Dr.Panwala Fenil Chetankumar

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Ph.D (Microelectromechanical system/EIE Dept)
Electronics and Instrumentation Engineering
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Career Objective

My objective is to impart quality education with emphasis and nurture my thought as well as learning process by focusing on sharpening engineering acumen which can enhance academic institution, where I can use my hard earned skills with creativity to address the present day problems for mutual growth.

Educational Qualifications

DEGREE	INSTITUTE	UNIVERSITY	COURSE	YEAR	SCORE
Ph.D.	NIT Nagaland	NIT Nagaland	MEMS (E & I Dept)	2020(15thJune)	9.69 CGPA (Coursework)
M.TECH	SRM , kattankulathur	SRM, Chennai	Electronics and Control	2017(June)	8.79 CGPA
B.E	Atmiya Institute of Technology And Science,Rajkot	GTU	Instrumentation and control	2014(June)	8.20 CGPA
HSC	T & T.V,surat	GHSEB	Science	2010	63.80%
SSC	Lokbharti English school,surat	GSEB	General	2008	68.62%

Journal papers, Chapter, Patent, Conferences and Workshops

✓ Journal Papers:

- **Fenil. C. Panwala**, R.Kumar, P. Mohamed Shakeel "**An analysis of bacteria separation and filtration from blood sample using passive methods**" Measurement, **Elsevier**, ISSN 0263-2241, Volume 140, pp 29-46, 2019. ***(SCI)***

- **Fenil. C. Panwala**, R.Kumar "**Asymmetric sifter-shaped microchannel network in biological MEMS for size- and mass-based mammalian cell sorting and separation using hydrodynamic technique**" The journal of supercomputing, **Springer US**, Online ISSN 1573-0484 & print ISSN 0920-8542 , vol 76, pp 3814-3846,2018. [DOI 10.1007/s11227-018-2715-9]. ***(SCI)***

- **Fenil. C. Panwala**, R.Kumar "**Modelling and analysis of asymmetric Sieve shaped Skewed type microchannel network in BioMEMS for mass and size based mammalian cell separation and**

sorting using filtration method" Revista de la Facultad de Agronomia De La Universidad Del Zulia, ISSN 0378-7818, Volume 34, Issue 4, pp 566-591, 2017. ***(SCIE)***

- **Fenil. C. Panwala**, R. Kumar, Trigunesh Narzary, A Vimala Juliet "**An Enhanced and Sieve type microchannel network simulation model to detect the separation of size and mass dependent bacteria in microfluidic device**", Journal of Advanced Research in Dynamical and Control Systems, **Elsevier**, ISSN 1943-023X, Volume 9, Issue 18, pp 1109-1124, 2017. ***(SCOPUS)***

- Rituraj Bhattacharjee, R. Kumar, **Fenil C Panwala** and P. Mohamed Shakeel, "**Design and Analysis of an Optimized Microfluidic Channel for Isolation of Circulating Tumor Cells Using Deterministic Lateral Displacement Technique**.", Complex & Intelligent Systems, Springer, Vol 6, Issue 3, pp. 711 - 720, 2020. ***(SCI)***

- Siddhanta Borah, R.Kumar, Subhradip Mukherjee, **Fenil. C. Panwala,** A Prassanna Lakshmi "**An Experimental Analysis of Quad Wheel Autonomous Robot Location and Path Planning Using Borahsid Algorithm (BsA) with GPS and Zigbee**" (Submission code: IJVICS-253614), International Journal of Vehicle Information and Communication Systems (IJVICS), Inderscience Publisher. (**ACCEPTED**). ***(SCOPUS)***

- **Fenil. C. Panwala**, C Likith Kumar, A Vimala Juliet "**Simulating the Lattice- Shaped microchannel for separation of bacteria beads using HDF**" **IEEE Xplore**, Electronics ISBN: 978-1-5090-3355-3 & PoD ISBN: 978-1-5090-3356-0, pp 54-58, 2017.

- **Fenil. C. Panwala**, R.Kumar, P.Mohamed Shakeel " **Bio-particle separation and sorting using Passive Technique in BioMEMS through bifurcated/Slit-shaped Geometrical (Micro-channeling) Network**" Environmental Geochemistry and Health, **Springer**, Van Godewijckstraat 30, Dordrecht, Netherlands, 3311 GZ.**(Under Review).**

✓ Chapter:

- R. Kumar and **Fenil. C. Panwala**, "**Micropatterning in BioMEMS for separation of cells/bioparticles**" Book Title: MEMS Sensors- Design and Applications, InTechOpen Publication, Rijeka Croatia-European Union, ISBN:978-1-78923-395-7 and Print ISBN: 978-1-78923-394-0, pp 71-90, 2018. (WEB OF SCIENCE) (BOOK CITATION INDEX).

✓ Conferences:

- Trigunesh Narzary, R Kumar**, Fenil. C. Panwala** "MEMS-Based Diaphragm Pressure Sensor using S-shaped Piezoresistors for Enhancing Sensitivity" IEEE Xplore, 2018 International conference on recent trends in Electrical, control and Communication(RTECC), Electronics ISBN: 978-1-5386-4310-5 & PoD ISBN: 978-1-5386-4311-2, pp 10-14, January 2018.

- C Likith Kumar, **Fenil.C.Panwala**, A.Vimala Juliet, "lattice-shaped microchannel network for sorting of size-dependent particle/cells by using hydrodynamic filtration" in International Conference on Advances in Biotechnology and Biotherapeutics (ICABBS-2017) at Sathyabama College of engineering, Chennai March-2017.

- **Fenil.C.Panwala**, C Likith Kumar, A.Vimala Juliet, "Simulating the Lattice-Shaped Microchannel for Separation of Bacteria beads using HDF" in conference of IEEE Sponsored 4th International Conference on Electronics and Communication Systems-ICECS'17" at Karpagam College of engineering, Coimbatore, Feb-2017.

- C. Likith Kumar, **Fenil.C.Panwala**, A.Vimala Juliet "Continuous sorting for mass dependent particles by lattice-shaped micro-channel network using HDF", in Research day 2017 at SRM university, Kattankulathur, Chennai (Feb- 2017)".

✓ Workshops

- National Level Workshop sponsored by TEQIP-III on "**Raspberry PI Based Industrial Application with IOT Technology**" Organized by Department of Electronics and Instrumentation Engineering, NIT Nagaland, Association with VI Microsystem, 2018.

- National Level Workshop on "**Industrial Automation Using PLC and DCS**" Organized by Department of Electronics and Instrumentation Engineering, NIT Nagaland, Association with SIEMENS, 2018.

- Workshop on "**Applications of MEMS in Instrumentation Engineering**" Organized by Department of Electronics and Instrumentation Engineering, SRM Institute of science and technology, Kattankulathur, Chennai, 2015.

- Attended"**One day HRD(AMT) Programme in Collaboration with centre for Entreprenurship Development**", Rajkot, Atmiya Institute of Technology and science, 2014.

- Workshop on "**PLC, DCS and SCADA**" Organized by Department of Instrumentation and Control Engineering, Association with PROLIFIC, ATMIYA Institute of Technology and Science, Rajkot, Gujarat, 2013.

- Workshop on Mobibotics (prepared a **ROBOT CAR**) at NIRMA university, Ahmedabad, Gujarat,2011.

Achievements

- **Gold medal** handed by Vice President (Shri M Venkaiah Naidu) as a **Rank holder** in **Mtech** (Electronics and Control) at SRM Institute of science and technology, Chennai.
- Awarded **Gold medal** for representing paper on "Continuous sorting for mass dependent particles by lattice-shaped micro-channel network using HDF", in **Research day 2017** at SRM Institute of science and technology, Chennai.

Internships and Extra Curricular

- Worked as an Intern in **IGCAR, Kalpakkam,** Chennai 2016-17(6 months).
- Summer Training in **Prince Electronics,** Ahmedabad, Gujarat from 5^{th} to 15^{th} June 2016.
- Co-ordinated in **ATMIYA ACCENT 2013** magazine of Atmiya institute of technology and science, Rajkot, Gujarat.
- Participated in **TECHIDEA 2013** event organized in college for an idea about "**FOUR WHEEL SMOOTH TURNING TECHNIQUE" at** Atmiya Institute of technology and science, Rajkot, Gujarat..

Work Experience

- Experience in textile industry, Surat ,Gujarat (2014-15).

Technical Knowledge

- Language: "C"
- Operating system: Linux programming
- Skills
  - ✓ COMSOL Multiphysics 5.2a
  - ✓ ANSYS
  - ✓ Intellisuite Software
  - ✓ MATLAB
  - ✓ Lab VIEW
  - ✓ FPGA(basics)
  - ✓ Proteus
  - ✓ PLC(SIEMENS, ABB, DELTA)
  - ✓ DCS and SCADA (SIEMENS)
  - ✓ LaTeX- A Document preparation system

Projects Undertaken

- Worked on "**Modelling and Analysis for Sieve-Shaped Micro-Channel Device for sorting of size dependent Bio-particles in BioMEMS using Hydrodynamic Filtration Technique"**(Ph.D)
  Simulation Tool**:** COMSOL Multiphysics 5.2a, Origin (for graphing and Data analysis)
  Project Place**:** NIT Nagaland, Chumukedima, Dimapur, Nagaland
  Status: Completed on 15th June 2020

- Worked on "**Continuous Sorting of Particles/Cells using Lattice-Shaped Microchannel Network by Hydrodynamic Filtration method**" (M.TECH) (2017).
  Simulation Tool**:** COMSOL Multiphysics 5.2a
  Project Place**:** SRM University, kattankulathur,Tamil Nadu.

- Worked on "**Indirect Measurement of Ion beam current and beam profiling monitoring for 400kv tandetron Accelerator**" (2016-2017).
  Simulation Tool**:** CCS C compiler, lab VIEW, FPGA
  Project Place**:** IGCAR, kalpakkam,Tamil Nadu.

- Worked on project of "**Automation in Precise Powder filling machine"** (B.E) (2014).
  Simulation Tool**:** PLC(Allen bradly(RSLogix)), Microcontroller.
  Project Place**:** Atmiya institute of technology and science, Rajkot, Gujarat

- **"Water Level Indicator"** which can indicate different levels of water in water tank (2012).

Research Interest

- MEMS/NEMS,
- BIOMEMS,
- Sensors and Transducers,
- Instrumentation System Design
- Industrial Instrumentation and Process Control.

Subjects Interested

- MEMS
- Advanced Control system
- Control system
- Digital system design
- Industrial Instrumentation-1
- Industrial Instrumentation-2
- Circuits and Networks
- Biomedical instrumentation
- Industrial Data Communication
- Process control.
- Sensors and transducers
- SCADA and Distributed Control System

Personal skills and Competencies

- Adaptability to new and changing situations.
- Leadership skills
- Self-motivated achiever with an established reputation for reliability, hard work, commitment, teamwork and flexibility.

Personal Details

Date of Birth	**July 13th, 1992**
Father's name	Chetankumar Panwala
Gender	Male
Marital Status	Married
Nationality	Indian
Hobbies	Cooking, Swimming
Language Proficiency	English (Read, Write and Speak) Hindi (Read, Write and Speak) Gujarati (Read, Write and Speak)

Declaration: I hereby declare that all statements given here are true and complete.

Reference-1:

Dr. R. Kumar
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