

FACULTY PROFILE

Name : Dr. M. Balasubramaniam

Designation : Professor

Contact Details:

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1 Education

S. No	Degree	Subject	Institution	Affiliated University	Year of Passing	Class/Grade
1.	Ph. D.	Physics	M.S. University	M. S. University	2001	-
2.	PGDCA.,	Computer Applications	M.S. University	M. S. University	1997	First
3.	M. Sc.,	Physics	M.S. University	M. S. University	1996	First
4.	B. Sc.,	Physics	APSA College	M. K. University	1994	First
5.	H. Sc.,	Physics, Chemistry, Maths, Bio	APHS School	TN State Board	1991	First
6.	SSLC		APHS School	TN State Board	1989	First

1.1 NET / SET / GATE / Others

S. No	Name of the Examination	Year of Passing	Register Number

2. Career Profile

S. No	Institution	Designation	Period		Total Period in Years
			From	To	
1.	Bharathiar University	Assistant Professor	April 2005	August 2015	5.3
2.	Bharathiar University	Associate Professor	August 2015	August 2018	3.4
3.	Bharathiar University	Professor	August 2018	Till date	1.2

3. Administrative / Additional Responsibilities

S. No	Name of the Responsibility	Designation	Institution	Period		Nature of Responsibility
				From	To	
1.	DST-PURSE Program (Phase-II)	Deputy Coordinator	Bharathiar University	2016	2020	PURSE Grant Management
2.	Warden, Thiruvalluvar Hostel	Warden	Bharathiar University	2015	2017	Hostel Management
3.	IQAC	Member	Bharathiar University	2016	Till date	Quality assurance
4.	UGC-SAP (Physics), Advisory Committee	Member	Bharathiar University	2016	Till date	SAP Support Monitoring
5.	Annual Report Committee	Member	Bharathiar University	2019	Till date	Preparation of Annual Report Statistics

5. Membership in Professional Bodies

S. No	Organization	Type of Membership	Period
1.	7 th five years cycle of SERB schools on "Nuclear Physics"	Planning committee member	2017 - 2021
2.	The Academy of sciences, Chennai	Fellow	Life Time
3.	Indian Association of Physics Teachers	Member	Life Time
4.	Indian Physics Association	Member	Life Time

5.1 Membership in Academic Bodies

S. No	Organization	Type of Membership	Period
1.	Indian Association of Physics Teachers	Member	Life Time
2.	Indian Physics Association	Member	Life Time

6. Foreign Visits/Exposure

S. No	Countries Visited	Duration of Visit	Month and Year	Purpose of Visit
1.	Giessen, Germany	35 days	June 01-July 05, 2000,	Collaborative Research Work
2.	Giessen, Germany	37 days	Oct. 01-No. 07, 2001,	Collaborative Research Work
3.	Giessen, Germany	58 days	Feb. 01-March 30, 2002,	Collaborative Research Work
4.	Giessen, Germany	48 days	Aug. 12-Sep. 30, 2002	Collaborative Research Work
5.	Frankfurt, Germany	One month	June 01 – June 30, 2009	Collaborative Research Work
6.	Beijing, China	5 days	Sept. 05 – Sept. 09, 2011	To present a invited talk
7.	Hanoi, Vietnam	6 days	Nov. 23 – Nov. 28, 2011	To present a invited talk

7. Research Areas

Ternary fission studies of heavy and superheavy nuclei	Saddle Point Fission Model
Level density approach for binary and ternary fission studies	Cluster Radioactivity
Nuclear clustering aspects – cluster decay	Empirical Relations for Decay Half-lives
Exotic decay modes of heavy and superheavy nuclei	
Fusion-fission studies of low-energy nuclear reactions	
Nuclear Data Activities (EXFOR coding of Indian Nuclear Data)	

8. Supervising Profile

Year	M.Sc. (Nos)	M.Phil. (Nos)	Ph.D. (Nos)	PDF (Nos)	Others
2005	1	--	--		
2006	4	2	--		
2007	3	2	--		
2008	2	3	--		
2009	4	1	--		
2010	3	2	--		
2011	3	1	1		
2012	3	1	--		
2013	2	--	--		
2014	2	1	1		
2015	2	5	2		
2016	--	--	--		
2017	2	--	--		
2018	3	--	--		
2019	3	--	2		

8.1 PG research

S. No.	Name of the candidate	Title of the Dissertation	Year
1.	Manimaran K	Heavy particle decay in trans-lead region	2006
2.	Saravanakumar B	Study of light mass nuclei near neutron dripline region	2006
3.	Vanitharani V	Alpha decay systematics of superheavy elements with Z = 104 to Z = 120	2006
4.	Sudha T	Entrance channel and incident energy effects in the emission of light particles and intermediate mass fragments from $^{56}\text{Ni}^*$ compound nucleus	2007
5.	Kavitha K	Alpha accompanied ternary fission of neutron deficient to neutron rich isotopes $^{242-259}\text{Fm}$	2008
6.	Keerthi Chandar R S	Fusion reactions leading to super heavy elements with atomic number Z = 118-124 using deformed projectile+spherical target nuclei	2008

7.	Jayasudha T	Study of heavy cluster emission in superheavy region	2009
8.	Karthikraj C	The borehole logging, radiometric core assay and fortran program for Weizsacker's mass formula and its applications	2009
9.	Senthilkumar B	Light and heavy charged particle accompanied ternary fission of Z = 114 isotopes	2009
10.	Sreevidya M	Fusion-fission studies of $^{62}\text{Ni}^*$ formed in $^1_0\text{n}+^{61}\text{Ni}$ at various incident energies	2009
11.	Nithya P	Ternary potential energy surfaces for ^{56}Ni and ^{60}Zn in the equatorial and polar configuration	2010
12.	Poongodi S	Binary fragmentation potential, Q value systematics and mass distributions of $^{234,236,238}\text{U}$	2010
13.	Saikrishna S	Preformation probability from penetrability integral	2010
14.	Sakthivel K	Alpha decay half lives of radioactive nuclei	2011
15.	Saranya V	Kinematics and decay study of excited $^{56}\text{Ni}^*$ nuclei formed in low-energy reactions	2011
16.	Sreejith M S	Binary and ternary fragmentation of superheavy nuclei	2011
17.	Jeevarekha A	De-excitation study of $^{56}\text{Ni}^*$	2012
18.	Kanaga S	Potential energy surface for neutron and proton halo nuclei	2012
19.	Shanmugapriya V	Kinetic energy and trajectories of fragments in ternary fission of ^{252}Cf	2012
20.	Janani M	Ternary fission studies and binary breakup of $^{56}\text{Ni}^*$	2013
21.	Periyasamy J	Alpha decay studies and empirical formula for preformation probability of cluster decay modes	2013
22.	Banupriya B	True ternary fission studies of thorium, uranium, plutonium, curium, californium, fermium and their isotopes	2014
23.	Senthil Kannan M T	Ternary fission studies of heavy nuclei using level density approach	2014
24.	Archana M	Alpha decay systematics	2015
25.	Pavithra V S	Role of entrance channel and incident energy in the de-excitation of $^{60}\text{Zn}^*$	2015
26.	Agalya P	Cluster radioactivity	2017
27.	Balamurugan R	A study of neutron star, neutron drip line and neutron halo	2017
28.	Jegadeesh V	^4He , ^{10}Be , ^{14}C accompanied cold ternary fission of ^{252}Cf nuclei	2018
29.	Sadhish Kumar C K	Square well Vs proximity potential for the α decay and cluster decay studies	2018
30.	Viswanath P L	Fission fragment mass distribution of ^{236}U	2018
31.	Bhuvanewari S	WKB method using realistic potential to calculate half-lives of different decay modes	2019
32.	Gowsalya R	Fission mass distribution for the actinides using TALYS	2019

33.	Kuzhanthaivel C	Application of mass formula for the energetics of basic decay modes	2019
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8.2 M.Phil. Research

S. No.	Name of the candidate	Title of the Thesis	Year
1.	Sudha V R	A study of α and heavy cluster radioactivity	2006
2.	Gugapriyadevi B	De-excitation studies of hot and rotating $^{60}\text{Zn}^*$ compound system formed in $^{32}\text{S}+^{28}\text{Si}$, $^{36}\text{Ar}+^{24}\text{Mg}$, and $^{40}\text{Ca}+^{20}\text{Ne}$ reactions	2006
3.	Subanya S	A three cluster model description applied to the study of particle accompanied ternary fission of $^{238-256}\text{Cf}$ and ^{248}Cm nuclei	2007
4.	Vanitha Rani V	A study of the role of orientation and deformation degrees of freedom in the synthesis of elements in fusion reactions	2007
5.	Jithesh V	Three cluster model description with deformation and orientation degrees of freedom applied to the light charged particle accompanied fission of ^{252}Cf	2008
6.	Saravanakumar B	A study of role of halo nucleus in fusion, fission reaction and the study of cluster decay in trans-actinide and trans-tin region	2008
7.	Shanmuga Priya V	A study of neutron induced ternary fission of ^{248}Cm and ^{241}Pu with emission of various light charged particles using three cluster model	2008
8.	Yuvarani S	Emission of fission like fragments from the excited light $^{56}\text{Ni}^*$ compound system	2009
9.	Karthick C	Exotic decay modes of superheavy nuclei	2010
10.	Sangeetha N	Fusion and fission cross section of $^{56}\text{Ni}^*$, $^{60}\text{Zn}^*$ and ternary potential energy surface for ^{60}Zn	2010
11.	Nandakumar A	Alpha and heavy cluster emission using Coulomb plus Woods-Saxon potential model	2011
12.	Saranya V	Ternary breakup of heavy and superheavy nuclei	2012
13.	Karthika P	Studies on ternary fission and dripline nuclei	2014
14.	Banupriya B	A potential energy surface study on the ternary clustering of light to medium mass nuclei	2015
15.	Monisha R	Basic, exotic decay modes of heavy and superheavy nuclei using Nilsson and two center shell model	2015
16.	Nandhini N	Modified Bethe-Weizacker formula applied to the study of neutron and proton halo nuclei	2015
17.	Paul Selvi G	Alpha clustering of light nuclei within potential energy surface approach	2015
18.	Senthil Kannan M T	Mass and charge distribution of ternary fission of ^{252}Cf and ^{236}U by statistical approach	2015

8.3 Ph.D. Research

S. No	Name of the candidate	Supervisor/Co-Supervisor	Title of the Thesis	Number of Peer Reviewed Publications		Year
				National	International	
1.	Manimaran K	M. Balasubramaniam	Ternary fission studies of californium (Cf) nuclei and heavy particle emission from ground and excited states of nuclei in transtun region	-	5	2011
2.	Rajeswari N S	M. Balasubramaniam	A study of basic and exotic decay modes of medium, heavy and superheavy nuclei	-	5	2014
3.	Karthikraj C	M. Balasubramaniam	Binary, ternary fission studies of medium, heavy nuclei using dynamical and statistical model	1	4	2015
4.	Vijayaraghavan K R	M. Balasubramaniam	Ternary fission studies of heavy and superheavy nuclei	1	3	2015
5.	Senthil Kannan M T	M. Balasubramaniam	Fission studies using dynamical and statistical models	-	4	2019
6.	Sreeja I	M. Balasubramaniam	Decay and structure studies of drip line and unstable nuclei in various mass region	1	4	2019

8.4 Postdoctoral Research (RA/WOS/NPDF/Others)

S. No	Name of the candidate	Title of the Thesis	Number of Peer Reviewed Publications		Year
			National	International	

9. Funded Projects

S. No	Funding agency	PI/ Co-PI	Title	Duration		Amount sanctioned	Amount received	Paper published if any	Ph.D . Produced
				From	To				
1.	CSIR	PI	Statistical and dynamical description of particle accompanied fission of medium to heavy mass nuclei	2019	Till date	4,89,000	4,89,000		
2.	SERB, DST	Director	SERC School on Nuclear Physics – “Nuclear Physics from new perspectives”	07.02.17	27.02.17	19,74,500	19,74,500		
3.	UGC	PI	A study of heavy ion collisions in the heavy and superheavy mass region and the related phenomena	2010	2013	6,09,000	6,09,000	4	1
4.	DAE, BRNS	PI	Studies on nuclear fission reaction process with orientation to nuclear data needs of India’s advanced reactor program	2009	2013	12,11,000	12,11,000	4	1
5.	DST, SERB	PI	Dynamical clusterization studies of fission like fragments from the excited light nuclei	2003	2006	8,13,000	8,13,000	6	

10. Consultancy Projects

S. No	Agency / Organization	Mentor	Description	Duration	Amount Earned

11. Departmental Projects as Co-Coordinators

S. No	Funding agency	Title	Duration		Amount sanctioned	Amount received
			From	To		

12. Patents

S. No	Details of Patent	International/National	Year	Application / Grant Number

13. Equipments purchased under projects

S. No.	Funding agency	Duration	Title of the Project	Equipment purchased (Above 1 lakh)	Cost (Rs.in Lakhs)	Present Status

14. Publications**14.1 14.1 Resesarch articles in Journals (International)**

S. No.	Name of the Authors	Title,	Journal name	Volume	Page Start-End	Year	SCI /Not	Current Impact factor	SJR	SNIP
1.	C. Kokila and M. Balasubramaniam	Effect of channel temperature and mass window in the fission decay of $^{181}\text{Re}^*$	Physical Review C	101	014614-1 to 014614-8	2020	SCI	3.132		
2.	C. Karthika and M. Balasubramaniam	Mirror nuclei of 1n/2n halo systems as 1p/2p emitters	Physical Review C	100	054611-1 to 054611-10	2019	SCI	3.132		

3.	I. Sreeja and M. Balasubramaniam	A generalized empirical formula for half-lives of α -decay fine structure	International Journal of Modern Physics E	28	1950067-1 to 1950067-16	2019	SCI	1.386		
4.	C. Kokila and M. Balasubramaniam	Role of channel temperature and mass window in the binary breakup of $^{236}\text{U}^*$	Physical Review C	100	034607-1 to 034607-10	2019	SCI	3.132		
5.	C. Karthika and M. Balasubramaniam	Scission point model for the mass distribution of ternary fission	European Physical Journal A	55	59-1 to 59-10	2019	SCI	2.481		
6.	I. Sreeja and M. Balasubramaniam	An empirical formula for the half-lives of exotic two-proton emission	European Physical Journal A	55	33-1 to 33-10	2019	SCI	2.481		
7.	M. Balasubramaniam and H. Stoecker	In memory: Prof. Raj K. Gupta	International Journal of Modern Physics E	28	1977001-1 to 1977001-5	2019	SCI	1.386		
8.	K.R. Vijayaraghavan, V. Gokula Lakshmi, P. Prema and M. Balasubramaniam	Equatorial, collinear trajectories in the ternary fission of ^{252}Cf for various third fragments	Journal of Physics G: Nuclear and Particle Physics	46	025103-1 – 025103-17	2019	SCI	3.534		
9.	N.S. 9.Rajeswari, C. Nivetha and M. Balasubramaniam	Nuclear surface energy coefficients in cluster decay	European Physical Journal A	54	156-1 to 156-9	2018	SCI	2.481		
10.	M.T. Senthil Kannan, Jhilaam Sadhukhan, B.K. Agrawal, M. Balasubramaniam and Santanu Pal	Dynamical model calculation to reconcile the nuclear fission lifetime from different	Physical Review C - Rapid	98	021601-1 to 021601-6	2018	SCI	3.132		

		measurement techniques								
11.	I. Sreeja and M. Balasubramaniam	An empirical formula for the half-lives of ground state and isomeric state one proton emission	European Physical Journal A	54	106-1 to 106-9	2018	SCI	2.481		
12.	I. Sreeja, M. Balasubramaniam and Raj K. Gupta	Preformation probability of two proton emitters	International Journal of Modern Physics E	27	1850032-1 to 1850032-10	2018	SCI	1.386		
13.	Bharat Kumar, M.T. Senthil Kannan, M. Balasubramaniam, B. K. Agrawal and S. K. Patra	Relative mass distributions of neutron-rich thermally fissile nuclei within a statistical model	Physical Review C	96	034623-1 to 034623-10	2017	SCI	3.132		
14.	M.T. Senthil Kannan and M. Balasubramaniam	Charge distribution in the ternary fragmentation of ^{252}Cf	European Physical Journal A	53	164-1 to 164-8	2017	SCI	2.481		
15.	M.T. Senthil Kannan, Bharat Kumar, M. Balasubramaniam, B. K. Agrawal and S. K. Patra	Relative fragmentation in ternary systems within the temperature-dependent relativistic mean-field approach	Physical Review C	95	064613-1 to 064613-10	2017	SCI	3.132		
16.	M. Balasubramaniam and K. R. Vijayaraghavan and K. Manimaran	Ternary fission of superheavy elements	Physical Review C	93	014601-1 to 014601-8	2016	SCI	3.132		
17.	K.R. Vijayaraghavan, M. Balasubramaniam and W. von Oertzen	True ternary fission	Physical Review C	91	044616-1 to 044616-4	2015	SCI	3.132		

18.	M. Balasubramaniam, C. Karthikraj, S. selvaraj and N. Arunachalam	Ternary-fission mass distribution of ^{252}Cf : A level-density approach	Physical Review C	90	054611-1 to 054611-4	2014	SCI	3.132		
19.	A. Kumar, M. Balasubramaniam, A. Chakroborty, B.P. Crider, S.F. Hicks, C. Karthikraj, L.J. Kersting, C.J. Luke, P.J. Mcdonough, M.T. McEllistrem, E.E. Peters, F.M. Prados-Estevez, A.J. Sigillito, M.M. Upadhyay, J.R. Vanhoy and S.W. Yates	A study of measured neutron elastic differential neutron cross sections for ^{23}Na	Journal of Radioanalytical Nuclear Chemistry	302	1043 - 1047	2014	SCI	1.186		
20.	C. Karthikraj and M. Balasubramaniam	Role of neck-length parameter in dynamical cluster-decay model for the decay of $^{56}\text{Ni}^*$	Journal of Physics G: Nuclear and Particle Physics	41	095101-1 to 095101-13	2014	SCI	3.534		
21.	K.R. Vijayaraghavan, M. Balasubramaniam and W von Oertzen	Collinear versus triangular geometry: A ternary fission study	Physical Review C	90	024601-1 to 024601-7	2014	SCI	3.132		
22.	N.S. Rajeswari and M. Balasubramaniam	Exotic decay modes of odd-Z (105-119) superheavy nuclei	European Physical Journal A	50	105-1 to 105-8	2014	SCI	2.481		
23.	M. Balasubramaniam and N.S. Rajeswari	An empirical relation for cluster decay preformation probability	International Journal of Modern Physics E	23	1450018-1 to 1450018-11	2014	SCI	1.386		

24.	W. Von Oertzen, K.R. Vijayaraghavan and M. Balasubramaniam	Dynamics of collinear ternary fission in the fragmentation of ^{252}Cf	EPJ web of conferences	66	03092-p.1 to 03092-p.4	2014	Not SCI	0.35		
25.	Shagun Thakur, Rajesh Kumar, K.R. Vijayaraghavan and M. Balasubramaniam	Alpha accompanied ternary fission of superheavy nuclei	International Journal of Modern Physics E	22	1350014-1 to 1350014-11	2013	SCI	1.386		
26.	C. Karthikraj and M. Balasubramaniam	Decay studies of $^{59}\text{Cu}^*$ formed in the $^{35}\text{Cl}+^{24}\text{Mg}$ reaction using the dynamical cluster-decay model	Physical Review C	87	024608-1 to 024608-6	2013	SCI	3.132		
27.	N.S. Rajeswari and M. Balasubramaniam	Nuclear surface energy coefficients in α -decay	Journal of Physics G: Nuclear and Particle Physics	40	035104-1 to 035104-19	2013	SCI	3.534		
28.	C. Karthikraj, N.S. Rajeswari and M. Balasubramaniam	Temperature-dependent binding energies in a dynamical cluster-decay model of hot and rotating $^{56}\text{Ni}^*$	Physical Review C	86	014613-1 to 014613-9	2012	SCI	3.132		
29.	K.R. Vijayaraghavan, W. von Oertzen and M. Balasubramaniam	Kinetic energies of cluster fragments in ternary fission of ^{252}Cf	European Physical Journal A	48	27-1 to 27-8	2012	SCI	2.481		
30.	N.S. Rajeswari, K.R. Vijayaraghavan and M. Balasubramaniam	Cluster pre-existence probability	European Physical Journal A	47	126-1 to 126-7	2011	SCI	2.481		
31.	K. Manimaran and M. Balasubramaniam	All possible ternary fragmentations of ^{252}Cf in collinear configuration	Physical Review C	83	034609-1 to 034609-9	2011	SCI	3.132		

32.	K. Manimaran and M. Balasubramaniam	Ternary fission fragmentation of ^{252}Cf for all possible third fragments	European Physical Journal A	45	293 - 300	2010	SCI	2.481		
33.	K. Manimaran and M. Balasubramaniam	Deformation and orientation effects in the ternary fragmentation potential of the ^4He - and ^{10}Be -accompanied fission of the ^{252}Cf nucleus	Journal of Physics G: Nuclear and Particle Physics	37	045104-1 to 045104-14	2010	SCI	3.534		
34.	K. Manimaran and M. Balasubramaniam	Cluster radioactivity in trans-tin region using semiempirical formula	International Journal of Modern Physics E	18	1509 - 1520	2009	SCI	1.386		
35.	K. Manimaran and M. Balasubramaniam	Three-cluster model for the α -accompanied fission of californium nuclei	Physical Review C	79	024610-1 to 024610-8	2009	SCI	3.132		
36.	Raj K. Gupta, M. Balasubramaniam, Rajesh Kumar, Dalip Singh, Shan K Arun and Walter Greiner	The dynamical cluster-decay model of preformed clusters for a hot and rotating $^{116}\text{Ba}^*$ nucleus produced in the low-energy $^{58}\text{Ni}^* + ^{58}\text{Ni}^*$ reaction	Journal of Physics G: Nuclear and Particle Physics	32	345 - 361	2006	SCI	3.534		
37.	Raj K. Gupta, M. Balasubramaniam, Sushil Kumar, S.K. Patra, G. Munzenberg and Walter Greiner	Magic numbers in exotic light nuclei near drip lines	Journal of Physics G: Nuclear and Particle Physics	32	565 - 571	2006	SCI	3.534		

38.	Raj K. Gupta, M. Balasubramaniam, Rajesh Kumar, Narinder Singh, Monika Manhas and Walter Greiner	Optimum orientations of deformed nuclei for cold synthesis of superheavy elements and the role of higher multipole deformations	Journal of Physics G: Nuclear and Particle Physics	31	631 - 644	2005	SCI	3.534		
39.	M. Balasubramaniam and N. Arunachalam	Proton and α -radioactivity of spherical proton emitters	Physical Review C	71	014603-1 to 014603-5	2005	SCI	3.132		
40.	Raj K. Gupta, M. Balasubramaniam, Rajesh Kumar, Dalip Singh, C. Beck and Walter Greiner	Dynamical cluster-decay model for hot and rotating light-mass nuclear systems applied to the low-energy $^{32}\text{S}+^{24}\text{Mg}\rightarrow^{56}\text{Ni}^*$ reaction	Physical Review C	71	014601-1 to 014601-13	2005	SCI	3.132		
41.	M. Balasubramaniam, S. Kumarasamy, N. Arunachalam and Raj K. Gupta	New semiempirical formula for exotic cluster decay	Physical Review C	70	017301-1 to 017301-4	2004	SCI	3.132		
42.	M. Balasubramaniam, Rajesh Kumar, Raj K. Gupta, C. Beck and Werner Scheid	Emission of intermediate mass fragments from hot $^{116}\text{Ba}^*$ formed in low-energy $^{58}\text{Ni}+^{58}\text{Ni}$ reaction	Journal of Physics G: Nuclear and Particle Physics	29	2703 - 2719	2003	SCI	3.534		
43.	Raj K. Gupta, Sharda Dhaulta, Rajesh Kumar, M. Balasubramaniam, G.	Closed-shell effects from the stability and instability of nuclei against cluster decays	Physical Review C	68	034321-1 to 034321-10	2003	SCI	3.132		

	Munzenberg and Werner Scheid	in the mass regions 130-158 and 180-198								
44.	Raj K. Gupta, Rajesh Kumar, Narinder K. Dhiman, M. Balasubramaniam, Werner Scheid and C. Beck	Cluster decay of hot $^{56}\text{Ni}^*$ formed in the $^{32}\text{S}+^{24}\text{Mg}$ reaction	Physical Review C	68	014610-1 to 014610-13	2003	SCI	3.132		
45.	Sushil Kumar, M. Balasubramaniam, Raj K. Gupta, G. Munzenberg and W. Scheid	The formation and decay of superheavy nuclei produced in ^{48}Ca - induced reactions	Journal of Physics G: Nuclear and Particle Physics	29	625 - 639	2003	SCI	3.534		
46.	Raj K. Gupta, Sushil Kumar, Rajesh Kumar, M. Balasubramaniam and W. Scheid	Structure effects in the region of superheavy elements via the α -decay chain of $^{293}118$	Journal of Physics G: Nuclear and Particle Physics	28	2875 - 2884	2002	SCI	3.534		
47.	Raj K. Gupta, Sushil Kumar, M. Balasubramaniam, G. Munzenberg and Werner Scheid	The cluster-core model for the halo structure of light nuclei at the drip lines	Journal of Physics G: Nuclear and Particle Physics	28	699 - 712	2002	SCI	3.534		
48.	Raj K. Gupta, M. Balasubramaniam, Chiara Mazzocchi, M. La Commara and Werner Scheid	Decay of excited $^{116}\text{Ba}^*$ formed in the $^{58}\text{Ni}+^{58}\text{Ni}$ reaction via the emission of intermediate mass fragments	Physical Review C	65	024601-1 to 024601-5	2002	SCI	3.132		
49.	Raj K. Gupta, M. Balasubramaniam, G. Munzenberg, W. Greiner and W. Scheid	Cold ^{86}Kr valley in superheavy $Z = 104 - 120$ nuclei	Journal of Physics G: Nuclear and Particle Physics	27	867 - 881	2001	SCI	3.534		

50.	Raj K. Gupta, Dharm Bir, M. Balasubramaniam and Werner Scheid	Cold fission versus exotic cluster decay in $^{234,236,238}\text{U}$ nuclei	Journal of Physics G: Nuclear and Particle Physics	26	1373 - 1388	2000	SCI	3.534		
51.	Raj K. Gupta, M. Balasubramaniam, Rajeev K Puri and Werner Scheid	The halo structure of neutron-drip line nuclei: (neutron) cluster-core model	Journal of Physics G: Nuclear and Particle Physics	26	L23 – L32	2000	SCI	3.534		
52.	M. Balasubramaniam and Raj K. Gupta	Heavy-ion emission in spontaneous decays of $^{249,252}\text{Cf}$ nuclei	Physical Review C	60	064316-1 to 064316-7	1999	SCI	3.132		

14.2 Resesarch articles in Journals (National)

S. No.	Name of the Authors	Title,	Journal name	Volume	Page Start-End	Year	UGC CARE indexed/Not
1.	I Sreeja and M Balasubramaniam	Empirical formulae with angular momentum dependence for exotic one and two proton emissions	Indian Journal of Pure and Applied Physics	57	655-659	2019	Yes
2.	I Sreeja and M Balasubramaniam	The three-body structure of 2n and 2p halo nuclei	Journal of Nuclear Physics, Material Sciences, Radiation and Applications	5	265-281	2018	Not
3.	M Balasubramaniam, K R Vijayaraghavan and C Karthikraj	Ternary Fission	Pramana – Journal of Physics	85	423-430	2015	Yes
4.	M. Balasubramaniam and K. Manimaran	Cluster radioactivity in ^{127}I	Journal of Nuclear Physics, Material	1	25 - 35	2013	Not

			Sciences, Radiation and Applications				
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14.

3 Submission for database

S. No.	Name of the Authors	XRD/Protein/Gene/Any other	Databas e	ID/Ref no	Year	Papers if any
1.	G.Pandikumar, S. Ganesan, M.Balasubramaniam Joseph Jermiah	IAEA-NDS	EXFOR	D6021	2009	
2.	K. Manimaran, Megha Bhike, C. Karthik and M. Balasubramaniam	IAEA-NDS	EXFOR	D6089	2009	
3.	K. Manimaran, Megha Bhike, C. Karthik and M. Balasubramaniam	IAEA-NDS	EXFOR	D6022	2009	
4.	G.Pandikumar, S. Ganesan, M.Balasubramaniam Joseph Jermiah	IAEA-NDS	EXFOR	D6039	2009	
5.	G.Pandikumar, S. Ganesan, M.Balasubramaniam Joseph Jermiah	IAEA-NDS	EXFOR	D6051	2009	
6.	G.Pandikumar, S.Ganesan, S.Kailas, J Joseph Jeremiah, ,M.Balasubramaniam,	IAEA-NDS	EXFOR	D6085	2009	
7.	S.Mahadevan, S.Subramanian, M.Balasubramaniam, G.Pandikumar	IAEA-NDS	EXFOR	D6151	2011	
8.	K. .R.Vijayaraghavan, M.Balasubramaniam, C.Karthikraj, A.Nandakumar, G.Pandikumar, R.Kumar	IAEA-NDS	EXFOR	D6147	2011	
9.	M.Balasubramaniam, C.Karthikraj ,S.Subramanian,	IAEA-NDS	EXFOR	D6241	2015	

						Total:	

15 Awards

15.1 Travel awards

S. No.	Funding agency	Name of conference	Country	Paper presented (Oral/Poster)	Title of paper	Dates
	FIAS	Visiting Researcher	Germany	Oral	Nuclear Physics Parallels in Atomic Clusters	June 01 – June 30, 2009
	DAE-BRNS, NDPI and Bharathiar University	2 nd Asian Nuclear Reaction Database Development Workshop	China	Oral	A comparison of ternary fragmentation potential energy surface in equatorial and collinear configuration	September 05 – 09, 2011
	DST-ITS	International Symposium on Physics of Unstable Nuclei	Vietnam	Oral	Ternary fission of unstable nuclei in equatorial and collinear configuration	November 23 – 28, 2011

15.2 Academic awards

S. No.	Awarding agency	Country	Purpose of award	Date of Award	Any other details
	Volkswagen research fellowship	Germany	Germany VW project between Giessen University, Germany and Panjab University, Chandigarh, India		Visits made during the project period 1. June 01 – July 05, 2000 2. October 01 – November 07, 2001 3. February 01-March 30, 2002 4. August 12 – September 30, 2002

15.3 Academic fellowships for training

S. No.	Name of faculty	Awarding agency	Institution visited	Country	Duration	Purpose	Papers if any

16 Academic events attended**16.1 Conference /seminars /Symposium attended**

S. No	Name of Authors	Title of conference	Duration	Poster /Oral/Guest speaker/Chairperson	Title of paper	Institution	Country

16.2 Workshop/Training/FDP attended

S. No	Title	Duration	Institution	Country

17 Events Organized

S. No	Title of the Event	Duration	Funding agency	Role	No. of Institutions	No. of days	No. of Institutions from other state	No. of participants	No. of experts
	SERC School on "Nuclear physics from new perspectives"	07.02.2017 – 27.02.2017	SERB, India	Director	23	20	20	47	15

18. Invited and Guest Lectures Delivered in Various Capacities

S. No.	Name of the Event	Title	Institution	Date	Role
1.	New trends in nuclear reactions and structure studies – NTNRS-19	Mirror nuclei of $1n/2n$ halo systems as $1p/2p$ emitters & Recent results supporting CCT	University of Calicut, Kerala	December 06 – 07, 2019	Invited talk
2.	National level training course	Programming for data analytics – FORTRAN	Tamil Nadu Agricultural University, Coimbatore	August 01 – 05, 2019	Invited talk
3.	DAE-BRNS Theme meeting	New horizons in heavy ion induced fission and nuclear data applications	BARC, Mumbai	June 22-23, 2018	Invited talk
4.	Association Inauguration	HE and SHE of nuclear landscape	Avinashilingam University	25.07.2019	Invited talk
5.	Faculty Development	Classical Mechanics	Periyar University	15.11.2018	Invited talk
6.	IANCAS Lecture	Light and Heavy Particle accompanied fission / Nuclear Ternary Fission	IGCAR, Kalpakkam	15.06.2017	Invited Talk
7.	State level seminar on Nuclear Energy: Peaceful, Environment friendly and reliable source for future	Fission and its related Phenomenon	The MDT Hindu College	11.03.2016	Invited Talk
8.	DAE- Symposium on Nuclear Physics	LCP-accompanied fission to symmetric tripartition of heavy & superheavy nuclei,	Sri Sathya Sai Institute of Higher Learning	7-11 Dec. 2015	Invited Talk
9.	Nuclear Physics Meet	True Ternary Fission	Institute of Physics, Bhubaneswar,	26th to 30th June, 2015	Invited Talk
10.	Conference on 75 years of Nuclear Fission: Present and Future Perspectives (Fission 75)	Ternary Fission	BARC, Mumbai	May 8-10, 2014	Invited Talk
11.	2nd Asian Nuclear Reaction Database Development Workshop	A comparison of ternary fragmentation potential energy surface in equatorial and collinear configuration	China Nuclear Data Centre, China Institute of Atomic Energy at Beijing, China	5 to 9 September 2011	Invited Talk

12.	International Symposium on Physics of Unstable Nuclei	Ternary fission of unstable nuclei in equatorial and collinear configuration	Ministry of Science and Technology of Vietnam held at Hanoi, Vietnam	23 to 28 November 2011	Invited Talk
13.	FIAS Lecture Series	Nuclear Physics Parallels in Atomic Clusters	FIAS, Frankfurt, Germany	24.06.2009	Invited Talk
14.	Seminar Series	Potential energy surfaces and yields of particle accompanied fission of Cf nuclei	University of Giessen	26.06.2009	Invited Talk

19 Extension activity (Social activity/election duty/special duty)

S. No.	Name of faculty	Nature of duty	Duration	Place of activity	Any other detail