

Ts. Dr. Sathiabama T.Thirugnana

Resume Summary

Current Position : Senior Lecturer
Current Specialization : Engineering – Electrical/Electronic
Highest Education : PhD in Engineering (Electrical/Electronic)
Years of Working Experiences : 10

Research Area: Sustainable Energy, namely Photovoltaic System and Ocean Thermal Energy Conversion (OTEC). GUP Tier I and II focuses on Salt Water Lantern. SATREPS Project manager and coordinator, 2019 – 2024. Member & Committee member of Energy Institute UK and Malaysia. Last year, won awards on STEM Mentor-Mentee Program in Malaysia.

Employment History

2012 - March 2015

1. Waseda University, Japan

Position Title (Level) : PhD Student
Specialization : Engineering - Electrical
Industry : Electrical & Electronics
Work Description :

I have successfully completed my PhD in EEE, majoring in semiconductor (material science). For more details about my research refer to my proposals and journal papers. Renewable energy and thermal energy is also my area of interest. Currently working on Ocean Thermal Energy Conversion (OTEC), focusing on the durable electrodes for salt lantern. I am passionate about nurturing and bringing the spark of STEM education into our younger generation. Actively involved in the National STEM Movement under the Academy of Sciences of Malaysia.

Publications

1. Lallendran Rajendran and SathiabamaThiru

Urban Metro Elevated Station To Generate Solar Power
International Journal Of Integrated Engineering, V10 (7), 156-166 (2018)

2. Nithiya Arumugam, Shreeshivadasan Chelliapan, Hesam Kamyab, Sathiabama Thirugnana, Norazli Othman, Noor Shawal Nasri

Treatment Of Wastewater Using Seaweed: A Review
International Journal Of Environmental Research And Public Health, V15 (12), 1-17 (2018)

3. SathiabamaThiru, Miki Fujita, Atsushi Kawaharazuka and YoshijiHorikoshi

Photoluminescence study of Si doped and undoped Chalcopyrite CuGaSe₂ thin films
Applied Physics A, V113 (2), 257-261 (2013)

4. SathiabamaThiru, Masaki Asakawa, Kazuki Honda, Atsushi Kawaharazuka, Atsushi Tackeuchi, ToshikiMakimoto and YoshijiHorikoshi

Investigation of CuGaSe₂/CuInSe₂ double heterojunction interfaces grown by molecular beam epitaxy
AIP Advances 5, 027120-1 (2015)

5. SathiabamaThiru, Masaki Asakawa, Kazuki Honda, Atsushi Kawaharazuka, Atsushi Tackeuchi, ToshikiMakimoto and YoshijiHorikoshi

Study of single crystal CuInSe₂ thin films and CuGaSe₂/CuInSe₂ single quantum well grown by molecular beam epitaxy
Journal of Crystal Growth, 425 (2015) 203–206

6. SathiabamaThiru, Miki Fujita, Atsushi Kawaharazuka and YoshijiHorikoshi

Electrical and Photoluminescence study of Undoped CuGaSe₂ Single crystal thin film

The Malaysia-Japan Model on Technology Partnership: International Proceedings 2013 of Malaysia-Japan Academic Scholar Conference, Springer, 2013, Part IV, 265p

International conference presentations

1. SathiabamaThiru, Miki Fujita, Atsushi Kawaharazuka, Koji Onomitsu and YoshijiHorikoshi

“Photoluminescence of single crystal thin film chalcopyrite CuGaSe₂ grown on GaAs(001)”, The 40th International Symposium on Compound Semiconductor, Kobe, Japan (May, 2013)

2. SathiabamaThiru, Miki Fujita, Atsushi Kawaharazuka and YoshijiHorikoshi

“Photoluminescence of single crystal thin film CuGaSe₂:Zn grown on GaAs(001)”, 2013 Fall Meeting of Materials Research Society, T7.10, Boston (December, 2013)

3. SathiabamaThiru, Atsushi Kawaharazuka, YoshijiHorikoshi

“Optical and Electrical properties of CuInSe₂/(CuGaSe₂:Ge) Superlattice grown on GaAs(001)”, The 41st International Symposium on Compound Semiconductor, Montpellier, France (May, 2014)

4. SathiabamaThiru, Atsushi Kawaharazuka, YoshijiHorikoshi

“RHEED Observation and X-ray Diffraction of CuInSe₂/(CuGaSe₂:Ge) Hetero-structure grown on GaAs(001)”, The 19th International Conference on Ternary and Multinary Compounds, Niigata, Japan (September, 2014)

5. SathiabamaThiru, Atsushi Kawaharazuka, YoshijiHorikoshi

“RHEED Observation and X-ray Diffraction of CuInSe₂/(CuGaSe₂:Ge) Single quantum well grown on GaAs(001)”, The 18th International Conference on Molecular Beam Epitaxy, Flagstaff, Arizona (September, 2014)

Domestic conference presentations

1. SathiabamaThiru, Tomohiro Sato, Miki Fujita, YoshijiHorikoshi

“Chalcopyrite CuGaSe₂ grown by Migration Enhanced Epitaxy and Its doping”, 73th Autumn Meeting of The Jpn. Soc. Of Appl. Phys., 11a-J-11, Ehime (September, 2012).

2. SathiabamaThiru, Tomohiro Sato, Miki Fujita, YoshijiHorikoshi

“Solar cell absorber layer material CuGaSe₂ thin films grown by migration-enhanced epitaxy and its doping characteristics by means of photoluminescence”, Malaysia Japan Academic Scholar Symposium, Waseda University (November, 2012).

3. SathiabamaThiru, Tomohiro Sato, Tomotaka Sato, Kouki Toyoda, Miki Fujita, YoshijiHorikoshi

“Photoluminescence of single crystal thin film chalcopyrite CuGaSe₂ grown on GaAs(001)”, 60th Spring Meeting of The Jpn. Soc. Of Appl. Phys., 28p-G4-1, Kanagawa (March, 2013).

4. SathiabamaThiru, Tomotaka Sato, Kouki Toyoda, Miki Fujita, YoshijiHorikoshi

“Photoluminescence of single crystal thin film CuGaSe₂:Zn grown on GaAs(001)”, 74th Autumn Meeting of The Jpn. Soc. Of Appl. Phys., 17a-D6-2, Kyoto (September, 2013).

5. SathiabamaThiru, Miki Fujita, Atsushi Kawaharazuka, YoshijiHorikoshi

“Electrical and photoluminescence study of undoped CuGaSe₂ single crystal thin film”, Malaysia Japan Academic Conference, Meiji University (November, 2013)

6. SathiabamaThiru, Tomotaka Sato, Kouki Toyoda, Atsushi Kawaharazuka, YoshijiHorikoshi

“In-situ RHEED observation and optical properties of thin film CuGaSe₂ grown on GaAs (001)”, 61th Spring Meeting of The Jpn. Soc. Of Appl. Phys., 19a-D7-2, Sagamihara, (March, 2014).

Feb 2011 - March 2012

2. AT&T

Position Title (Level) : Project Manager (Manager)
Specialization : IT/Computer - Network/System/Database Admin
Role : Project Management
Industry : Telecommunication

Work Description :

Handling all tele-communication projects in APAC region. With my Japanese language skill and expertise in their culture, I am mainly handling Japanese customers. Completed six-sigma green belt successfully. Implementing the methodology into daily task while handling projects.

Jan 2008 - March 2010

3. EDS MSC Sdn. Bhd.

Position Title (Level) : Subject Matter Expert/Trainer/QA Analyst (Senior Executive)
Specialization : Technical & Helpdesk Support
Role : IT Support/Helpdesk
Industry : Call Center / IT-Enabled Services / BPO

Work Description :

RESPONSIBILITIES:

Upon joining supported several accounts for Japanese clients. Went to UK for a month of SAP training. Played a SME role and SAP expert for Japanese clients. Later, joined a different project/account related to hotel CRM. I was sent to India for training and successfully completed the task by training other new agents. I was also in charge of service QA. Have been using DW ticketing applications and also REMEDY. I am a fast learner of computer applications, processes and knowledgeable of PC hardware.

1. Provide both DTS and SAP support to clients.
2. Provide guidance, support and coaching to a team of 10 head counts.
3. Handling difficult customers and handle complaints.

ACCOMPLISHMENT:

1. Completed ITIL courses.

REASON FOR LEAVING:

Seek for better career advancement opportunities and exposure.

2002 - 2007

4. Minato Electronics Inc.

Position Title (Level) : Senior Engineer (Senior Executive)
Specialization : Engineering - Electronics/Communication
Role : R&D Engineer
Industry : Electrical & Electronics

Work Description :

Have been working with Programmable ROM (Flash memory, EPROM etc) writer for 6 months. Then had interest in Flat Panel Display (FPD) testers; In-line FPD inspection tester. Supported customers in Japan (TFPD, DTI and Sharp) with customized specifications. Also customers out of Japan were AFPD (Singapore) and Korean

Samsung, our very leading customers. I have gone on business trips to both Singapore and South Korea in order to do the setup and system installation. Also directly support customers via phone and email regarding technical specifications and its implementation.

I was leading Slant system project. Inspections of flat panels were done using cameras that are set slant. Platform used were Windows XP, 2K etc.; with Redlake camera and Hamamatsu Photonics camera; Matroxsolios frame grabber with CamLink and LVDS as Acquisition interface. Once image acquisition is done, digital images can be stored into host memory via frame grabber. I have been using C++, where image processing development, implementation, debugging and testing are done. I also setup, assemble and dismantle computers while installing our system. I used WINTEL, XEON servers, Dell PCs and Epson PCs.

Had been making GUI tools, preparing for demonstrations for Taiwanese clients. I was also doing demonstrations for our co-partners in Japan. Later, focused on the inspection of backlight modules and cell phones LCD panels.

Educational Background

Graduation Date: 2002

Master's Degree of Engineering (Electrical/Electronic)

Major : Semiconductor Material Ternary Compound
 Institute/University : Nagaoka University of Technology, Japan
 Grade : Grade A/1st Class

Graduation Date: 2000

Bachelor's Degree of Engineering (Electrical/Electronic)

Major : Semiconductor Materials, Intern at Alps Denki
 Institute/University : Nagaoka University of Technology, Japan
 Grade : Grade B/2nd Class Upper

Skills

(Proficiency: Advanced - Highly experienced; Intermediate - Familiar with all the basic functionalities; Beginner - Just started using or learning the skill)

Skill	Years	Proficiency
Japanese	>5	Advanced
Project Management	4	Intermediate
C++ Language	4	Intermediate
Microelectronics - PV cells	>5	Advanced
OTEC Technology	2	Intermediate

Languages

(Proficiency: 0=Poor - 10=Excellent)

Language	Spoken	Written
English	9	9
Japanese	9	9
Bahasa Malaysia	8	8
Tamil	8	2

Personal Particulars & Preferences

Date of Birth : 14 March 1975
 Nationality : Malaysia
 Gender : Female
 IC No. : 750314-14-5388
 Possess Own Transport : Yes

Additional Info

BIODATA:

After completing my SPM, I was awarded a scholarship to Japan to further my studies in Engineering & Technology by the PSD (JPA).

INTERPERSONAL TRAITS AND ATTITUDE:

- * Excellent cross-cultural communication skills
- * International living experience
- * Sense of responsibility
- * Highly inquisitive
- * Creative and resourceful
- * Leadership charisma
- * Dynamic team player
- * Time management skills
- * Dependable

HIGHLIGHTS OF DELIVERED PROJECTS:

1. Project Name : Slant system Tester

Client : Samsung Sony LCD, Korea

Duration : April 2005 till 2007

Role : Team lead

Team size : 4

Software and Platform : WIN XP, VC++/COM, sockets programming

Others : Redlake Camera uses Coreco Imaging's Sapera module

The project involved setting and implementing new hardware which were higher resolution and speedy camera using Redlake camera and Sapera module for the Slant System Tester. I did the requirement gathering, specification and designing of tools and system.

2. Successfully delivered new accounts transitions on the receiving side of BPO centre. I have delivered tasks such as, learning the new processes, become SME, making of knowledge base etc.. Later, successfully trained new agents on new applications and processes.

ADDITIONAL SKILLS:

- * Internet research
- * Programming/Scripting Languages: C++