

CHANDI DARSHANI RUPASIGHE



PERSONAL PROFILE

Full name	Chandi Darshani Rupasinghe
Date of Birth	5 th December 1992
Nationality	Sri Lankan
Postal address	No 34, Ekamuthu Uyana, Gonamaditta Road, Piliyandala.
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EDUCATION

BSc. (4 Year) Industrial Mathematics Faculty of Applied Sciences, Rajarata University of Sri Lanka. (2014-2018)

Subjects	Mathematics, Physics
Final Grade Point Average	3.74 (out of 4.00)
Result	Frist Class
Effective date	18- September 2018

Piliyandala Central College, Piliyandala (2002-2011)

- General Certificate Examination of Advanced Level.

August 2013 passed with following results.

Combined Mathematics	- C
Chemistry	- C
Physics	- C

- General Certificate of Ordinary Level December 2008 passed with 8As & C.

RESEARCH EXPERIENCE

Dissertation Designing of the Hospital Facility Layout using Quadratic Assignment Problem

Dissertation Adviser Prof. Daundasekara W.B., Faculty of Science, University of Peradeniya, Sri Lanka

Abstract Facility layout design arises both in the process of designing a new layout and redesigning an existing layout. The facility layout can be formulated as a Quadratic Assignment Problem, where objective function is quadratic in cost and distance. This study focuses on redesigning an existing layout of a multi-floor hospital by providing a better service to the patients and increasing the efficiency of its employees. The movement cost between entrance and the patients care rooms can be minimized by applying quadratic assignment problem to the hospital facility layout. It is assumed that the distance between the entrance and patient care rooms is directly proportional to a cost function which is defined based on the movement of the patients, doctors, medical staff and non-medical staff known as entities. The travel frequency and the degree of travelling difficulty to the entities were measured by observing the movements. Patients in a hospital encounter difficulty in movement and may sometimes even require some extra help to move depending on their physical conditions. To incorporate these conditions, trip difficulty rating scale is used in the model. In addition, the distances between departments were obtained by using the existing hospital building layout plan. Finally, the cost factor was determined by assigning different weights for entities. The proposed facility layout model was solved using LINGO optimization solver. The solution to the model has significantly reduced the travelling distances of entities producing a better hospital layout plan compared to the existing layout.

PUBLICATIONS

- “Designing of the Hospital Facility Layout Using Quadratic Assignment Problem.” Rupasinghe C. D. and Daundasekara W. B. Abstract Published in the International Conference on Mathematics and Mathematics Education, Sri Lanka: 22nd -23rd March 2019. (Abstract No: 308760)

PRESENTATIONS

- C.D. Rupasinghe (2018). “Designing of the Hospital Facility Layout Using Quadratic Assignment Problem.” Paper presented at the Applied Sciences Undergraduate Research Sessions at the Rajarata University of Sri Lanka.
- C.D. Rupasinghe (2019). “Designing of the Hospital Facility Layout Using Quadratic Assignment Problem.” Paper presented at the International Conference on Mathematics and Mathematics Education at the University Peradeniya. (Poster Presentation)

AWARDS AND CERTIFICATIONS

- Informatics Institute of Technology **Gold Medal** for Highest Cumulative GPA in Bachelor in Physical Sciences, Rajarata University of Sri Lanka: 11th July 2019.
- Department of Physical Sciences **Gold Medal** for Highest Cumulative GPA in Bachelor of Sciences (4 Year) degree in Industrial Mathematics, Rajarata University of Sri Lanka: 11th July 2019.
- Completed the certification course in Human Resource Management in the Institute of Personal Management Sri Lanka (IPM) with a **Merit Pass**: 11th May 2016.
- Passed Australian National Chemistry Quiz in the year of 2008 with a **Distinction** award

PROFESSIONAL EXPERIENCE

- **Temporary Demonstrator (13th January 2019 to 31st July 2019)**

Department of Physical Sciences, Faculty of Applied Sciences, Rajarata University of Sri Lanka, Mihinthale
Conducting tutorial discussions for operations research courses and Statistical courses

- **Temporary Lecturer (1st August 2019 to Present)**

Department of Physical Sciences, Faculty of Applied Sciences, Rajarata University of Sri Lanka, Mihinthale
Conducting lectures for operations research courses and Statistical courses

RELEVANT SKILLS

- Proficient user of Statistical software (MINITAB).
- Proficient user of Microsoft Office (PowerPoint, Word, Excel)
- Proficient user of Mathematical Software (Mathlab).
- Proficient user of Excel Solver and Lingo
- Can work individually as well as with groups.
- Good presentation skills.

MEMBERSHIPS AND COMMUNITY SERVICES

- Committee member of industrial mathematics students' Association (IMSA) (from 2015) (IMSA is the internal mathematics society of the Faculty of Applied Sciences in Rajarata University of Sri Lanka)
- Active participation in the “Advance Level Workshop Rajarata University of Sri Lanka for North Central Province students” (2017, 2016, 2015).

REFEREES

1. Prof. W.B.Daundasekara (Ph.D.-The University of Alabama, Alabama, U.S.A.)

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Faculty of Science,
University of Peradeniya, Sri Lanka
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2. Dr. (Miss) Harshani Wijewardane (Ph.D.- University of Missouri U.S.A.)

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DECLARATION

I hereby certify that the above information are true and correct due to my knowledge.

C D Rupasinghe
August 13, 2019