



# Call for Application

## MPhil/PhD Scholarship (Full-time)

This MPhil/PhD (MPhil transfer to PhD) scholarship is offered as part of the funding provided by the Higher Education Commission (Previously Tertiary Education Commission) for the project titled "A mesoscopic simulator for the optimisation of Light Rail Transit Systems".

One of the objectives set for the aforementioned project is to conduct PhD level research for the development of a novel multi-objective nature-inspired model/algorithm for the optimisation of operations (scheduling, cost, emission, Light Rail Vehicle Motion, passenger flows at stations) for light rail transit (LRT) systems. The beneficiary of this scholarship will have to undertake the following core activities during his/her MPhil/PhD study:

- Carry out profound literature reviews in the field of multi-objective optimisation algorithms, Nature-inspired algorithm, Constrained Optimisation, Computational Intelligence, and light rail transit;
- Conduct experimentations, observations, and surveys;
- Analyse models, datasets and simulation results;
- Develop, test and validate a novel optimisation algorithm/model for LRT operations;
- Publish research papers in internationally peer-reviewed journals during the scholarship;
- Do oral presentations at seminars/workshops/conferences;
- Prepare and submit progress reports, MPhil transfer report and PhD Thesis.

The proposed title for this MPhil/PhD study is "Optimising light rail transit systems using a multi-objective nature-inspired algorithm".

### ELIGIBILITY CRITERIA FOR MPhil/PHD SCHOLARSHIPS

Applicants must hold at least an Upper Second-Class Honours Degree in Computer Science/ Information Systems/ Applied Computing/ Software Engineering/ Mathematics/ Physics/ Engineering, or related fields, from a recognised institution.

### FUNDING

The Scholarship covers an annual tuition and registration fees up to a maximum of Rs 75,000 and a monthly stipend: MPhil - Rs 16,500; PhD - Rs 18,300.

### DURATION

The beneficiary will be granted a maximum period of 3 years to complete his/her MPhil/PhD study.

## How to apply?

A brief summary of your understanding of the subject will have to be submitted. The summary should not exceed 2 pages and should contain the following:

- Your understanding of the problem statement for this research;
- Brief literature review on optimisation algorithms applied in transport and light rail transits; and
- References using Harvard Referencing style.

Letter of application together with the brief summary and a detailed Curriculum Vitae (C.V) as well as photocopies of qualifications, birth certificate, marriage certificates (if applicable), testimonials and equivalence of qualifications (where applicable) should reach the **Dean of Faculty of Information, Communication and Digital Technologies (FoICDT), (Attention: Dr O.Gukhool), University of Mauritius, Réduit** OR by email at [o.gukhool@uom.ac.mu](mailto:o.gukhool@uom.ac.mu) and copied to [deanfoicdt@uom.ac.mu](mailto:deanfoicdt@uom.ac.mu) (Dean, FoICDT), by **9th of October 2020**, at latest.

The envelope should be clearly marked “*Application for MPhil/PhD Scholarship (PV: T0104)*” on the top right-hand corner. Applications received after the closing date will not be considered. The University of Mauritius reserves the right:

- to call for interview only the most appropriate and best qualified applicants.
- not to make any appointment as a result of this advertisement.
- to conduct a written/aptitude test as and when required.

The successful award recipient must comply with the general scholarship terms and conditions, including compliance to a bond agreement.

### MPHIL/PHD REGISTRATION

The selected candidate for this call for application will have to register for MPhil/PhD (Full-time) once the Teaching and Research Committee (TRC) approves his/her research proposal. For this purpose, he/she will have to prepare a research proposal under the guidance of the supervisors, which should be submitted together with the duly filled application form to the Admission's Office by latest **6th of November 2020**. This scholarship is contingent upon final approval of TRC and registration of selected candidate. Following registration, the awardee is expected to start his/her MPhil/PhD studies as from **1st of December 2020**. The general guidelines for MPhil/PhD application and Registration can be consulted through this link: <https://tinyurl.com/y5t633bn>