

# SAI RAJ ALI



» Seeking to be inspired, to envision the unlikely, to work hard for things that are worth it, and to be surrounded by those who bring out the best in me.

## CURRENT POSITION

I am currently working as CSIR Senior Research Fellow at the Department of Physics Jamia Millia Islamia Central University, New Delhi, India.

## EDUCATION

### Ph.D. in Physics

Dept. of Physics JMI, New Delhi, India, Pursuing

» Title of the Thesis: Investigation of the Catalytic Role of Nanostructured Surfaces.

### Post Graduation (M.Sc. in Physics)

Dept. of Physics JMI, New Delhi, India, 2016

» Division: First, Percentage: 83.9%

### Undergraduation (B.Sc. in Physics Hons.)

Dept. of Physics Shivaji College, Uni. of Delhi, New Delhi, India, 2014

» Division: First, Percentage: 72.7%

### Higher Secondary

GBSS School, Rajouri Garden New Delhi, India, 2011

» Division: First, Percentage: 73.4%

### Matriculation

GBSS School Mohan Garden New Delhi, India, 2009

» Division: First, Percentage: 86.6%

## EXPERIENCE

» Worked as a **Teaching Assistant** for one semester in **Mechanics Lab**, B.Sc.(H) Physics at the Department of Physics Jamia Millia Islamia New Delhi, July-December, 2018.

» Worked as a **Teaching Assistant** for one semester in **Electronics Lab** B.Sc.(H) Physics, at the Department of Physics Jamia Millia Islamia New Delhi, January-June, 2019.

## INVITED TALKS/TEACHING ASSISTANT/RESOURCE PERSON

» Invited as **Teaching Assistant** in the workshop on “**Mollywood to Molecular Nodes**” jointly organised by Gdańsk University of Technology, Poland, IRB Barcelona, Spain and Scidart Academy, India held during 8<sup>th</sup> - 11<sup>th</sup> September 2022.

» Invited as **Teaching Assistant** in winter school on “**Advanced Molecular Dynamics simulation**” jointly organised by International School of Photonics, Cochin University of Science and Technology (CUSAT), India, Department of Physics and Green Club of thoughts, Kathmandu University, Nepal, held during 6<sup>th</sup> - 17<sup>th</sup> Sept, 2021.

» Invited as **Teaching Assistant** in summer school on “**Advanced Molecular Dynamics simulation**” jointly organised by Department of Chemistry, IISER Pune, India, Department of Physics and Green Club of thoughts, Kathmandu University, Nepal, held during 5<sup>th</sup> - 16<sup>th</sup> July, 2021.

## PERSONAL DETAILS

Sai Raj Ali  
 03-07-1993  
 Male  
 Hindi, English

## CONTACT

JMI, New Delhi India  
 +91 9213030098  
 sairajdream@gmail.com  
 rs.sairajdream@jmi.ac.in  
 sairajdream.github.io

## RESEARCH INTERESTS

Water Splitting  
 CO<sub>2</sub> reduction  
 CO-Oxidation  
 2D-Materials, MXene  
 Electrocatalysis  
 Density Functional Theory

## PROGRAMMING

Shell Scripting  
★★★★★★★★★  
 C, C++, Fortran  
★★★★★★★☆☆  
 Python  
★★★★★★★☆☆

## SOFTWARE EXPERTISE

Quantum Espresso, PWTk  
 Latex, Vim, MS Office  
 Gnuplot, Grace  
 Inkscape, GIMP  
 Blender

## OPERATING SYSTEMS



## »»» ACHIEVEMENTS

- » Qualified National Eligibility Test (NET) examination for lectureship conducted by **Council of Scientific and Industrial Research (CSIR)**: Eligible for a junior research fellowship in India. **All India rank-92**, in December 2016 exam.
- » CSIR-Senior Research Fellowship 2020-2022.
- » Got 2<sup>nd</sup> position on report submitted in the “**Winter School on Electronic structure and Molecular Dynamic Simulations Using Open Source Softwares: From Theory to Practice**” jointly organized by Parvatibai Chowgule College of Arts and Science, Margao, Goa and Supercomputer Center, Kathmandu University, Nepal held during Sept. 27- Oct. 04, 2020
- » Received “**Best poster**” award at Jamia Millia Islamia University National Symposium on “**Advances in Material Science and Theoretical Physics**” 19-20th February 2020.
- » Got 1<sup>st</sup> position in “**Powerpoint presentation**” organised by physics society (Invenio 2014) at Shivaji College, University of Delhi.
- » Got 2<sup>nd</sup> position in “**Science quiz competition**” organised by physics society (Invenio 2014) in Shivaji College, University of Delhi.
- » Got 2<sup>nd</sup> position in Zonal level “**Science quiz competition**” from GBSS School Rajouri Garden in 2009-10.
- » Got scholarship for obtaining “**99 marks in Social-Science**” in 10th class.
- » Got 1<sup>st</sup> position in “**Cultural activity**” on 4 Feb 2009 in GBSS School Mohan Garden.
- » Had been selected for “**The Scout Training Camp at Nainital**” from 30/12/2008-03/01/2009.
- » Had been selected by the Directorate of Education (sports branch Govt. of national capital territory of Delhi) for short trekking from “**Rishikesh-Neelkanth Mansarovar-Jhilmil Cave**” from 1 – 4 Oct 2007 and got 1<sup>st</sup> position.
- » Got 1st position in School level “**Science quiz competition**” in GBSS School Mohan Garden in 2006-07.

## »»» SCHOOLS, WORKSHOPS & CONFERENCES ATTENDED

- » One Week National Certificate Program on “Instrumental methods of analysis” virtual mode under MHRD Govt. of India held during 7<sup>th</sup> - 13<sup>th</sup> October, 2020.
- » One Week National Faculty Development Program on “Research Ethics and Characterisation Techniques in Materials Science” virtual mode under MHRD Govt. of India held during 9<sup>th</sup> - 15<sup>th</sup> September, 2020.
- » National Symposium on “Advances in Material Science and Theoretical Physics” at Jamia Millia Islamia University New Delhi, India held during 19<sup>th</sup> - 20<sup>th</sup> February 2020.
- » Winter School on “Materials and Molecular Simulations using Open Source Softwares from theory to practice” at Department of Physics, Bishop Moore College, Mavelikara, Kerala, India held during 16<sup>th</sup> - 22<sup>nd</sup> October 2019.
- » Workshop and Symposium on “Advanced Simulation Methods: DFT, MD and Beyond” at IIT Delhi, India held during 6<sup>th</sup> - 10<sup>th</sup> March, 2019.
- » International School on “Ion Beams in Material Science” at Inter University Accelerator Centre (IUAC) New Delhi, India held during 3<sup>rd</sup> - 7<sup>th</sup> October, 2018.
- » Density Functional Theory for Heterogeneous Catalysis at IIT Guwahati, India held during 6<sup>th</sup> - 11<sup>th</sup> August, 2018.

## MASTER’S PROJECT

4<sup>th</sup> - 22<sup>nd</sup> January, 2016

### M.Sc. Orientation Programme

Inter University Accelerator Centre new Delhi

Project title: “Gamma-ray detection and variation in energy resolution with different scintillation detector NaI(Tl), LaBr<sub>3</sub>(Ce) and BaF<sub>2</sub>”

Supervisor:

Mr. Akhil Jhingan Scientist-G

July 2015 - May 2016

### Research towards Master’s Thesis

Centre for Theoretical Physics, Jamia Millia Islamia, New Delhi

Project title: “Newman-Janis Algorithm for Black Hole”

Supervisor:

Prof. Sushant G Ghosh

COMMUNICATED

JOURNAL

1. Sai Raj Ali, CS Praveen, Sung Gu Kang, Lekha Nair, KC Bhamu, Praveen Kumar,  
“Hydrogen Evolution Reaction on oxygen terminated  $\text{Ti}_2\text{C}$  MXene with adsorbed  $\text{Cu}_3$  cluster.”

IJHE