

**The American College, Madurai
FACULTY PROFILE**

Name : Dr. T. R. K. PRIYA DARZINI Date of Joining : 01.07.2016
Designation : Assistant Professor Department : Physics
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I. Education Qualification:

Degree	Subject	College/University & Place	Year Completed
B.Sc.	Physics	Vivekananda College/Manonmaniam Sundaranar University, Tirunelveli	2004
M.Sc.	Physics	V.H.N.S.N. College / Madurai Kamaraj University, Madurai	2006
M.Phil.	Physics	V.H.N.S.N. College / Madurai Kamaraj University, Madurai	2007
Ph.D	Physics	Manonmaniam Sundaranar University, Tirunelveli	2012

Specialization in Research:

Structural Biophysics

Research Interests:

- ◆ Structural Biophysics
- ◆ Conformations of carbohydrates
- ◆ Protein-Carbohydrate interactions
- ◆ Molecular Modelling and Molecular Dynamics simulation
- ◆ Quantum Mechanical Calculation

Any Other Work Experience:

Designation	Institution / Company	Year – From (month/year) To (month/year)
Assistant Professor	V V College of Engineering, Tisaiyanvillai	20.05.2013 to 23.05.2014
Assistant Professor III	Velammal College of Engineering & Technology	29.01.2015 to 28.02.2015

Membership in Professional Bodies:

(Include Board of Studies/ journal/ article)

Positions held / currently holding in Professional Body	Year – From (month/year) To (month/year)
Indian Biophysical Society	2012

Publications in peer reviewed journals:

1. Molecular dynamics simulation studies on influenza A virus H5N1 complexed with sialic acid and fluorinated sialic acid
RA Jeyaram, **TRK Priyadarzini**, C Anu Radha, NR Siva Shanmugam, M. M. Gromiha and K. Veluraja.
Journal of Biomolecular Structure and Dynamics 37 (18), 2019, 4813-4824 **[Impact Factor: 3.310]**
[DOI:10.1080/07391102.2019.1568304](https://doi.org/10.1080/07391102.2019.1568304)
2. Geometry optimization of carbohydrate binding sites of influenza – A Quantum Mechanical approach Veeramani Murugan, Ponnusamy Parasuraman, Jeyasigamani F. A. Selvin, **Thanu R. K. Priyadarzini**, Michael M Gromiha, Kazuhiko Fukui and Kasinadar Veluraja.
Journal of Carbohydrate Chemistry, 34, 2015, 409-429. **[Impact Factor : 1.417]**
[DOI:10.1080/07328303.2015.1093135](https://doi.org/10.1080/07328303.2015.1093135)
3. Theoretical Investigation on binding specificity of sialyldisaccharides with Influenza A hemagglutinin Virus by MD simulation
Thanu R. K. Priyadarzini, J. F. A. Selvin, M. Michael Gromiha, K. Fukui and K. Veluraja
Journal of Biological Chemistry, 287, 2012, 34547-34557 **[Impact Factor: 4.773]**
[DOI:10.1074/jbc.M112.357061](https://doi.org/10.1074/jbc.M112.357061)

4. Sialyldisaccharide conformation: A Molecular Dynamic Simulation Perspective
J. F. A. Selvin, **Thanu R. K. Priyadarzini** and K. Veluraja
Journal of Computer Aided Molecular Design, 26, 2012, 375-385. **[Impact Factor: 3.386]**
[DOI:10.1007/s10822-012-9563-0](https://doi.org/10.1007/s10822-012-9563-0)
5. Molecular dynamic simulation and quantum mechanical calculations on α -D-N-acetylneuraminic acid
Thanu R. K. Priyadarzini, Balakrishnan Subashini, J. F. A. Selvin and K. Veluraja
Carbohydrate Research, 351, 2012, 93-97. **[Impact Factor: 2.3352]**
[DOI:10.1016/j.carres.2012.01.015](https://doi.org/10.1016/j.carres.2012.01.015)
6. Preparation, Properties and Applications of Tamarind Seed Gum Reinforced Banana Fibre Composite Materials
Amirthalingam V. Kiruthika, **Thanu R. K. Priyadarzini** and K. Veluraja
Fibers and Polymers, 13(1), 2012, 51-56. **[Impact Factor: 0.836]**
[DOI:10.1007/s12221-012-0051-x](https://doi.org/10.1007/s12221-012-0051-x)
7. 3DSDSCAR – a three dimensional structural database for sialic acid containing carbohydrates through molecular dynamics simulation
K. Veluraja, J. Fermin Angelo Selvin, S. Venkateshwari and **Thanu R. K. Priyadarzini**
Carbohydrate Research, 345 (14), 2010, 2030 – 2037. **[Impact Factor: 2.3352]**
[DOI:10.1016/j.carres.2010.06.021](https://doi.org/10.1016/j.carres.2010.06.021)

Paper Published in International Conference Proceeding with ISBN

1. Molecular Dynamics Simulation Studies on Sialic acid and its Acetylated derivatives and their interaction with Vibrio Cholera Neuraminidases,
Thanu R. K. Priyadarzini, J. Fermin Angelo Selvin and K. Veluraja
International Association of Computer Science and Information Technology - Spring Conference, 2009, (IEE), 562-566.
ISBN: 978-0-7695-3653-8.
[DOI:10.1109/IACSIT-SC.2009.62](https://doi.org/10.1109/IACSIT-SC.2009.62)

Conference Seminar Presentations:

Name of the Seminar/Conference/Symposia Workshop etc.,	Name of the Sponsoring Agency	Title of paper	Institution, Place and Date
International Conference on physics of advanced materials and molecules (ICPAMM-2020)		Synthesis and Characterization of amino acid doped KBR crystals by slow evaporation technique	Dr. Ambedkar Government Arts College, Chennai, Tamilnadu, India on 30 & 31 January 2020.
XXiV National Seminar on Crystal growth and Applications (NSCGA-2020)		Effects Of Amino Acids Doped With Kcl Crystal By Slow Evaporation Techniques in the	Department of Physics, Periyar University, Salem February 3 – 5, 2020
International Symposium on Modeling of Crystal Growth Processes and Devices	Science and Engineering Research Board (SERB) Council of Scientific and Industrial Research (CSIR) and STR group	Incorporating Sno ₂ Nanocomposites Towards Carbon Dioxide And Oxygen” in the International Symposium on” Modeling of Crystal Growth Processes and Devices	SSN College, Chennai February 26-28,2019
International Symposium on Modeling of Crystal Growth Processes and Devices	Science and Engineering Research Board (SERB) Council of Scientific and Industrial Research (CSIR) and STR group	Synthesis of perfect Cusnzr Cubic thin film by simple successive ionic layer adsorption and Reaction method	SSN College, Chennai February 26-28,2019
Energy Fest '17, Seminar on Advanced Technologies and		Green approach to develop microbial fuel cell using bio-waste	School of Energy, Environment and Natural Resources, Madurai

Innovations in Energy and Environment			Kamaraj University, Madurai on 28.03.2017.
International Conference on Biomolecular Forms & Functions		Molecular dynamics simulation studies on the complexes of Hemagglutinin H1-disaccharides containing derivatives of sialic acid	Indian Institute of science, Bangalore, Jan 8 – 11, 2013,
5 th International Symposium on Recent Trends in Macromolecular Structure and Function		Receptor specificity of sialyldisaccharides with Influenza A hemagglutinin complex of H1 and H3-A Molecular Dynamics Simulation Study	University of Madras, Chennai, Tamilnadu, January 23 -25, 2012
5 th International Symposium on Recent Trends in Macromolecular Structure and Function		Molecular Modeling and Molecular Dynamics Simulation Studies on Neu5Ac α (2-3)GalNAc and Neu5Ac α (2-6)GalNAc and their specificity with Tetanus Toxin	University of Madras, Chennai, Tamilnadu, January 23 -25, 2012
4 th International Symposium on Recent Trends in Macromolecular Structure and Function		Molecular Dynamics simulation studies on Monosialogangliosides complexed with Cholera toxin	University of Madras, Chennai January 21-23, 2010
4 th International Symposium on Recent Trends in Macromolecular Structure and Function		Docking studies on MD Modelled Sialyldisaccharides as Cholera Inhibitors	University of Madras, Chennai January 21-23, 2010
Symposium on Recent Trends in Biophysics and Workshop on Emerging Techniques of Biophysics		Molecular Dynamics Simulation (10ns) Studies on the complexes H1N1-NeuNAc α (2-3)Gal and H5N1 - NeuNAc α (2-3)Gal Neuraminidases	Banaras Hindu University, Varanasi, Uttar Pradesh February 1-16, 2010
XXXIX National Seminar on Crystallography		Conformational Models for Sialic acid through 10ns MD Simulation and Ab initio Studies	University of Jammu, Jammu October 25–27, 2010

XXXIX National Seminar on Crystallography		Molecular Dynamics Simulation on Sialyldisaccharides and their binding specificity towards <i>Vibrio cholerae</i> neuraminidase through Molecular Docking	University of Jammu, Jammu October 25–27, 2010
School on Understanding Molecular Simulation 09		10ns Molecular Dynamics Simulation studies on monosialo gangliosides	Jawaharlal Nehru Centre for Advanced Scientific Research, Bangaluru August 17-28, 2009
National Symposium on Cellular & Molecular Biophysics		Molecular Dynamics Simulation studies on Sialic Acid and its Acetylated Derivatives and their Interaction with Vibrio Cholerae Neuraminidase.	Centre for Cellular and Molecular Biology, Hyderabad January 22-24, 2009
National Seminar on Crystallography		Conformational preferences of Sialic acid containing disaccharides by 10ns Molecular Dynamics Simulation in the active site of Vibrio Cholerae Neuraminidase	University of Mysore February 11-13, 2009

Workshop Attended

Name of the Workshop etc.,	Name of the Sponsoring Agency	Institution, Place and Date
School on Understanding Molecular Simulation 09		Jawaharlal Nehru Centre for Advanced Scientific Research, Bangaluru August 17-28, 2009
Tokyo Joint Workshop on Bioinformatics and Large Scale Data Analysis		Indian Institute of Technology Madras, Chennai, July 15 -16, 2011
National Level Workshop on Computational Physics using Gaussian		N.M.S.S.V.N. College, Nagamalai, Madurai, February 13, 2015
Two Day Lecture Workshop on “Emerging Trends in Applied		Devanga Arts College,(Autonomous), Aruppukottai, 22.09.2015 and 23.09.2015

Physics		
One week Faculty development Programme on Open Source Tools for Research from	Ministry of Human Resource Development Pandit Madan Mohan Malaviya National Mission On Teachers and Teaching.	Teaching learning Centre, Ramujan College, University of Delhi, June 08-14, 2020

Webinars Attended

Webinar attended	Organized by	Date
National Level FDP program	North Storm Academy	13.05.2020 and 14.05.2020
International level Covid-19 Pandemic webinar on Functional Materials for Electrochemical Sensors and Energy Storage Devices	Department of Physics, Thiagarajar College, Madurai	15 May 2020
Web Series Programme on COVID-19 Virus	Nature Science Foundation, Coimbatore, Tamil Nadu	17.05.2020
E-Learning Program on Bioinformatics as Cartographic Tool In Drug Discovery	Department of Bioinformatics, Alagappa University, Karaikudi	19.05.2020 to 30.05.2020
Characterization of Materials at Nanoorder scale length – A SAXS Approach	Department of Physics, SNS College of Technology Coimbatore	25.05.2020
Passive and Active Hyperbolic Meta materials and their Applications	Department of Physics, SRM Institute of Science and Technology, Ramapuram Campus, Chennai	26.05.2020
Webinar	Ladies club, The American College, Madurai	27.05.2020
Webinar on Piezoelectric based energy harvesting techniques	Department of Electrical and Electronics Engineering, Mohamed Sathak AJ College of Engineering	03.06.2020
Women Risk Blooms	Ladies club of The American College, Madurai	09 June 2020
Self Awareness and Social Responsibility During COVID 19 Pandemic	Ladies Club of The American College, Madurai	13.06.2020
International webinar on Recent Trends in Advance Material Science	Department of Physics, The American College, Madurai	19 June 2020

Lectures / Talks given:

(List the title of the lecture / talk, date, institution and place)

Name of the Seminar/Conference/Symposia Workshop etc.,	Name of the Sponsoring Agency	Title of paper	Institution, Place and Date
National Conference on Innovative Technologies in Engineering	-	Biomaterials	Dr. G. U. Pope College of Engineering, Sawyerpuram on March 25 th 2014.

Awards / Fellowships:

Research awards/ recognitions received by faculty and research fellows

	Name of the award/ fellowship	year
National	Junior Research Fellowship from Department of Biotechnology funded Project at Department of Physics, Manonmaniam Sundaranar University, Tirunelveli.	2007
	Research Assistantship from Department of Biotechnology funded Project at Department of Physics, Manonmaniam Sundaranar University, Tirunelveli.	2010

Research activities of the student under guideship

Title	M. Phil / M.Sc/ B.Sc	Please tick if it is collaborative
Synthesis And Characterization Of Copper Aluminium Film	M.Sc	
Construction of spin coater at low cost	M.Sc	
Exploring the Conformational models for Siaα(2-3)GalNAc	M.Sc	
Construction of Single crystal growth setup	M.Sc	

Growth and Characterization of Pottasium Bromide Crystals	M.Sc	
Construction of wireless quadcopter	B.Sc	
Microbial fuel cell using Biowaste	B.Sc	

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

Organized a National conference on Biomolecular Structure and Function, March 7 & 8, 2014. Department of Science & Humanities, V V College of Engineering, Tisaiyanvilai.