Pengesanan Perlanggaran Dalam Persekitaran Maya Interaktif*. Jurnal Teknologi Maklumat, Fakulti Sains Komputer dan Sistem Maklumat, UTM, vol. 15, no. 1. June 2003.

#### ARTICLES IN BOOKS

1. Hamzah Asyrani Sulaiman, Abdullah Bade, Daut Daman, **Norhaida Mohd Suaib** (2009). “*Hierarchical Approach for Fast and Efficient Collision Detection in Urban Simulation*”. in H. Badioze Zaman et al. (Eds.): IVIC 2009, LNCS 5857/2009, pp. 50–57, Springer-Verlag Berlin Heidelberg. ISBN 978-3-642-05035-0
2. “*Grafik Komputer*” in Ensiklopedia Sains & Teknologi (Teknologi Maklumat) (2005). Vol. 10, pp 81 – 83. Dewan Bahasa & Pustaka/Penerbit UTM.
3. “*Tetingkap*” in Ensiklopedia Sains & Teknologi (Teknologi Maklumat) (2005). Vol. 10, pp 410 – 412. Dewan Bahasa & Pustaka/Penerbit UTM.
4. “*Pengaturcaraan Untuk Tetingkap*” in Ensiklopedia Sains & Teknologi (Teknologi Maklumat) (2005). Vol. 10, pp 244 – 246. Dewan Bahasa &

Pustaka/Penerbit UTM.

CHAPTERS IN  
BOOKS

1. **Suaib. N**, Bade. A, Mohamad. D. “*Collision Detection: A Survey Of Techniques And Applications.*” in Daman. D, Bade. A & Suaib. N. (ed.s) *Collision Detection for Real-Time Graphics: Series of Techniques* (2008). pp 1 – 16. Penerbit UTM.
2. Sulaiman. H A, Bade. A, Daman. D, **Suaib. N**. “*Bounding Volumes and How We Create Them*” in Daman. D, Bade. A & Suaib. N. (ed.s) *Collision Detection for Real-Time Graphics: Series of Techniques* (2008). pp 17 – 28. Penerbit UTM.
3. **Suaib. N**, Bade. A, Mohamad. D. “*A Classical Bounding Volume Techniques*” in Daman. D, Bade. A & Suaib. N. (ed.s) *Collision Detection for Real-Time Graphics: Series of Techniques* (2008). pp 29 – 42. Penerbit UTM.
4. **Suaib. N**, Bade A. “*The Oriented Convex Polyhedra (Or-Dops)*” in Daman. D, Bade. A & Suaib. N. (ed.s) *Collision Detection for Real-Time Graphics: Series of Techniques* (2008). pp 43 – 59. Penerbit UTM.
5. Devadas. S , Bade. A, Daman. D, **Suaib. N**. “*Collision Response Between Deformable Objects*” in Daman. D, Bade. A & Suaib. N. (ed.s) *Collision Detection for Real-Time Graphics: Series of Techniques* (2008). pp 77 – 88. Penerbit UTM.
6. Yahya. S. N, Bade. A, **Suaib. N**. “*Dynamic Selection Based Method for Physical Based Deformation*” in Daman. D, Bade. A & Suaib. N. (ed.s) *Collision Detection for Real-Time Graphics: Series of Techniques* (2008). pp 89 – 101. Penerbit UTM.
7. **Suaib. N**, Bade. A, Mohamad. D. “*Collision Detection for Avatar*” in Daman. D, Bade. A & Suaib. N. (ed.s) *Collision Detection for Real-Time Graphics: Series of Techniques* (2008). pp 115 – 129. Penerbit UTM.
8. Abd. Rahim R, **Suaib N**, Bade A. “*Character Animation*” in Daman. D, Bade. A, Suaib. N. (ed.s) *Real-Time Graphics: Theory and Applications* (2008) Vol 2 (pg. 45). Johor: Universiti Teknologi Malaysia.
9. Yusof. H, **Suaib. N** “*Modeling Fish and Its Movement*” in Daman. D, Bade. A, Suaib. N. (ed.s) *Real-Time Graphics: Theory and Applications* (2007). Vol. 1, pp 105 – 122. Penerbit UTM.
10. **Suaib, N.** & Che Mat, R. “*Fractal In Modeling Natural Objects*” in Daut Daman, D., Sunar, M.S. & Zamri, M.N. (ed.s) *Advances in Computer Graphics & Virtual Environment* (2007). Vol. 1, pp 55 – 78. Penerbit UTM.
11. Bade, A., **Suaib, N.** & Daman, D. “*Collision Detection in Virtual Environment*” in Daut Daman, D., Sunar, M.S. & Zamri, M.N. (ed.s) *Advances in Computer Graphics & Virtual Environment* (2007). Vol. 1, pp 103 – 122. Penerbit UTM.

- MODULS
1. Fundamentals of Computer Graphics (1999) – Department of Computer Graphics & Multimedia, Universiti Teknologi Malaysia.
  2. Graphical User Interface (1998) – Department of Computer Graphics & Multimedia, Universiti Teknologi Malaysia.
  3. Pengaturcaraan Grafik Komputer 2D Menggunakan OpenGL – Department of Computer Graphics & Multimedia, Universiti Teknologi Malaysia.
- BOOK EDITOR
1. Real-Time Graphics: Theory and Applications (2007). Vol. I. Penerbit UTM. ISBN 978-983-52-0614-6
  2. Real-Time Graphics: Theory and Applications (2008). Vol. II. Penerbit UTM. ISBN 978-983-52-0615-3
  3. Collision Detection for Real-Time Graphics: Series of Techniques (2008). Penerbit UTM. ISBN 978-983-52-0616-0
- JOURNAL EDITOR
1. International Journal of Interactive Digital Media (IJIDM). Mixed and Virtual Environment Section Editor (2013 – current). UTM ViCubeLab. ISSN: 2289-4098; eISSN: 2289-4101.
  2. Jurnal Teknologi Maklumat (JTM – FSKSM internal journal). Publication editor (1998 – 2008). Faculty of Computer Science & Information System, UTM.
- MAGAZINE EDITOR
1. Majalah DATA (1995 – 2000) – internal circulation, Faculty of Computer Science & Information System, UTM.

## **SUPERVISION**

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- POSTGRADUATES
1. Nazreen b. Abdullasim 2015 -2016  
*Velocity Perception as Collision Handling for autonomous agents avoidance behavoir*  
• Co-supervisor (PhD. (CS))
  2. Noor Adibah Najihah bt. Mat Noor 2016 - 2017  
*An improved non-photorealistic rendering method*  
• Thesis Supervisor (MSc. (CS) mixed-mode)
  3. Syaiful Nizam b. Yahya 2006 - 2008  
*Physical Based Deformations for Real-time Applications*  
• Co-supervisor (MSc. (CS) by research)
  4. Saandilian s/o Devadas 2004 – 2008

	<i>Collision Response Between Deformable Objects in Game Environment</i>	
	• Co-supervisor (MSc. (CS) by research)	
	5. Abd. Samad b. Hassan Basari	2002
	<i>Sistem Penilaian Prestasi Pelajar</i>	
	• Co-supervisor (MSc. (IT) by coursework)	
	6. Mohd Asri b. Mohammad	2001
	<i>Sistem Penjana Modul Pembelajaran di Atas Talian</i>	
	• Co-supervisor (MSc. (IT) by coursework)	
UNDERGRADUATES (FINAL YEAR PROJECTS – RECENT 10 YEARS) *TOTAL >50 PROJECTS	1. Haridev Singh a/l Jagegit Singh	2016
	<i>College Faulty Items Complaint Application (COLFIC)</i>	
	2. Aqly bin Kamaruddin	2016
	<i>Virtual Reality Game Using Google Cardboard : Eye Spy</i>	
	3. Ahmad Haryth bin Ahmad	2016
	<i>Development Of Building Blocks (Lego) Software In A Development Virtual Environment Using Hand Gesture Interaction</i>	
	4. Chua Jing Min	2016
	<i>Pen-Based Visualization System Intended Toward Medical Application</i>	
	5. Nur Hazwani binti Zubir	2016
	<i>Virtual Flybrough using Leap Motion Controller</i>	
	6. Chong Wai Kit	2015
	<i>Tablet Interface for Interactive Control on Character Animation</i>	
	7. Chuah Bee Chin	2015
	<i>Online Chinese Digits Recognition using Self-Organizing Map</i>	
	8. Fawwaz bin Mohd Nasir	2014
	<i>Broad-phase Collision Detection using Multi-core Processor</i>	
	9. Mohd Zulhisyam bin Elias	2014
	<i>Research on Extraction of Contour Line from Topographic Map</i>	
	10. Suriati binti Yaacob	2014
	<i>Kajian Teknik Penyakit Benar dalam Permodelan Hutan</i>	
	11. Tamimi bin Tamby	2013
	<i>3D Jumanji Board Game for Android</i>	
	12. Muhammad Safwan bin Zakaria	2013
	<i>Pengiraan Bilangan Pokok Kelapa Sawit berdasarkan Imej Satelit</i>	
	13. Aimi Maryam bt Abd Halim	2013
	<i>Broad-phase Collision Detection for Multiple Rigid Objects Simulation</i>	

14. Nor Amirafarhani bt Kamarudin	2013
<i>Buku Mewarna Interaktif dalam Persekitaran 3D untuk Android</i>	
15. Nuraini bt Mohd @ Saras	2006
<i>Pengesanan Pelanggaran di antara Rambut dengan Rambut</i>	
16. Farah Hafizah bt. Mohd Azman	2005
<i>Permodelan Bulu Burung (Feather) Menggunakan L-systems</i>	
17. Fakhri b. Mohamed	2005
<i>Simulasi Kesan Serangan Serangga Perosak Terhadap Pokok Menggunakan Kaedah L-systems</i>	
18. Jamayah bt. Hassan	2005
<i>Model Tangan Maya Menggunakan Konsep Permodelan Berhierarchy Dan Pengesanan Pelanggaran</i>	
19. Edzree b. Ayub	2005
<i>Penggunaan Cell Shading Terhadap Model Watak 3D</i>	
20. Jsrina bt. Sabari	2005
<i>Alat Bantu Mengajar Matapelajaran Asas Grafik Komputer : Transformasi 2D</i>	
21. Maslina bt. Jamaludin	2005
<i>Paparan Stereoskopik Untuk Helmet Mounted Display (HMD)</i>	
22. Fauziah bt. Zaibidi	2005
<i>Persekitaran Masa-nyata Menggunakan Teknik Level-of-Detail (LOD)</i>	
23. Douglas Jacob Cheah Vun Hiung	2005
<i>Physically-based Modelling: Goal-post Net</i>	
24. Norazrina bt. Marikun	2005
<i>Permodelan Petir Menggunakan Kaedah Fraktal</i>	
25. Ng Irene	2005
<i>Penjanaan Laluan Terpendek Dalam Pandu Arah Sebuah Kompleks Membeli-belah</i>	

#### **POSTGRADUATE EXAMINATIONS/VIVA**

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DOCTOR OF PHILOSOPHY	1. Ismahafezi bin Ismail <i>PhD. (Computer Science)</i>	April 2016
	• Co-chairman	
	2. Suriati binti Sadimon <i>PhD. (Computer Science)</i>	April 2016
	• Co-chairman	

	3. Ali Sharifara <i>PhD. (Computer Science)</i>	20 August 2015
	• Co-chairman	
	4. Pang Yee Yong <i>PhD. (Computer Science)</i>	5 November 2015
	• Co-chairman	
	5. Itimad Raheem Ali <i>PhD. (Computer Science)</i>	9 November 2015
	• Co-chairman	
MASTER OF SCIENCE	6. Ainul Azura Abdul Hamid <i>MSc. (Computer Science)</i>	12 July 2015
	• Co-chairman	

#### ADMINISTRATIVE

Current Committee	Posts/	Undergraduate Course Coordinator - B.CS (Computer Graphics & Multimedia Software (SCSV))	2014 - 2016
		Jawatankuasa Penyelarasan Penyelidikan & Penerbitan, Fakulti Komputeran (research group representative)	2015 - 2016
		Editor - International Journal of Interactive Digital Media (IJIDM)	2013 - 2016
Previous		Internal Audit Preparation Unit - Committee/Academic Programme Head, Faculty of Computing	2015
		Paperwork Preparation for New Postgraduate Program (Department of Computer Graphics & Multimedia) - Committee	2011 - 2012
		Department representative - Bengkel Penawaran Kursus Baru – Program Sarjana Muda Sains Komputer (Pengkhususan)	2005
		Jawatankuasa Penerapan Nilai-nilai Murni (JAPNI)	2011 - 2015
		Research Coordination Committee (Dept. rep.)	2003 - 2007
		Editor - Jurnal Teknologi Maklumat	1996 - 2007
		Department's Quality Assurance Committee	2005
		Department's Publication & Research Committee	2005
		Department's Teaching & Learning Committee	2005
		Faculty Marketing Programme Committee	2005
	Jawatankuasa Bengkel Pemantapan Pengurusan Pengajian Siswazah dan		

Penyelidikan FSKSM	2002, 2004
Faculty Publication Committee	2002 – 2004
e-Learning Technical Committee (FSKSM)	2002
FSKSM Academic Excellence Program – Advisor	2000
Practical Training Committee (FSKSM)	1996 – 1999
Acting Coordinator – Practical Training Committee	1998
Multimedia Programme Launching Ceremony (Committee)	1996
Head of Computer Graphics Lab	1995

## CONFERENCE ORGANISATION

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- ICOCOE 2016** Bandung, Indonesia  
*3rd International Conference on Communication and Computer Engineering*
- Technical / Publication Committee (Reviewer)
- ICIDM 2015** Bandung, Indonesia  
*International Conference on Interactive Digital Media 2015*
- Publication co-Chair
- GAMEPEC 2015** Langkawi, Malaysia  
*Game Physics and Mechanics International Conference 2015*
- Technical / Publication Committee (Reviewer)
- ICOCOE 2015** Phuket, Thailand  
*2nd International Conference on Communication and Computer Engineering*
- Technical / Publication Committee (Reviewer)
- I4CT 2015** Kuching, Malaysia  
*2015 International Conference on Computer, Communication, and Control Technology*
- Technical / Publication Committee (Reviewer)
- ICIDM 2014** Kota Kinabalu, Malaysia  
*International Conference on Interactive Digital Media 2014*
- Technical Committee
- ICT4M 2014** Kuching, Malaysia  
*International Conference on Information & Communication Technology for the Muslim World 2014*
- Technical Reviewer
- ICIDM 2013** Kuching, Malaysia  
*International Conference on Interactive Digital Media 2013*

- Technical Committee

**ICIDM 2012** Langkawi, Malaysia  
*International Conference on Interactive Digital Media 2012*

- Technical Committee

**GRAPHITE 2006** Kuala Lumpur, Malaysia  
*4th International Conference on Computer Graphics and Interactive Techniques in Australasia and the Southeast Asia 2006*

- Technical/Publication Chair

**Cybergames 2006** Perth, Australia  
*International Workshop on Game Research and Development 2006*

- Technical Committee

**BIC 2005** Johor Bahru, Malaysia  
*International Symposium on Bio-Inspired Computing 2005*

- Committee

**CoGRAMM 2004** Kuala Lumpur, Malaysia  
*2nd National Conference on Computer Graphics and Multimedia 2004*

- Secretary I

**CoGRAMM 2002** Melaka, Malaysia  
*1st National Conference on Computer Graphics and Multimedia 2002*

- Secretary

**INFOTECH'95** UTM Skudai/via video conferencing nationwide  
*National Conference of Information Technology Management 1995*

- Committee

ADVISORY BOARD **ICPCM 2008** New Delhi, India  
*International Congress on Pervasive Computing and Management 2008*

#### **PROFESSIONAL MEMBERSHIPS**

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Persatuan Sains dan Matematik Malaysia (PERSAMA)	<i>life membership since 2005</i>
Persatuan Saintis Muslim Malaysia (PERINTIS)	<i>life membership since 2016</i>
Association for Computing Machinery (ACM)	<i>member since 2004</i>
ACM Special Interest Group on Graphics and Interactive Techniques (ACM SIGGRAPH)	<i>member since 2004</i>
KL-SIGGRAPH	<i>2003 – 2006</i>
Persatuan Animasi Malaysia (ANIMAS)	<i>2010 – 2012</i>



Institute of Electrical and Electronics Engineers (IEEE)	2015
IEEE Computer Society	2015

#### **PROFESSIONAL CERTIFICATION**

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MSC Malaysia's Train-the-Trainers: NukeX for Digital Compositing (Level 1)	2015
Adobe Photoshop CC Masterclass	2015
Adobe Flash CS5 Certified Expert	2012

#### **AWARDS RECEIVED**

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Best Paper Award <i>International Conference in Interactive Digital Media (ICIDM 2013)</i>	2013
Anugerah Perkhidmatan Cemerlang <i>Universiti Teknologi Malaysia</i>	2006
<ul style="list-style-type: none"> <li>• Hari Kualiti 2007</li> </ul>	
Bronze Medal <i>Universiti Teknologi Malaysia</i>	2004
<ul style="list-style-type: none"> <li>• Industrial Art and Technology Exhibition 2004 (INATEX 2004) - Concept, Ideas &amp; Algorithm Category</li> </ul>	
Anugerah Perkhidmatan Cemerlang <i>Universiti Teknologi Malaysia</i>	2002
<ul style="list-style-type: none"> <li>• Hari Kualiti 2003</li> </ul>	
Anugerah Tuanku Canselor <i>Universiti Teknologi Malaysia</i>	1995
<ul style="list-style-type: none"> <li>• Convocation – Golden Award</li> </ul>	
Pingat Tuanku Abdul Rahman <i>Yayasan Tuanku Abdul Rahman</i>	1995
<ul style="list-style-type: none"> <li>• Outstanding academic &amp; extra-curricular activities</li> </ul>	
Anugerah Siswi Cemerlang <i>Persatuan Siswazah Wanita Malaysia</i>	1995
<ul style="list-style-type: none"> <li>• Outstanding academic &amp; extra-curricular activities</li> </ul>	
Anugerah Pelajar Sains Muslim Cemerlang <i>Akademi Sains Islam Malaysia</i>	1995
<ul style="list-style-type: none"> <li>• Outstanding academic performance in science</li> </ul>	

Anugerah Tunku Shahbudin  
*Tunku Kurshiah College*

1990

- Outstanding academic performance

## REFERENCES

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