

The American College, Madurai
FACULTY PROFILE
(For College Website)

Name: Dr. V. MURUGAN

Designation: Assistant Professor

Department: PHYSICS

Date of Joining: 23.08.2021

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I. Educational Qualification:

Degree	Subject	College / Uuniversity & Place	Year Completed
B.Sc	Physics	Sadakathullah Appa College, Rahmath Nagar, Tirunelveli/MSU	2006
M.Sc	Physics	Manonmaniam Sundaranar University, Tirunelveli	2008
M.Phil	Physics	Manonmaniam Sundaranar University, Tirunelveli	2010
Ph.D	Physics	Manonmaniam Sundaranar University, Tirunelveli	2017

II. Specialisation in Teaching:

- Mathematical Physics
- Quantum Mechanics
- Semiconductor Physics

III. Specialisation in Research:

- Biophysics
- Protein-Carbohydrate Interaction study by Molecular Dynamics Simulation and Gaussian Software

IV. Research Interests:

- Protein-Carbohydrate Interaction study
- Programs Development for analysing MD trajectories

V. Any Other Work Experience:

Designation	Institution / Company	Year - From (month/year) To (month/year)
Assistant Professor	National Engineering College, Kovilpatti, Tuticorin- 628503	5 years (05.08.2016 – 13.08.2021)

VII. Publications:

Articles Published in International Journals:

1. Theoretical investigation on the binding specificity of fluorinated sialyldisaccharides Neu5Ac α (2 \rightarrow 3)Gal and Neu5Ac α (2 \rightarrow 6)Gal with influenza hemagglutinin H1 – A Molecular Dynamics Study
Murugan V, Parasuraman P, Selvin JFA, Gromiha MM, Fukui K and Veluraja K.
Journal of Carbohydrate Chemistry, 2017; 36: 111–128
2. Geometry Optimization of Carbohydrate Binding sites of Influenza: A Quantum Mechanical Approach
Murugan V, Parasuraman P, Selvin JFA, Priyadarzini TRK, Gromiha MM, Fukui K and Veluraja K.
Journal of Carbohydrate Chemistry, 2015; 34: 409–429
3. Theoretical investigation on the glycan-binding specificity of Agrocye cylindracea galectin towards cell surface sialyllactose: A molecular modelling and molecular dynamics simulation study.
Parasuraman P, **Murugan V**, Selvin JFA, Gromiha MM, Fukui K and Veluraja K.
Journal of Molecular Recognition, 2015; 28: 528–538
4. Insights into the binding specificity of wild type and mutated wheat germ agglutinin towards Neu5Ac α (2-3)Gal: A study by in silico mutations and molecular dynamics simulations
Parasuraman P, **Murugan V**, Selvin JFA, Gromiha MM, Fukui K and Veluraja K.
Journal of Molecular Recognition, 2014; 27 (8), 482-492

Conference / Seminar / Paper Presentations:

1. Parasuraman P, **Murugan V**, Michael Gromiha M, Fukui K and Veluraja , "Designing Cyborg lectin of Agrocye cylindracea and its specificity with Neu5Aca(2-3)lactose: A study by molecular modelling and molecular dynamics simulation", International Conference on Biomolecular Forms and Functions, Molecular Biophysics Unit, Indian Institute of Science, Bangalore, January 2013.

2. Fermin Angelo Selvin J, Priyadarzini T R K, **Murugan V**, Parasuraman P, and Veluraja K , "Conformational analysis of Sialylated Human Milk Oligosaccharides: A molecular dynamics approach", International Conference on Biomolecular Forms and Functions, Molecular Biophysics Unit, Indian Institute of Science, Bangalore, January 2013.
3. Priyadarzini T R K, **Murugan V**, Parasuraman P, Selvin JFA, Michael Gromiha M, Fukui K and Veluraja K , "Molecular dynamics simulation studies on the complexes of Hemagglutinin H1-disaccharides containing derivatives of sialic acid", International Conference on Biomolecular Forms and Functions, Molecular Biophysics Unit, Indian Institute of Science, Bangalore, January 2013.
4. Parasuraman P, **Murugan V**, M. Michael Gromiha, K. Fukui and K. Veluraja, "Molecular Modeling and Molecular Dynamics Simulation Studies on the Complexes of WGA-Neu5Ac(2-3)Gal and in silico modified WGA-Neu5Ac(2-3)Gal", Annual Meeting of the Indian Biophysical Society , University of Madras, Chennai, CAS in Crystallography and Biophysics, January 2012.
5. **Murugan V**, Parasuraman P, Veluraja K, "Conformational Analysis of Glucose and Mannose containing Disaccharides – A Molecular Dynamics Simulation Study", National Conference on "Current Trends in Chemistry", 24th and 25th March, 2011, Department of Chemistry, Manonmaniam Sundaranar University, Tirunelveli, Tamilnadu, India.
6. **Murugan V**, Parasuraman P, Veluraja K, "Molecular Dynamics Simulation studies on Glucose and Mannose containing disaccharides", 39th National Seminar on Crystallography, 25th – 27th October, 2010, Post Graduate Department of Physics and Electronics, University of Jammu, Jammu, India.

Conference / Seminar /FDP Participations:

1. Faculty Development Program on "Introduction to Python Programming" conducted by ICT Academy during August 1 – 3, 2019, National Engineering College, Kovilpatti, Tuticorin, Tamilnadu, India.
2. QIP Short Term Course on "Hands-on approach to semiconductor device physics education" conducted by IIT Bombay during May 06– 10, 2019.
3. National Seminar on Recent Trends in Physics, 18th March, 2013, Department of Physics, Manonmaniam Sundaranar University, Tirunelveli, Tamilnadu, India.
4. National Seminar on Structural Bioinformatics, 15th March, 2013, Bioinformatics Infrastructure Facility (BIF) centre, Department of Physics, Manonmaniam Sundaranar University, Tirunelveli, Tamilnadu, India.
5. International Conference on Biomolecular Forms and Functions, A Celebration of 50 years of the Ramachandran Map, 8-11 January, 2013, Indian Institute of Science, Molecular Biophysics Unit, Bangalore, India.

6. One day National Seminar on “Emerging Trends in Pharmaceutical Chemistry” in Honour of Prof. S. Gopalakrishnan, 20th April, 2012, Department of Pharmaceutical Chemistry, Manonmaniam Sundaranar University, Tirunelveli, Tamilnadu, India.
7. National Seminar on Structural Bioinformatics, 2nd March, 2012, Bioinformatics Infrastructure Facility (BIF) centre, Department of Physics, Manonmaniam Sundaranar University, Tirunelveli, Tamilnadu, India.
8. Annual Meeting of the Indian Biophysical Society (IBS), 19th – 21st January, 2012, CAS in Crystallography and Biophysics, University of Madras, Guindy Campus, Chennai, India.
9. National Conference on “Current Trends in Chemistry”, 24th and 25th March, 2011, Department of Chemistry, Manonmaniam Sundaranar University, Tirunelveli, Tamilnadu, India. Poster Presentation on “Conformational Analysis of Glucose and Mannose containing Disaccharides – A Molecular Dynamics Simulation Study”.
10. One day National Seminar on “Recent Trends in Natural Products Chemistry”, 18th March, 2011, Department of Pharmaceutical Chemistry, Manonmaniam Sundaranar University, Tirunelveli, Tamilnadu, India.
11. National Seminar on Advances in Physics, 10th & 11th March, 2011, Department of Physics, Manonmaniam Sundaranar University, Tirunelveli, Tamilnadu, India.
12. National Seminar on Structural Bioinformatics, 4th March, 2011, Bioinformatics Infrastructure Facility (BIF) centre, Department of Physics, Manonmaniam Sundaranar University, Tirunelveli, Tamilnadu, India.
13. One day In-house Seminar on Physics in Honour of Prof. Dr. N. Arunachalam, 30th September, 2010, Department of Physics, Manonmaniam Sundaranar University, Tirunelveli, Tamilnadu, India.
14. 39th National Seminar on Crystallography, 25th – 27th October, 2010, Post Graduate Department of Physics and Electronics, University of Jammu, Jammu, India.
15. Workshop on Molecular Modelling and Drug Design, 2nd – 7th August, 2010, Center for Modelling Simulation and Design, University of Hyderabad, Hyderabad, India.
16. Users Awareness Programme an Access to e-Resources, 9th March, 2010, Department of Library and Information Science, Manonmaniam Sundaranar University, Tirunelveli, Tamilnadu, India.
17. Workshop on Advances in Physics, 5th March, 2010, Department of Physics, Manonmaniam Sundaranar University, Tirunelveli, Tamilnadu, India.
18. National Seminar on Structural Bioinformatics, 26th February, 2010, Bioinformatics Infrastructure Facility (BIF) centre, Department of Physics, Manonmaniam Sundaranar University, Tirunelveli, Tamilnadu, India.

19. One day Workshop on Patent Awareness Programme, 18th December, 2009, Patent Awareness Cell, Manonmaniam Sundaranar University, Tirunelveli and Tamilnadu State Council for Science and Technology (TNSCST), India.
20. National Seminar on Advances in Materials Science, 4th & 5th February, 2008, Department of Physics, Manonmaniam Sundaranar University, Tirunelveli, Tamilnadu, India.
21. One day Seminar on Advances in Physics, 25th January, 2007, Department of Physics, Manonmaniam Sundaranar University, Tirunelveli, Tamilnadu, India.

VIII. Any other activities / information / academic credentials you would like to mention:

- Extra course completion: **Certificate course in Bioinformatics** (2010)
- NPTEL Course done: **Laser Fundamentals and Applications** (online mode)
(Sept-Nov, 2020-8-weeks course)
Grade: 91% - Elite+Gold
- Programming Languages Known: FORTRAN and C++