

## CV Profile (max. 2 pages length)

1 *Shilpi Pandey*

### Research interests

Bio-Sensor, Microfluidic, RF MEMS, CD microfluidics, Point-of-care and low cost diagnostic tools, Material Science, Micro-Fabrication Technology, Semiconductor Devices.

### Education

#### **Education:**

Doctor of Philosophy (PhD) in Electronics Engineering, Banasthali Vidyapith, India, 2017.

Master of Technology (M. Tech.) in VLSI Design, Banasthali Vidyapith, India, 2010.

Bachelor of Technology (B. Tech.) in Electronics and Communication, Dr. A. P. J. Abdul Kalam Technical University (Formerly UPTU), India, 2008.

#### **Awards/Honor:**

DRESDEN Junior Fellowship of TU Dresden, Germany, in 2019 (six months).

Won 3rd prize in talk "Clogging-free continuous operation with whole blood in a microfluidic pillar device" at "SELECTBIO-Microfluidics and LAB-ON-A-CHIP" on January 17-18th, 2018

Institute Postdoctoral Fellowship of Indian Institute of Technology Bombay India, in 2017 (two years).

Senior Research Fellowship of Council of Scientific & Industrial Research (CSIR), Government of India, in Engineering Field, 2012 (PhD fellowship; four years).

### Experience

#### **Fabrication Skills:**

##### Process:

PDMS fabrication, 3D printing, CD fabrication for CD microfluidics

Cleaning (Degreasing, RCA and Piranha), Thermal oxidation, Diffusion, Photolithography, Reactive Ion Etching, Annealing, Thin film deposition Techniques such as: LPCVD, PECVD, Sputtering.

Characterization and analysis techniques: RF and CV measurement, AFM, XRD, UV-Vis-NIR spectrometer, SEM, Ellipsometry.

##### Technical Proficiency:

High Frequency Structural Simulator (HFSS), CST Software, Coventor Ware, L-edit, CleWin, Autodesk Inventor, Silvaco, MATLAB, Comsol, Ansys – Fluid (Certificate course from Ansys Noida).

#### **Research Experience:**

Post-Doc, Institute for Microwave Technology and Photonics, Technical University of Darmstadt Germany, from 1st October, 2019- 30th September, 2020. (1 year)

Dresden Junior Fellow in the Institute of Microsystems and Sensors, TU Dresden Germany, from 06th April, 2019-30th September, 2019 (6 months).

Postdoctoral Fellow, Biosciences and Bioengineering, Indian Institute of Technology Bombay, India, from 3th April, 2017-25th March, 2019 (2 year).

CSIR-Senior Research Fellow, Transducers and Actuators Group (Formerly SNTG), CSIR-Central Electronics Engineering Research Institute, Pilani, Rajasthan, India, from 13th April, 2012-29th April, 2016. (4 year)

Project Fellow Level-III, Transducers and Actuators Group (Formerly SNTG), CSIR-CEERI, Pilani, Rajasthan, India, from 22nd February, 2012 -12th April, 2012. (2 months)

**Projects completed:**

Microwave dielectrometry of biological liquids of small volumes. (Technical University of Darmstadt, one year)

Development and implementation of microfluidic platform for cell separation and analysis (Technical University of Dresden, six months)

Development of CD microfluidics platform for various applications (Indian Institute of Bombay, India, six months)

Cell separation using microfluidic chip (Indian Institute of Bombay, India, 2 years)

Design and Fabrication of DMTL Phase Shifter for Communication Applications (CSIR-CEERI, Pilani, India, 4 years)

Advanced Microsensors and Microsystems Design Development and Application: RF MEMS Switch

Innovative high-k dielectric based reduced size, high speed SPST and SPDT switch: design and development (CSIR-CEERI, Pilani, India, 2 years)

An Experimental Analysis of LPCVD Polysilicon for MEMS application (CSIR-CEERI, Pilani, India, , 10 months)

## Contact information

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