




Bharathiar University

State University | "A++" Grade by NAAC | 26th Rank in MoE-NIRF
Maruthamalai Road, Coimbatore, Tamil Nadu - 641 046.

Dr M. BALASUBRAMANIAM Professor Department of Physics Bharathiar University Coimbatore, 641041 Tamil Nadu, India E-mail: m.balou@buc.edu.in Phone: 9487021118 Office Number: 0422-2428446	
Research Area <ul style="list-style-type: none">• Superheavy Elements• Ternary Fission Studies• Exotic Decay Studies• Low energy nuclear reaction• Machine learning in Nuclear data Physics• Machine Learning in Nuclear Physics	Courses Teaching <ul style="list-style-type: none">• Nuclear and Particle Physics• Computational methods and Programming - Theory Course• Classical Mechanics• Research Methodology• Computational methods and Programming - Lab Course (FORTRAN)• Nuclear data for science & technology• LATEX - A document preparation system• Machine Learning and Python Programming• PYTHON Programming Lab
Research Experience: 25	Teaching Experience: 20
Research Credentials (as on September 2025 – Source: Google scholar) H-index: 25 Citations: 2282 i10-index: 43	
Publications Books/Chapters: 1 National Journals: 3 Publication Database: 2 International Journals: 66	
Education Ph. D. Subject : Physics Institution : University Department Affiliated University : Manonmaniam Sundaranar University Year of Award : December 2001 PGDCA Subject : Computer Application Institution : University Department Affiliated University : Manonmaniam Sundaranar University Year of Award : March 1997 M. Sc. Subject : Physics Institution : University Department Affiliated University : Manonmaniam Sundaranar University Year of Award : April 1996 B. Sc. Subject : Physics Institution : Arumugam Pillai Seethai Ammal College Affiliated University : Madurai Kamaraj University Year of Award : April 1994	



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Dr M. BALASUBRAMANIAM , Professor , Department of Physics

Projects

National Level

Ongoing - completed - 4

Research Guidance

Completed

Ph.D. - 8 M.Phil. - 18

On Going

Ph.D. - 3

Institutional Responsibilities

Deputy Coordinator - DST-PURSE (Phase - II)

Period : Jan 2016 - Dec 2020

Nature of Responsibility : PURSE Grant Management

Programs organized

1. Organized National level SERC School on "Nuclear physics from new perspectives" as Director of the School. - 23 Institutions with 47 participants and 15 experts (2017-02-07 - 2017-02-27)
2. Organized national level EXFOR-2023, the 9th DAE-BRNS workshop on Nuclear Reaction data and its compilation for EXFOR database (2023-11-18 - 2023-11-14)

Visits

1. Volkswagen research fellowship (in a VW project between Giessen University, Germany and Panjab University, Chandigarh, India) at Institut fur Theoretische Physik – II, Justus Liebig Universitat, Giessen, Germany (2000-06-01 - 2000-07-05)
2. Visiting Researcher at Frankfurt Institute of Advanced Studies (FIAS), Frankfurt, Germany (2009-06-01 - 2009-06-30)
3. Volkswagen research fellowship (in a VW project between Giessen University, Germany and Panjab University, Chandigarh, India) at Institut fur Theoretische Physik – II, Justus Liebig Universitat, Giessen, Germany (2001-10-01 - 2001-11-07)
4. Volkswagen research fellowship (in a VW project between Giessen University, Germany and Panjab University, Chandigarh, India) at Institut fur Theoretische Physik – II, Justus Liebig Universitat, Giessen, Germany (2002-03-30 - 2002-02-01)
5. Volkswagen research fellowship (in a VW project between Giessen University, Germany and Panjab University, Chandigarh, India) at Institut fur Theoretische Physik – II, Justus Liebig Universitat, Giessen, Germany (2002-09-30 - 2002-08-12)
6. DST-International Travel Support (2011-11-23 - 2011-11-28)
7. Travel award - DAE-BRNS, NDPCI, and Bharathiar University (2011-09-05 - 2011-09-09)

Selected Publications

1. Empirical relations using symbolic regression models for cluster decay half-lives

Phys. Rev. C 111, 064605 (2025) - Published 9 June, 2025 (June 2025)
S. Madhumitha Shree and M. Balasubramaniam

2. Alpha-decay half-life predictions for superheavy elements through machine learning techniques

Eur. Phys. J. A 61, 32 (2025) (February 2025)
S Madhumitha Shree, M Balasubramaniam

3. Scission point model applied to $^{181}\text{Re}^*$ formed in $^{12}\text{C} + ^{169}\text{Tm}$ reaction

Eur. Phys. J. A 56, 148 (2022) (May 2020)
C Karthika, M Balasubramaniam

4. Mirror nuclei of $1n/2n$ halo systems as $1p/2p$ emitters

Phys. Rev. C 100, 054611 (2019) (September 2019)
C. Karthika and M. Balasubramaniam,



5. Role of channel temperature and mass window in the binary breakup of $^{236}\text{U}^*$

Phys. Rev. C 100, 034607 (2019) (September 2019)
C. Kokila and M. Balasubramaniam

6. Dynamical model calculation to reconcile the nuclear fission lifetime from different measurement techniques

Phys. Rev. C 98, 021601(R) (2018) (August 2018)
M. T. Senthil Kannan, Jhiliam Sadhukhan, B. K. Agrawal, M. Balasubramaniam, and Santanu Pal

7. Heavy-ion emission in spontaneous decays of $^{249,252}\text{Cf}$ nuclei

Phys. Rev. C 60, 064316 (1999) (November 1999)
M. Balasubramaniam and R.K. Gupta,