

# Muhammad Israr

Assistant Professor

NUST Institute of Civil Engineering

Email: muhammad.israr@nice.nust.edu.pk

Contact:

LinkedIn: <https://www.linkedin.com/in/dr-muhammad-israr-siddiqui-39986aa7/>?midToken=AQGjJW9wxvomnw&midSig=3ylyoKz3n0NVs1&trk=eml-email\_pymk\_02-header-81-profile&trkEmail=eml-email\_pymk\_02-header-81-profile-null



## About

Dr. Muhammad Israr is working as Assistant Professor in the NUST Institute of Civil Engineering. Dr. Muhammad Israr has a PhD in Fluid Mechanics. Dr. Muhammad Israr has published 18 research articles & conference papers having a citation count of 165, carried out 0 projects and filed 0 intellectual property.

## Qualifications

### PhD in Fluid Mechanics

Petronas Technology University , Malaysia

2011 - 2015

### MS in Mathematics

COMSATS Institute of Information Technology , Pakistan

2007 - 2009

### BS in Mathematics

COMSATS Institute of Information Technology , Pakistan

2003 - 2007

## Experience

### Assistant Professor

NUST Institute of Civil Engineering

2020- Present

### Assistant Professor

NUST Institute of Civil Engineering

2017 - 2017

### Assistant Professor

(Do Not Use-Duplicate)NUST Institute of Civil Engineering

2017 - 2017

### Post-Doctoral Researcher

Universiti Teknologi PETRONAS , Seri Iskanadr, Perak, Malaysia

2015 - 2017

### Graduate Assistant

Universiti Teknologi PETRONAS , Perak, Malaysia

2011 - 2015

### Visiting Lecturer

AIR University , Islamabad, Pakistan

2011 - 2011

## Research Articles

### Boosting the photoexcited charge collection and transportation via BiVO<sub>4</sub>/Fe-TiO<sub>2</sub> NRs in Type-II heterojunction for efficient photoelectrochemical water splitting

2023

Fazeelat Rehman Noor Alam Manzar Sohail Muhammad Ahmad Muhammad Israr Muhammad Imran Irshad Dr Asad Mumtaz

Journal of Photochemistry and Photobiology A: Chemistry, Volume 444, Article Number: 114956

Impact Factor: 5.14 | Quartile: 2 | Citations: 9

DOI: 10.1016/j.jphotochem.2023.114956

### Combination of linear stochastic estimation and proper orthogonal decomposition: application in two-phase slug flow

2023

Muhammad Israr Shahzad Munir Abdul Rashid Abdul Aziz Morgan Heikal

Journal of the Brazilian Society of Mechanical Sciences and Engineering, Volume:45, Issue:2, Article number: 112

Impact Factor: 2.361 | Quartile: 3 | Citations: 4

DOI: 10.1007/s40430-023-04013-3

### Proper Orthogonal Decomposition Based on Vorticity: Application in a Two-Phase Slug Flow

2022

Shahzad Munir Muhammad Israr Abdul Rashid bin Abdul Aziz Morgan Heikal Umer Farooq

**Numerical analysis of entropy generation in the stagnation point flow of Oldroyd-B nanofluid**

*Shahzad Munir Asma Maqsood Umer Farooq Muzamil Hussain Muhammad Israr Taseer Muhammad*

*Waves in Random and Complex Media*, Pages 1-17

**Impact Factor:** 4.051 | **Quartile:** 2 | **Citations:** 7

**DOI:** <https://doi.org/10.1080/17455030.2021.2023782>

2022

**Bifurcation analysis and chaos control in discrete-time modified Leslie–Gower prey harvesting model**

*Umer Saeed Muhammad Israr Muhammad Bilal Ajaz Qamar Din Irfan Ali*

*Advances in Difference Equations*, Volume 2020, Article Number 45

**Impact Factor:** 2.421 | **Quartile:** 1 | **Citations:** 21

**DOI:** <https://doi.org/10.1186/s13662-020-2498-1>

2020

**Tumble Motion Evolution for GDI Engine Using Particle Image Velocimetry (PIV)**

*Mohammed El-Adawy M. R Heikal A. Rashid A. Aziz Hasanain A. Abdul Wahhab Mhadi A. Ismael Muhammad Israr*

*Journal of Mechanical Engineering*, Engineering

**Impact Factor:** N/A

**DOI:** <https://ir.uitm.edu.my/id/eprint/41733/1/41733.pdf>

2018

**Effect of Boost Pressure on the In-Cylinder Tumble- Motion of GDI Engine under Steady-State**

**Conditions using Stereoscopic-PIV**

*Mohammed El Adawy M. R. Heikal A. Rashid A. Aziz S. Munir Muhammad Israr*

*Journal of Applied Fluid Mechanics*, NULL

**Impact Factor:** 0.914 | **Quartile:** 4

**DOI:** [10.18869/acadpub.jafm.73.246.28506](https://doi.org/10.18869/acadpub.jafm.73.246.28506)

2018

**Experimental study on an IC engine in-cylinder flow using different steady-state flow benches**

*M. El-Adawy A. Rashid A. Aziz Hasanain A. Abdul Wahhab M. R Heikal Muhammad Israr*

*Alexandria Engineering Journal*, Volume 56, Issue 4, Pages 727-736

**Impact Factor:** N/A | **Citations:** 34

**DOI:** [dx.doi.org/10.1016/j.aej.2017.08.015](https://dx.doi.org/10.1016/j.aej.2017.08.015)

2017

**Characterization of the Inlet Port Flow under Steady-State Conditions Using PIV and POD**

*Mohammed El-Adawy Morgan R. Heikal A. Rashid A. Aziz Muhammad Israr Shahzad Munir*

*Energies*, NULL

**Impact Factor:** 2.676 | **Quartile:** 2 | **Citations:** 34

**DOI:** [10.3390/en10121950](https://doi.org/10.3390/en10121950)

2017

**Simultaneous velocity measurements and the coupling effect of the liquid and gas phases in slug flow using PIV–LIF technique**

*Shahzad Munir M. R Heikal G. de Sercey A. Rashid A. Aziz S. C. Dass Muhammad Israr*

*Journal of Visualization*, Volume 19, Issue 1, Pages 103-114

**Impact Factor:** 0.950 | **Quartile:** 4 | **Citations:** 29

**DOI:** <https://doi.org/10.1007/s12650-015-0302-1>

2016

**Identification of dominant structures and their flow dynamics in the turbulent two-phase flow using POD technique**

*Shahzad Munir M.R Heikal Abdul Rashid Abdul Aziz Guillaume de Sercey Muhammad Israr*

*Journal of Mechanical Science and Technology*, Volume:29, Issue:11, Page:4701-4710

**Impact Factor:** 0.761 | **Quartile:** 3 | **Citations:** 15

**DOI:** [10.1007/s12206-015-1017-x](https://doi.org/10.1007/s12206-015-1017-x)

2015

**Slug Dynamics in a Nearly Horizontal Pipe Using Non-Invasive Measurement Techniques**

*Shahzad Munir M.R Heikal A. Rashid A. Aziz S. C. Dass Muhammad Israr*

*Modern Applied Science*, Volume 9, No. 9, Pages 50-57

**Impact Factor:** N/A

**DOI:** <http://dx.doi.org/10.5539/mas.v9n9p50>

2015

**Dynamical analysis of turbulent liquid phase in two-phase pipe flow**

*Shahzad Munir Morgan R. Heikal A. Rashid A. Aziz Mohana S. Muthuvalu Azuraien Jaafar Muhammad Israr*

*ScienceAsia*, Volume 40, Pages 63-68

**Impact Factor:** 0.347 | **Quartile:** 3 | **Citations:** 3

2014

**Speed of Longitudinal and Transverse Plane Elastic Waves in Rotating and Non-Rotating Anisotropic Mediums**

2011

A. Khan S. Islam M. Khan Muhammad Israr

*World Applied Sciences Journal*, Volume 15 (12), Pages 1761-176

**Impact Factor:** N/A

**DOI:** <https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=faf075d52081608af713d397fad87b88682568df>

**Conference Proceedings**

**Dynamics of liquid slug using particle image velocimetry technique**

2016

Muhammad Israr A. Rashid A. Aziz MR Heikal

*4th International Conference on Fundamental and Applied Sciences (ICFAS2016)*, res.country(157,)

**Citations:** N/A

**DOI:** <https://doi.org/10.1063/1.4968130>

**Structure analysis of turbulent liquid phase by POD and LSE techniques**

2014

Shahzad Munir MR Heikal A. Rashid A. Aziz M. S. Muthuvalu Muhammad Israr

*3rd International Conference on Fundamental and Applied Sciences (ICFAS 2014)*, res.country(157,)

**Citations:** N/A

**DOI:** <https://doi.org/10.1063/1.4898455>

**Influence of a gas bubble on the dynamical parameters of the slug flow using particle image velocimetry**

2014

Muhammad Israr MR Heikal Shahzad Munir S. C. Dass A. Rashid A. Aziz

*3rd International Conference on Fundamental and Applied Sciences (ICFAS 2014)*, res.country(157,)

**Citations:** N/A

**DOI:** <https://doi.org/10.1063/1.4898543>

**Temporal and spatial characterization of turbulent structures in liquid phase using POD technique**

2014

Shahzad Munir MR Heikal A. Rashid A. Aziz M. S. Muthuvalu M I Siddiqui

*International Conference on Mathematics, Engineering and Industrial Applications, ICoMEIA 2014*, res.country(157,)

**Citations:** N/A

**DOI:** [10.1063/1.4915836](https://doi.org/10.1063/1.4915836)