




PERSONAL INFORMATION

Vanessa Rozelle Maria Rodrigues

 Institutul Național de Cercetare-Dezvoltare pentru Fizică și Inginerie Nucleară „Horia Hulubei”,
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Date of birth 20/10/1985 | Nationality Indian

POSITION

Engineer

WORK EXPERIENCE

12/2018–Present

Engineer/ Physicist

- Extreme Light Infrastructure-Nuclear Physics (ELI-NP), Magurele (Romania)

2008–2010

Customer Support Engineer

EMITAC Distribution L.L.C. (Authorized Dealers), Abu Dhabi (United Arab Emirates)

EDUCATION AND TRAINING

12/2012–07/2019

Doctor of Philosophy (Ph.D)

EQF level 8

Department of Atomic and Molecular Physics, Manipal Academy of Higher Education, Manipal (India)

Dissertation title: Sub-micron fabrication of diffractive optics using a pulse switching system

08/2010–07/2012

Master of Science (M.Sc)

EQF level 7

Department of Atomic and Molecular Physics, Manipal Academy of Higher Education, Manipal (India)

Photonics

2003–2007

Bachelor of Engineering (B.E.)

EQF level 6

Manipal Institute of Technology, Manipal (India)

Electronics and Communication

PERSONAL SKILLS

Foreign language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C1	C1	C1

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
 Common European Framework of Reference for Languages

Organisational / managerial skills

- Laboratory Demonstrator to graduate students , 2013-present
- Tutoring projects for 3 visiting summer interns on Ultrafast Photonics, 2015-2016
- Tutoring a six month undergraduate project on Opto-Mechanical door locking, 2015
- The Department Blog editor <http://huenew.wordpress.com> 2014 - 2018

- Website content writer for SPIE Focus - Asia Student Photonics Conference in 2016 and DAE BRNS Theme Meeting on Ultrafast Science in 2014
- Event management coordinator for science conferences/ workshops/ student interaction events in Manipal 2014-2018

Digital skills

Language Proficiency : C++, Arduino

Tools : MATLAB, KEIL, PICkit2, Origin 8, ImageJ

Packages : MS-Office (proficient)

Operating Systems : DOS (basic), Windows (intermediate)

ADDITIONAL INFORMATION**Honours and awards**

- Third place for research idea and prototype demonstration of *Spatial Light Modulators fabricated using ultrafast lasers* at MAHE Innovation day Oct 28, 2017.
- **Best Poster Award** at Nano and Soft Matter Sciences Workshop, Manipal 2016
- Recipient of **SPIE Optics and Photonics Education Grant** 2014
- Invited Participant for the Indian Nanoelectronics Users Program (INUP) at IISc Bangalore in July 2-10, 2015
- Invited Participant in Summer School on Lasers and Laser Applications (SSOLLA 2012), Gwangju, South Korea in July 16-20, 2012
- Manipal University SPIE Student chapter **Secretary**, 2013-14
- **MAHE Scholarship Award** during Bachelor of Engineering 2004-2007
- Company Representative for Samsung Laptop Training and Certification course in Dubai, United Arab Emirates. 2009

Publications

- **Direct femtosecond laser fabricated photon sieve**

OSA Continuum 2 (4), 1328-1341

Vanessa RM Rodrigues, Jayashree A. Dharmadhikari, Aditya K. Dharmadhikari, Santhosh Chidangil, Deepak Mathur, and Hema Ramachandran

- **Enhancing the Strength of an Optical Trap by Truncation**

PLoS ONE, 8(4): e61310 (2013)

Vanessa R. M. Rodrigues, Mondal A., Dharmadhikari JA, Panigrahi S., Mathur D., Dharmadhikari AK

- **Small and Macromolecules Crystallization Induced by Focused Ultrafast Laser**

Proc Indian Natn Sci Acad 81, No. 2, pp. 517-523 (2015)

T Shilpa, Shashikiran G Bhat, Vanessa RM Rodrigues, SD George, Aditya K Dharmadhikari, C Santhosh, A Abdul Ajees

- **Opto-mechanical Door locking system**

SPIE *Optical Systems Design*. International Society for Optics and Photonics, pp. 96262J-96262J (2015), Saurabh Suhas Patil, Vanessa M. Rodrigues, Ajeetkumar Patil, Santhosh Chidangil

- **Microfabrication of Fresnel zone plates using Laser Induced Solid Ablation**

Journal of Optics, IOP 18(7), 075403 (2016)

Vanessa R.M. Rodrigues, John Thomas, Santhosh Chidangil, Hema Ramachandran, Deepak Mathur

- **Self-cleaning superhydrophobic surfaces with underwater superaerophobicity**

Materials & Design 100: 8-18 (2016)

Jijo Easo George, Vanessa R. M. Rodrigues, Deepak Mathur, Santhosh Chidangil, Sajjan D. George

- **Fabrication of micro-optical components using femtosecond oscillator pulses**

Proc. SPIE 10449, Fifth International Conference on Optical and Photonics Engineering, 104492V (June 13, 2017); doi:10.1117/12.2270898

Vanessa R. M. Rodrigues, Hema Ramachandran, Santhosh Chidangil, Deepak Mathur

Conferences

- *International conference on Optics and Engineering*, Singapore: Fabrication of micro-optical components using femtosecond oscillator pulses, Apr 4-7, 2017
- *National Symposium on Radiation and Photochemistry*, Manipal: Deviations In Material Behavior Observed During Ultrafast Laser Machining Of Micro-Optics, Mar 3-5, 2017
- *International Workshop on Complex Photonics 2017*, TIFR, Mumbai: Variations in material types observed during ultrafast micro-machining of diffractive optics, Jan 22-24, 2017
- *CeNS workshop on Nano and soft matter sciences*: Diffractive optics fabricated by Femtosecond laser micromachining, Aug 2016 and 2017
- *DAE-BRNS Theme meeting on Ultrafast Laser science*, BARC Mumbai: Fabrication of Discrete and Continuous zone plates using femtosecond lasers, Nov 24-26, 2016
- *DAE-BRNS National Laser Symposium-24*, RRCAT, Indore: Fabrication of Phase Zone Plates by Ultrafast Laser Micromachining, Dec 2-5, 2015
- *DAE-BRNS Theme meeting on Ultrafast Laser science*, Manipal: Fabrication of low numerical aperture microlenses using femtosecond laser pulses, Oct 31-Nov 1 2015
- *International symposium on Ultrafast Intense Laser Science -13*, Jodhpur, Rajasthan, Oct 5-10, 2014
- *Asia Student Photonics Conference*, Kolkata: Carbon nanotube mediated bubble dynamics using an optical trap July 18-21, 2014
- *DAE-BRNS National Laser Symposium-22*, Manipal: Using spatial truncation to enhance the strength of an optical trap, Jan 8-11, 2014

Projects

Title: **The Study of Bubble Dynamics using Optical Tweezers**

Jan 2012 – June 2012

4th Semester Masters in Photonics Project (Duration: 6 months)

Tata Institute of Fundamental Research, Mumbai, India

Title: **Power Consumptions in Multiplier Architectures**

Jan 2007 – May 2007

8th Semester Bachelor of Engineering Project (Duration: 5 months)

Manipal Institute of Technology, Manipal Academy of Higher Education, India