

## Call for Graduate Research Assistant

<b>Project Title</b>	Mathematical Framework for Smooth Curve Generation in Presence of Uncertainties
<b>Funding</b>	Fundamental Research Grant Scheme FRGS (Ministry of Education, Malaysia)
<b>Project Duration</b>	2 years, Jan 2015 till Dec 2016
<b>Salary</b>	As per MOHE guidelines approx. RM 1800 pm (an additional of RM 500 – RM 800 pm can be added for deserving candidates or Master students)
<b>Location</b>	School of Engineering, Monash University Malaysia, Bandar Sunway
<b>Benefits</b>	<ul style="list-style-type: none"> <li>• Pursuing Master in Engineering with Monash University Malaysia (MUM). Tuition fee is waived.</li> <li>• Upon successful completion, Engineering degree from Monash University Clayton, Australia.</li> <li>• Student with master degree can enroll in MUM PhD program.</li> </ul>

### Project Description

Uncertainties are inevitable in engineering systems and applications. Identifying and quantifying uncertainties and designing system to cope with the uncertainties will save time and money and in turn increase the value of the products and services. Producing path and trajectories are the fundamental requirement in many areas of engineering such as CAGD, CAD/CAM, Robotics, Unmanned Autonomous Systems, and Precision Machining & Manufacturing. They describe the behaviour of the systems. This project investigates formulating a fundamental theory of including uncertainties in producing trajectories and paths, verification, and/or validation.

Criteria	Essential	Desirable
Education/ Qualifications	- Bachelor's degree with honors in Mechatronics/ Mechanical / Robotic Engineering/ Applied mathematics - Minimum grade equivalent to H2B or above	Knowledge in Geometry, Numerical methods, CAD/CAM, Path planning, Machining / CNC
Knowledge	Computer programming	MatLab/ C / C++/ CAGD/ CUDA / OpenGL
Skills/Aptitudes	Excellent command in written and oral English	Proactive and able to carry out research independently
Personal Qualities	Willing to learn and apply new concepts/ theories and do experiment	

Interested applicants are requested to submit their resumes through email to the person below. All queries regarding the project are welcomed.

**Dr. Madhavan Shanmugavel**  
 Mechatronics Engineering