

Sunanda Gunasekara

(Mphil, Bsc Eng Hons, AMIESL)



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Blending engineering with common sense towards innovation while keeping excellent personal relationships.

PERSONAL INFORMATION

Born September 23rd, 1978 in Bandarawela (Sri Lanka)
Citizenship : Sri Lankan
Marital status : married, 2 kids
Religion : Buddhism
NIC Number : 782671200V

AREAS OF INTEREST

- Operational Management
- Construction management
- Electronics & Automation
- Sustainability & Green initiatives
- Laser Technology
- Nanotechnology
- Energy Management
- Research & Innovation

WORK HISTORY

2009 – PRESENT
(7 Years)

Sri Lanka Institute of Nanotechnology Pvt Ltd

Manager Technical Services & *Infrastructure Development*

- Design Engineer / Project manager for the construction of the Nanotechnology Center of Excellence.
(LEEDS platinum awarded & USD 6.2 Mn project)
- Design Engineer / Project manager for the construction of the Technology Incubation Center (2.5 Mn USD project).
- Hands on experience on operation & maintenance of high-end analytical instruments
 - Transmission Electron Microscopy (JEOL 2100 TEM) with Gatan Electron Energy Loss Spectroscopy (EELS)
 - Scanning Electron Microscopy (SEM) - Hitachi SU6600
 - Nuclear Magnetic Resonance spectroscopy (NMR) – Bruker 400MHz
 - X-Ray Diffraction– (XRD) – Bruker D8 Focus
 - FTIR/ IR Microscope/ FT Raman – Bruker Vertex80
 - Thermo Gravimetric Analysis – (TGA) / Differential Scanning calorimeter– TA Instruments

- Spectrophotometers - AAS/ICPMS/GCMS/LCMS- Agilent/Waters
- Etc...
- General Administration– BOI/Customs etc..
- Inventor for many patents – US patent office

2005 – 2009
(4.5 years)

MAS Unichela Pvt Ltd
Maintenance Manager

- Handled all the Industrial Engineering & maintenance activities at the Panadura & Koggala factories
- Actively participated in implementation of Saw system bonding machine program
- Introduced laser cutting technology for precision cutting
- Designed & developed two double head molding machines & a fabric relaxation machine
- Project manager - Phase two expansion Unichela Koggala
- Project manager – Cutting department Unichela Panadura
- Member – MOS(MAS Operating System) Team

2004 – 2005
(2 years)

BALVIN Electronics pvt ltd
Managing Director

- Startup company - Join venture with Balvin Inc. UK
- Design & develop fuel pumps in Sri Lanka & exported to UK.
- Received a design patent (Sri Lankan patent office) for petrol & 2T oil automatic mixing pump for two stroke engines

2003
(3 months)

Ceylinco Digital House Pvt Ltd
IT Engineer

- System administrator for the organization
- Maintained the computer network at the “The Finance Pvt Ltd.”

2003
(6 months)

Lakdhanavi Pvt Ltd – (Industrial training)
Operations Engineer

- Handled the entire operation at 39MW diesel power plant – Embilipitiya

EDUCATION

2010 – 2013

University of Moratuwa, Sri Lanka
MPhil – Nanotechnology (Full time research)

- “Parameter optimization of preparation of multi wall carbon nanotubes using Sri Lankan vein graphite by arc discharge method.”

1998 – 2002

University of Moratuwa, Sri Lanka
BSc Engineering

- First Class Honors Degree in Electrical Engineering
- **GPA : 3.85**

TRAININGS ATTENDED

- 2004 **Lakdhanavi Pvt Ltd, Sri Lanka**
- Six month Industrial training at 39MW diesel power plant – Operation Engineer
- 2004 **Autometer Alliance pvt ltd, Delhi, India**
- Training on manufacturing of multi-layer printed circuit boards
- 2006 **Bierrebi Italia srl, Bologna, Italy**
- Training on die cutting machines for garments
- 2006 **IMA S.P.A, Breccia, Italy**
- Training on automated fabric spreading machines
- 2007 **Framis Italia, Italy**
- Training on manufacturing & application of adhesives tapes for fabrics
- 2007 **Perfecta Schmid AG, Switzerland**
- Training on Bra molding machines
- 2007 **Gerber Technology, CA, USA**
- Training on automated fabric cutting machines
- 2008 **Gbosch Electromechanical Pvt Ltd, China**
- Training on CO2 laser cutting systems
- 2013 **Dantakuma Technologies, Japan**
- Training on maintenance of class 1000 clean room facilities
- 2011 **Park System, Korea**
- Training on Atomic force microscope (AFM)
- 2010 **Bruker Optics GmbH, Germany**
- Training on FTIR & FT-RAMAN system
- 2009 **Shimadzu Asia Pacific Pte. Ltd, Singapore**
- Training on UV-Visible spectrophotometer
- 2011 **Fritsch GmbH, Germany**
- Training on particle size analyzers & planetary ball mills
- 2013 **Ritzumikan University, Japan**
- Training on MEMS (micro electro mechanical devices) & NEMS (Nano electro mechanical devices)
- 2015 **Gatan Inc, California, USA**
- Training on Electron Energy Loss Spectroscopy (EELS)
- 2015 **Jeol Pvt Ltd, Tokyo, Japan**
- Training on Transmission Electron Microscopy

PATENTS (USA PATENT OFFICE)

1. Composition and method for sustained release of agricultural macronutrients

Patent number : 8696784
Type : Grant
Filed : December 7, 2012
Issued : April 15, 2014
Assignee : Sri Lanka Institute of Nanotechnology (Pvt) Ltd
Inventors : Nilwala Kottegoda, Gayan Priyadharshana, Chanaka Sandaruwan, Damayanthi Dahanayake, Sunanda Gunasekara, A. J. Gehan Amaratunga, Veranja Karunaratne

2. Cellulose based sustained release macronutrient composition for fertilizer application

Patent number : 8617284
Type : Grant
Filed : June 6, 2011
Issued : December 31, 2013
Assignee : Sri Lanka Institute of Nanotechnology (Pvt) Ltd
Inventors : Nilwala Kottegoda, Imalka Munaweera, Lilantha Samaranayake, Sunanda Gunasekara, Ajith De Alwis, Veranja Karunaratne, A. Nadeesh Madusanka

3. Process for preparation of carbon nano tubes from sri lankan vein graphite

Application number : 20130062195
Type : Application
Filed : August 21, 2012
Issued : March 14, 2013
Assignee : Sri Lanka Institute of Nanotechnology (PVT) Ltd.
Inventors : Lilantha Samaranayake, Nilwala Kottegoda, Asurasinghe R. Kumarasinghe, Ajith De Alwis, Sunanda Gunasekara, Sameera Nanayakkara, Veranja Karunaratne

4. Process for preparation of nano particles form magnetite ore

Application number : 20120056121
Type : Application
Filed : July 5, 2011
Issued : March 8, 2012
Assignee : Sri Lanka Institute of Nanotechnology (PVT) Ltd.
Inventors : Veranja Karunaratne, Gayan Priyadharshana,
Sunanda Gunasekara, Nilwala Kottegoda, Atula
Senaratne

PATENTS (SRI LANKAN PATENT OFFICE)

1. Design patent for Automated petrol & 2T oil mixing pump for two stroke vehicles

Patent number : 7494
Type : Grant
Filed : 24.12.2003
Issued : 16.05.2004
Assignee : Sunanda Gunasekara
Inventors : Sunanda Gunasekara, Gamini Padmalal

PAPERS PRESENTED

1. National academy of Science – Colombo- Sri Lanka -2013

„The first Sri Lankan Park for Science: The Growth of a Nanopolis“

2. *Annual training workshop on the development of science park and technology business incubator. – Daejeon – Korea - 2010*

“Triple Helix Model of Innovation”
Role of Government, Academia & Industry in promoting science
technology & innovation in SRI LANKA.

EXTRA-CURRICULAR ACTIVITIES

1. Former Visiting Lecturer at Open University of Sri Lanka.
2. Member – Engineering student Union, University of Moratuwa – 2000/2001
3. Company Sarjeon Major – National Cadet Corps – 1996
4. Regimental Sarjeon Major – National Cadet Corps – 1997
5. Member – School Chess team -1996/1997
6. Member – School Volleyball team - 1996
7. Chess Coach – Central College Bandarawela – 1998/99

REFERENCES

Prof. Ajith de Alwis
Project Director (COSTI)

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