

**Name** : Ms.D.Uma Maheswari  
**Staff ID** : RCAS00758  
**Designation** : Head and Assistant Professor  
**Department** : Physics  
**Experience** : 15 years  
**Qualification** : M.Sc., M.Phil.  
**Specialization** : Molecular Quantum Mechanics  
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### ACADEMICS

Degree	Branch	Institution / University	Year of Completion
M.Phil.	Physics	Bharathiar University	2010
M.Sc.	Physics	NGM College, Pollachi/Bharathiar University	2009
B.Sc.	Physics	NGM College, Pollachi/Bharathiar University	2007

Diploma / Certification	Specialization	Institution / University / Agency Name	Year of Completion
DCA	Computer Application	Sigma Computer, Kinathukadavu	2003

### RESEARCH AND PUBLICATIONS

#### GRANTS

Title	Agency	Amount	Year	Status
TNSCST – Popularisation of Science	TNSCST	25,000/-	2023	Completed
ICPR – World Philosophical day –National Level Seminar on Philosophy, Science and Technology	ICPR	40,000/-	2025	Completed

#### Journal Publications

P. Kolandaivel, **D. Uma Maheswari**, L. Senthilkumar, “The study of performance of DFT functional for van der Waals interactions”, Computational and Theoretical Chemistry, Volume 1004, Pages 56-60, 15 January 2013

N. Srikanth, **D. Uma Maheswari**, “Effect of Annealing On Structural and Morphological Characteristics of Pure and Cobalt Doped Zinc Oxide Thin Film”, Journal of Aeronautical Materials, ISSN: 1005-5053 Vol. 43, Issue-01, 2023.

K. Arundhati, **D. Uma maheswari**, “Synthesis of ZnO nanoparticles by simple precipitation method”, Journal of Information and Computational Science ISSN: 1548-7741, Volume 10 Issue 7 – 2020

**Ms.D.Uma Maheswari**, “Statistical Analysis of engine parameter for 4-stroke engine for fuel efficiency”, International journal of multidisciplinary Research Review, **ISSN:** 2395-1877, Vol.1, Issue – 3, Page – 67-71, March -2016.

**D. Uma maheswari** , R.Thangarasu, “A study on structural, optical properties of ITO Thin Films by Dip-Coating Technique”, Journal of Information and Computational Science Volume 10 Issue 6 - 2020 ISSN: 1548-7741, Volume 10 Issue 6 - 2020

A. Jackson Dass, **D. Uma Maheswari**, P. Pandeewari ,” Synthesis and Characterization of ZnO nanoparticles by Precipitation method”, Journal of Information and Computational Science Volume 10 Issue 8 - 2020 ISSN: 1548-7741, Volume 10 Issue 8 – 2020

**D. Uma Maheswari**, “Quantum Chemical Investigations of Proline: A Comparative Study Using Mp2 and DFT Methods”, Journal of Rajasthan Academy of Physical Sciences ISSN: 0972-6306, Vol.24, No.1&2, January - June, 2025.

**Ms.D.Uma Maheswari**, Dr. R. Pandeewari, “Tungsten trioxide Thin films by Chemical Spray Pyrolysis Method”, ANVESAK ISSN: 0378 – 4568, Vol. 52, No.2S(I) July – December 2022.

N Srikanth, **D Uma Maheswari**, K J Hrudhik Surya, R Amirthavalli, “Synthesis and Characterization of Cobalt (Co) doped Nickel Ferrite (NiFe<sub>2</sub>O<sub>4</sub>) Prepared by Co-Precipitation Method”, Industrial Engineering Journal, ISSN: 0970-2555 Volume: 52, Issue 6, No. 1, July: 2023.

**Ms. D. Uma Maheswari**, Mr. Ahmed Saalih Subair,” A DFT Study for Van der Waals Heterostructure” Journal of The Asiatic Society of Mumbai, ISSN: 0972-0766, Vol. XCVI, No.1, 2023.

**Ms. D. Uma Maheswari**, R. Pandeewari, “Synthesis Of ZnO Nanoparticles Using Aqueous Extracts Of Acalypha Indica”, Shodhasamhita : Journal of Fundamental & Comparative Research, ISSN: 2277-7067, Vol. VIII, No. 1(XXXII) : 2022

**D. Uma Maheswari**, U.G.Kaarthik Raja, “An Ab-Initio Study On Van Der Waals Interaction Of Ar<sub>2</sub> With Co<sub>2</sub> By Gamess Software” ANVESAK ISSN : 0378 – 4568, Vol. 51, No.1(XIV) January – June 2021.

**Ms. D. Uma Maheswari**, Ms. Afnan Shirin, “DFT Study of Tetrazine-1,2,4,5, It’s Reactivity and Ab Initio Calculation Using Gamess”, Journal Of The Asiatic Society Of Mumbai, ISSN: 0972-0766, Vol. XCVI, No.25, 2023.

### Books:

Essential Techniques Unveiled: A Novice Researcher’s Guide to Fundamental Characterization, Editors: Dr. K. P. V. Sabareesh, **Ms. D. Uma Maheswari**, Dr. C. Dhanush, CIIT Publications, Coimbatore

### Proceedings

A DFT study on Van der Waals Interaction of Ar<sub>2</sub> - CO<sub>2</sub> Dimer U.G. Kaarthik Raja, D. Uma Maheswari Department of Physics, Rathinam College of Arts and Science, International Virtual Conference on “Novel Nanomaterials for Innovative Research” ICNNIR – 2021), 29th & 30th April, 2021

A study on Properties of Silicene a Van der Waals Heterostructure by using GAMESS D.Uma Maheswari, C.Loganathan, S. Aswin, Prakash Kumar Jha, International Conference on Theoretical and Experimental Science – 2022 (ICTES – 2022), 8th January, 2022

### PARTICIPATION

	State Level	National	International
Conference	5	2	1
Seminar	5	4	-
Workshop	10	5	-
Orientation	-	2	-
FDP/PDF	5	5	-

## **Events Organized**

ICPR Sponsored National Level Conference on Philosophy, Science and Technology, 10<sup>th</sup> March 2025

International Virtual Conference on “Novel Nanomaterials for Innovative Research” ICNNIR – 2021), 29th & 30th April, 2021

International Conference on Theoretical and Experimental Science – 2022 (ICTES – 2022), 8th January, 2022

Geographic Information System: Hands on Training and Career Opportunities, 20<sup>th</sup> September, 2024

## **Invited Speaker / Session Chair- Conference / Seminar / Workshop**

Invited as Guest in Chnimaya Vidyalaya School, Coimbatore on account of Science Week Celebrations.

## **AWARDS, HONORS AND RECOGNITION**

<b>Awards / Honors /Recognition</b>	<b>Agency / Institution</b>	<b>Year of Award</b>
Rotary Award	Rotary Club Coimbatore South	2023