**SARADH PRASAD.R**

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RESEARCH & DEVELOPMENT PROFESSIONAL

 ***In laser & opto-electronics research, design and development***

**PROFILE**

* Excellent interpersonal and communication skills along with clarity of fundamentals with perseverance to succeed and zeal to achieve results.
* A competent and diligent professional with a degree in **M.Tech – Laser & Electro Optical Engineering** from **Faculty of Information and Communication,** **College of Engineering, Anna University, Chennai.**
* A Researcher with **14 ISI publications and H-index of 4** in interdisciplinary research fields.
* **Working as Researcher at Research Chair for Laser Diagnosis of Cancers, KSU, Riyadh.**
* **Teaching Physics, Laser Physics, Electronics circuits and working as lab instructor and guidng Master level students research projects.**
* Previously worked with **Appasamy Associate & Group of Companies** a**s** a**n Electronics Solution Provider & Team Leader.**
* **High-level languages: C/C++, Visual Basic, BASIC, HTML, Pascal, and Fortran**
* **Assembly languages: ARM, M68K DragonBall (68328), MCore, PowerPC, PIC, and X86**
* **Extensive experience in simultaneous cross-platform development**
* **Expert at debugging embedded systems with little or no emulator support**
* **System level software (RTOS, drivers, libraries, and test applications) in embedded environment**
* **High level hardware and software debugging using oscilloscopes, logic analyzers, and simulators**
* **Low level software debugging using memory dumps and assembly code tracing**
* **Operating Systems: Palm OS, WinCE/PocketPC, VRTX, Windows upto 8, Unix and Linux**
* **Programmable Logic: Xilinx, CoolRunner, and other PLDs**
* **Electrical soldering (including surface mount components)**
* **Good Knowledge in Power Electronics.**
* Experienced in researching next generation laser and LED materials such as conjugated polymers, quantum dots and nano particles.
* Expertise in Design, Simulation, Development and implementation of Lasers, Electronics & power electronics systems for Medical Devices
* Proliferant in hardware development and power electronics development with a professional diploma **in Embedded Systems from AU-PERS, Anna University.**
* **Funded Projects (Approved):**

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| --- | --- | --- | --- | --- |
| S.No | Project Code | Project Name | Role | Funding Agency |
| 1 | 14-ADV989-08 | Synthesis of some Chalcones and related heterocyclic compounds for **Designing Solid State Laser** | Co-Investigator | NPST/  1.97 million SAR |
| 2 | 14-ENE899-02 | Designing, Evaluating and Improving Solar-cells based on **ConjugatedPolymer, perovskite organo-metal trihalide** | Full time researcher | NPST/  1.99 million SAR |
| 3 | 13-ADV1205-02 | Design of Tunable Broadband **Conjugated-Polymer Laser** | Full time researcher | NPST/  1.67 million  SAR |
| 4 | 13-ELE1174-02 | Synthesis, efficacy and evaluation of novel rigid coumarin/quinoline hybrids for **solid-state dye lasers** | part time researcher | NPST/ 1.98 million  SAR |

**Research Skills:**

**Equipments Handled** : Fluorescence Spectroscopy Perkin Elmer FL 55, UV-VIS Lambda 950, FTIR **Lasers Handled**  : Nd:YAG Laser (5 ns, 1,2,3,4 harmonic), Ti:Sappier (Tunable) and other lasers

**Software** : Zemax, Origin Pro 7.5

**I T SKILLS**

**Embedded Software** : Keil uVision, ARM IDE, Code blocks.

**Electronic Design Tool** : Proteus 7.4, OrCAD, PSPICE, Origin Pro.

**High Level language** : Embedded C, C++.

**PROFESSIONAL EXPERIENCE**

**King Saud University Jul 11’- Till Date**

***(Research Chair for Laser Diagnosis of Cancers, Riyadh)***

* Designing Medical device KSU Spectral Scan.
* Designing lasers from new materials and designing laser optics.
* Design & Development of Optics, Electronics for optical biopsy instrument.
* Design & Development of Laser based car parking guiding system.
* Researcher in excited state dynamics of conjugated polymer lasers and cancer diagnosis using optical biopsy technique.

**APPASAMY ASSOCIATE & GROUP OF COMPANIES Jun 09’-Jun 11’**

***(R&D, Chennai)***

* Drawn up project plans, schedule of activities, budget & cost estimates, planned, procured, mobilized and deployed resources to deliver the project within defined time and costliness.
* *Designed flash and diode pumped* ***Nd:YAG Laser System with Dual wavelength output 1064*** nm ***& 532nm,*** *its power electronics and Electronics interface circuits.*
* Laser Power Electronics Designing.
* Involved in the designing of 2D positioning system for moving the laser spot to various points of a plane (Retina) with high precision was designed and implemented.
* Implemented migrations to open source software such as Project Planner, Open Office, Gimp, PikLab, gEDA, KiCAD and GNU ARM project.
* *Design and development of* ***Display for integrated slit lamp*** *to determine spot size of Laser.*

**ACADEMIC & PROFESSIONAL CREDENTIALS**

**M. Tech, Laser & Electro optical Engineering (Faculty of Information and Communication),** College of Engineering, Anna University, Chennai, **2009, 7.3 (GPA)**

**B.E, Electrical & Electronics Engineering,** D.M.I College of Engineering, Chennai, **2007, 73%**

**H.S.C,** AdhiParasakthi Mat. Hr. Sec. School, Melmaruvathur, **2003, 79.5%**

***Other Courses***

**Course: Embedded System Programming,** AU-PERS Embedded Technologies, Anna University, Chennai, **2008**

**Exposure**: Hands on Practical & Theoretical training in project development using ATMEL, PIC microcontrollers, Programming in Keil and Raisonance ride IDE using embedded C, Introduction about ARM, AVR Controllers and Real Time Operating System (RTOS).

**Grade**: A

**Research Publications: (2011 - 2015)**

1. **Saradh Prasad**, K.H. Ibnaouf, M.S. AlSalhi, V. Masilamania, [Laser from the dimer state of a conjugated polymer (PFO) in solution](http://www.sciencedirect.com/science/article/pii/S0032386113011658), Polymer 55 (2014) 727-732
2. K. H. Ibnaouf, **Saradh Prasad**, A. Hamdan, M. Al Salhi, V. Masilamani, A.S. Aldwayyan, and M. B. Zaman, [Photoluminescence spectra of CdSe/ZnS quantum dots in solution](http://www.journals.elsevier.com/spectrochimica-acta-part-a-molecular-and-biomolecular-spectroscopy/), Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy 121 (2014) 339–345
3. K. H. Ibnaouf, ***Saradh Prasad,*** M. S. Al Salhi, A. Hamdan, M. B. Zaman, and L. El Mir, Influence of the solvent environments on the spectral features of CdSe quantum dots with and without ZnS shell, Journal of Luminescence, 149 (2014) 369–373
4. Masilamani V, Das BB, Secor J, Alsalhi M, Devanesan S, **Prasad S**, Rabah D, Alfano RR. Optical Biopsy of Benign and Malignant Tissue by Time Resolved Spectroscop[y](http://www.tcrt.org/Optical-Biopsy-of-Benign-and-Malignant-Tissue-by-Time-Resolved-Spectroscopy-p18052.html), *Technol Cancer Res Treat*. 2013 Jun 6. [Epub ahead of print]
5. Mustapha, N., Ibnaouf, K.H., Fekkai, Z., Hennache, A., **Prasad.S.**, Alyamani, A Improved efficiency of solar cells based on BEHP-co-MEH-PPV doped with ZnO nanoparticles, (2013) *Optik*, . Article in Press.
6. Ibnaouf, K.H., **Prasad.S**., Masilamani, V., Alsalhi, M.S., Mustapha, N., Alyamani, A.  
   [Triple amplified spontaneous emissions from a conjugated copolymer BEHP-co-MEH-PPV in solution.](http://www.scopus.com/record/display.url?eid=2-s2.0-84878415270&origin=resultslist) (2013) *Physica E: Low-Dimensional Systems and Nanostructures*, 53, pp. 66-71.
7. Ibnaouf,K.H.,**Prasad,S**., Masilamani, V., Alsalhi, M.S.  
   Evidence for amplified spontaneous emission from double excimer of conjugated polymer (PDHF) in a liquid solution, (2013) *Polymer (United Kingdom),*54 (9), pp. 2401-2405.
8. Ibnaouf, K.H., **Prasad,S.**, Masilamani, V., Alsalhi, M.S., Alaamer, A.S.  
   [Evidence for the double excimer state of conjugated polymer in a liquid solution,](http://www.scopus.com/record/display.url?eid=2-s2.0-84873341973&origin=resultslist)(2013) *Journal of the European Optical Society*, 8, pp. 13001-13005.
9. Ibnaouf, K.H., **Prasad,S**., Aldwayyan, A.S., Alsalhi, M.S., Masilamani, V.  
   [Amplified spontaneous emission spectra from the superexciplex of coumarin 138,](http://www.scopus.com/record/display.url?eid=2-s2.0-84865462637&origin=resultslist)(2012) *Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy*, 97, pp. 1145-1151.
10. Masilamani, V., Alsalhi, M.S., Vijmasi, T., Govindarajan, K., Rathan Rai, R., Atif, M., **Prasad, S**., Aldwayyan, A.S., [Fluorescence spectra of blood and urine for cervical cancer detection,](http://www.scopus.com/record/display.url?eid=2-s2.0-84870596828&origin=resultslist)(2012) *Journal of Biomedical Optics*, 17 (9), art. no. 098001, . Cited 1 time.
11. Alsalhi, M., Al Mehmadi, A.M., Abdo, A.A., **Prasad,S.**, Masilamani, V.  
    [Diagnosis of liver cancer and cirrhosis by the fluorescence spectra of blood and urine](http://www.scopus.com/record/display.url?eid=2-s2.0-84863937323&origin=resultslist)(2012) *Technology in Cancer Research and Treatment*, 11 (4), pp. 345-352.
12. S. Devanesan, M.S. AlSalhi, M. Ravikumar, K. Perinbam, ***Saradh Prasad***, Abbas H. Al-Saeed, Siddanna Palled, K. Jeyaprakash, V. Masilamani, Fluorescence spectral classification of iron deficiency anemia and thalassemia, Journal of biomedical optics 19, no. 2 (2014): 027008-027008. Impact Factor = 2.752
13. ***Saradh Prasad***, K.H. Ibnaouf, M.S. AlSalhi, Kamal Alameh, D.Devaraj, A. Hamdan, M. R. Karim and V. Masilamani, Laser from optically pumped quantum dots CdSe/ZnS in a colloidal liquid, Journal of nanoscience and nanotechnology,
14. ***Saradh Prasad***, K.H. Ibnaouf, M.S. AlSalhi, D. Devaraj, V. Masilamani, High power amplified spontaneous emission from an oligomer in solution, Journal of Luminescence 168 (2015) 109–113
15. Al-Khalid Isam Zuhaier, Kosa Mohammad, Sandhanasamy Devnesan, Mohamad Saleh AlSalhi , ***Saradh Prasad*** and Vadivel Masilamani, Shelf-life enhancement of donor blood by He–Ne laser biostimulation, **CURRENT SCIENCE, VOL. 109, 2015, 15**
16. Saradh Prasad, M. S. AlSalhi, Ziad. S. Abo Mustafa, D.Devaraj, Gamma-irradiation effects on the spectral properties of the conjugated polymer BEHP-co-MEH–PPV in solution, Accepted in journal of radiation physics and chemistry
17. ***Saradh Prasad***, M. S. AlSalhi, D.Devaraj, V Masilamani, Spectral and ASE characterization of a conjugated polymer poly (9,9-dioctylfluorenyl-2, 7-diyl) (PFO) in thin films, under revision, journal of Molcular Pysics
18. Sarah Abdulaziz Alfahad, ***Saradh Prasad***, Wafa Al-Mujammi,V.Masilamani and Mohamad Saleh AlSalh,An efficient violet laser from a conjugated polymer (PFO-co-pX) in solution, under revision J euro optic soc
19. Saradh Prasad, M. S. AlSalhi, V. Masilamani and Ziad. S. Abo Mustafa, The Effect of Gamma Radiation on ASE Properties of MEH-PPV conjugated polymer, under revision Journal of Macromolecular Science, Part B

**Date of Birth**: 18th Oct, 1985

**Languages Known:** Tamil and English

**References**: Available on Request

**Official** (LinkedIn) : <http://www.linkedin.com/pub/sarad-prasad/6b/9b3/7b4>

**Personal** (Facebook) : <https://www.facebook.com/sarad4u>