



Bharathiar University

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

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



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**Dr M. BALASUBRAMANIAM , Professor , Department of Physics**

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| <p><b>Projects</b><br/><b>National Level</b><br/>Ongoing - completed - 4</p>  | <p><b>Research Guidance</b><br/><b>Completed</b><br/>Ph.D. - 8 M.Phil. - 18<br/><b>On Going</b><br/>Ph.D. - 3</p> |
| <b>Institutional Responsibilities</b>   |   |
| <p><b>Deputy Coordinator - DST-PURSE (Phase - II)</b><br/>Period :Jan 2016 - Dec 2020<br/>Nature of Responsibility :PURSE Grant Management</p>  |   |
| <p><b>Programs organized</b></p> <ol style="list-style-type: none"> <li>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 )</li> <li>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 )</li> </ol>   |   |
| <p><b>Visits</b></p> <ol style="list-style-type: none"> <li>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 )</li> <li>Visiting Researcher at Frankfurt Institute of Advanced Studies (FIAS), Frankfurt, Germany ( 2009-06-01 - 2009-06-30 )</li> <li>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 )</li> <li>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 )</li> <li>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 )</li> <li>DST-International Travel Support ( 2011-11-23 - 2011-11-28 )</li> <li>Travel award - DAE-BRNS, NDPCI, and Bharathiar University ( 2011-09-05 - 2011-09-09 )</li> </ol> |   |
| <p><b>Selected Publications</b></p> <ol style="list-style-type: none"> <li><b>Empirical relations using symbolic regression models for cluster decay half-lives</b><br/>Phys. Rev. C 111, 064605 (2025) - Published 9 June, 2025 (June 2025)<br/>S. Madhumitha Shree and M. Balasubramaniam</li> <li><b>Alpha-decay half-life predictions for superheavy elements through machine learning techniques</b><br/>Eur. Phys. J. A 61, 32 (2025) (February 2025)<br/>S Madhumitha Shree, M Balasubramaniam</li> <li><b>Scission point model applied to <math>^{181}\text{Re}^*</math> formed in <math>^{12}\text{C} + ^{169}\text{Tm}</math> reaction</b><br/>Eur. Phys. J. A 56, 148 (2022) (May 2020)<br/>C Karthika, M Balasubramaniam</li> <li><b>Mirror nuclei of <math>^{1n/2n}</math> halo systems as <math>1p/2p</math> emitters</b><br/>Phys. Rev. C 100, 054611 (2019) (September 2019)<br/>C. Karthika and M. Balasubramaniam,</li> </ol>   |   |



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**5. Role of channel temperature and mass window in the binary breakup of 236U\***

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, Jhilam Sadhukhan, B. K. Agrawal, M. Balasubramaniam, and Santanu Pal

**7. Heavy-ion emission in spontaneous decays of 249,252Cf nuclei**

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