

**Name** : *R.DAPHNIE*

**Designation** : **Assistant Professor & UG (SF) Head**

**Department** : **Physics**

**Date of Joining** : **23-06-2011**

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**daphnedaniel@gmail.com**



**Educational Qualification:**

Degree	Subject	College / University & Place	Year Completed
B.Sc.	Physics	Women's Christian College, Nagercoil Manonmanium Sundaranar University	Apr. 1993
M.Sc	(Physics)	-do-	Apr. 1996
B.Ed.	Physical sciences Education	St. Christopher's College of Education, Madras University of Madras	Apr. 1996
M.Ed.	Education	Madurai Kamaraj University	May 2000
M.Phil	Physics	Madurai Kamaraj University	Apr. 2007
M.Phil	Education	Vinayaka Missions University	Apr. 2009
Ph.D	Inter disciplinary – (Education & Physics)	Alagappa University	Aug-2014
SET-qualified	Physics	Mother Teresa Women's University	Feb-2016

**Specialisation in Teaching** : **Energy physics & Astrophysics**

**Specialisation in Research** : **Technology mediated Physics evaluation through  
Computer Adaptive Testing**

**Research Interests** : **Energy Physics**

**Any Other Work Experience:**

<b>Designation</b>	<b>Institution / Company</b>	<b>Year - From (month/year) To (month/year)</b>
Science teacher	Hebron Matriculation Higher Secondary School , Nagercoil	[ May1996 - May 1997]
Physics teacher	Carmel convent school, Bangalore.	May 2001 - Jan 2002 & May 2004 – June 2005
lecturer (Physical Sciences)	KSM college of Education, Madurai	June 2005 – Feb 2007
lecturer (Physical Sciences)	CSI college of Education, Pasumalai, Madurai	March 2007-June 2011
Assistant Professor in Physics	The American college, Madurai	since June 2011

**Administrative /Academic Position/s (held / currently holding):**

<b>Positions held / currently holding</b>	<b>Year – From (month/year) To month/year)</b>
Examinership and as an External Evaluator	during 2007, 2008, 2009 and 2010 in Madurai Kamaraj University, TNTEU and in IGNOU
NAAC Convener in CSI College of Education, Madurai.	JUNE 2009 – June 2011
Academic Counsellor for IGNOU students	2008 – 2011
NSS Program officer	AUGUST-2014 - Till Date
Head of the Department of Physics UG (SF)	27.09.2017 – Till Date

**Membership in Professional Bodies:**

1. Member of college green club
2. Treasurer in India Youth for Christ, Madurai

**Publications:****Articles Published in International Journals:**

1. Daphine, R. & Sivakumar, P. (2011). A Study on the Professional Problems Faced by Post Graduate Teachers in Physics, *Indian Journal of Applied Research*, 1 (2), 29-31 (Impact Factor 1.88). DOI : 10.36106/ijar
2. Daphine, R. & Sivakumar, P. (2015) Eliminate Gender Disparity In Education Through Technology Integration in Curriculum For Empowering Rural Women, *Human Rights International Research Journal*, 3(1) (Impact Factor 2.54)

3. Daphine, R. & Daniel, A.G. K (2016). Attitude Towards Individualization is behind the success in Learning Science Through Computer Technology, *International Journal of Multidisciplinary Research Review*, 1(3), 28-30. (Impact Factor 2.262)
4. Daphine, R. & Daniel, A.G. K (2017). Concept Attainment Through Computer Adaptive testing(CAT) can overcome the Barriers like locality of the Institution” in the “ROOTS *International Journal of Multidisciplinary Research Review*, 4(1), 28-30. (Impact Factor 4.075)
5. Daphine, R. (2020). Best Practices in Institutions, While On-Line Pedagogic approaches are included in the present Curriculum Design, in the “PURAKALA” *International journal of research (IJR)*, 31 (6),136-146 (Impact Factor 5.6)
6. Selvakumar, S., Sivakumar, P. & Daphine, R. (2020). Leverage of Learning Science through Blended Learning Technique, *International Journal of Engineering and Advanced Technology (IJEAT)*,9 (4), 2052-2056 (Impact Factor 6.02)  
DOI: 10.35940/ijeat.D8656.049420
7. Daphine, R., P. Sivakumar, P. & Selvakumar, S. (2020).A study on Student’s Attitude towards Online Computer Adaptive Test (CAT) in Physics Education through Observation Schedule, *Journal of Xidian University (JXU)*, 14(5), 4703-4708 (Impact Factor 5.4) - DOI: 10.37896/jxu14.5/517

#### Articles published in National Journals:

1. Daphine, R. & Daniel, A.G.K.(2011). Test Mode CAI as CAT for Quality Evaluation and Time Reduction, *Innovative Technology in Education* pp. 45-49.
2. Daphine, R. & Sivakumar, P. (2013). Computer Adaptive Test - An efficient students’ abilities measurement tool. *University News*, 51(8),pp 14-20.
3. Daphine, R. & Sivakumar, P. (2015).Assessing the Effectiveness of Computer Adaptive Test in identifying the students’ Potential. *Indian e- journal of Teacher Education* (2015), 3(2) Pg-56-63 (Impact Factor 2.15)
4. Daphine, R. & Sivakumar, P. (2015). Interactive Learning Environment In Classroom Increases Aptitude and Develops Higher Order Thinking Skills, *Journal of Teacher, Learner & Society* (Special Edition)

#### Conference / Seminar Presentations:

##### *Papers presented in International conferences / symposia / seminars*

Name of the Seminar/Conference/Symposia Workshop etc.,	Name of the Sponsoring Agency	Title of paper	Institution, Place and Date
International conference on Reforms in Higher education in Asia (RHEA-2008)	ICSSR	Technological Reforms in higher education	3 <sup>rd</sup> to 5 <sup>th</sup> March, 2008, at Cardamom planters Association college, Bodinayakanur
International Conference on Educational Leadership Preparation and Practices in India	UGC	Nine Leadership characteristics	11 <sup>th</sup> to 13 <sup>th</sup> June, 2009, by Sri Ramakrishna Mission Vidyalaya College of Education, Coimbatore in collaboration with Howard University.
International Conference on Approaches and Strategies for Generation Y learners		Assessing the Effectiveness of Computer Adaptive Test in identifying the students’ Potentials.	21 <sup>st</sup> to 23 <sup>rd</sup> June, 2013, by Tamil Nadu Teachers Education University, Chennai, Tamil Nadu, India.

International Conference on Social Exclusion of Women (ICSEIW-2013)		Effectiveness of Computerized Adaptive Test (CAT) on Achievement and Learning Rate in Physics with Special reference to Gender	20 <sup>th</sup> & 21 <sup>th</sup> August 2013, by Alagappa University, Karaikudi & Mother Teresa University, Kodaikanal.
International conference on enhancing excellence, equity and efficiency in higher education (EEEEHE-2014)		Aptitude as a predictor of students performance in CAT in Physics concepts	7 <sup>th</sup> & 8 <sup>th</sup> NOV 2014, by the Tamil Nadu Open University, Chennai
International Seminar On "Blended Learning; Opportunities and Challenges in Higher Education"(BLOCHE-2014)	IQAC	Teacher's Role in Implementing Computer Adaptive testing	13 <sup>th</sup> & 14 <sup>th</sup> , Dec-2014 by IQAC-Vysya College, Salem & Dept. Of Edu, Madurai Kamaraj University, Madurai
International Conference on "Effect of Technology in Globalization of Education"(EDTGE-2015)		Integration of Technology in Classrooms to Promote 21 <sup>st</sup> century Learning Skills	22 <sup>nd</sup> & 23 <sup>rd</sup> Jan-2015 by Terasa College of Education, Pudukottai
International Conference on "Innovations and Initiatives in Teacher Education"(ITE-2015)		Impact of Computerized Adaptive Test (CAT) in Rural Female Education	24 <sup>th</sup> & 25 <sup>th</sup> Jan-2015 by Kongunadu College Of education, Trichy
International Conference on Women Empowerment & Social Sciences		Eliminate Gender Disparity in Education Through Technology Integration in Curriculum for Empowering Rural Women	5 <sup>th</sup> -7 <sup>th</sup> March, 2015 by The American College, Madurai & International Multidisciplinary Research Foundation
International Conference on Rethinking Teaching in the 21 <sup>st</sup> Century	IQAC	Interactive Learning Environment In Classroom Increases Aptitude and Develops Higher Order Thinking Skills	9 <sup>th</sup> & 10 <sup>th</sup> March, 2015 by IQAC, Muslim College of Education, Kanyakumari
XX IDEA Annual Conference on Empowering INDIA Through Distance learning: Breaking Down Barriers, Building partnership and Delivering Opportunities	IDEA	CAT Practices in ODL, Creates Quality Self centric Interactive Learning Environment	April 23, 24 & 25, 2015 by Tamil Nadu Open University, Chennai & Indian Distance Education Association
International conference on Emerging Trends in Multidisciplinary Research		Concept Attainment Through Computer Adaptive Testing (CAT) can overcome the Barriers like locality of the Institution	organized by The American College, Madurai during 27 <sup>th</sup> & 28 <sup>th</sup> December 2017
International Symposium on" Modeling of Crystal Growth Processes and Devices	IOCG	Enhanced Sensitivity Of Cu-Mn Ferrite Gas Sensor By Incorporating SnO <sub>2</sub> Nanocomposites Towards Carbon Dioxide And Oxygen	at SSN College, Chennai during 26-28 February, 2019
International Symposium on" Modeling of Crystal Growth Processes and Devices	IOCG	Synthesis of Perfect CuSnZr Cubic Thin film by Simple Successive Ionic layer Adsorption and Reduction Method	at SSN College, Chennai during 26-28 February, 2019
International Conference on Physics of Advanced Materials and Molecules		Synthesis and Characterization of amino acid doped KBR crystals by slow evaporation technique	at The Dr. Ambedkar Government Arts College, Vysarbadi during 30 <sup>th</sup> and 31 <sup>st</sup> January 2020

### ***Papers presented in National seminars /workshops***

National conference on Combating Evils of AIDS and Drug Addiction Using Student Power	UGC	Educator's role in prevention of HIV/AIDS	14 <sup>th</sup> to 16 <sup>th</sup> Feb, 2008, at Annammal College of Education, Thoothukudi
National Seminar on Innovative Practices in Elementary Education		The Role of Multimedia in Elementary Education	16 <sup>th</sup> to 17 <sup>th</sup> Dec, 2008, by Directorate of Teacher Education Research and Training, Kallupatti
National Seminar on Promoting Environmental Values among the Teacher Trainees at Secondary Level	UGC	Importance of Training Teachers of Secondary Level on Environmental Value Education	22 <sup>nd</sup> to 23 <sup>rd</sup> Oct, 2009, by DDE & School of Education, Alagappa University, Karaikudi
National Seminar on Integration of Innovative Technology in Teacher Education		Test Mode CAI as CAT for Quality Evaluation and Time Reduction, in Innovative Technology in Education	10 <sup>th</sup> to 11 <sup>th</sup> Jan, 2011, by Manonmanium Sundaranar University & Ponjesly college of education
National Seminar on Emotional Intelligence in Teaching Learning Process		Introducing Emotional Intelligence in Schools	5 <sup>th</sup> Feb. 2011, by NMS Vellaichamy Nadar College of Education, Madurai

National Conference on Teacher Education Programme for Emerging Needs		Reforms in Evaluation Strategy is the need for quality enhancement in teacher education	17th & 18th March 2011, by College Of Education, Alagappa University, Karaikudi
National Conference on Strategies of Quality initiatives, Enhancement and sustenance in Higher Education on	IQAC	Interactive Testing Environment for 21st Century Digital learners Develops Conceptual Clarity and Higher Order Thinking Skills in Physics Learning	21th & 22nd February, 2017 by IQAC, The American College, Madurai
XXIV National Seminar on Crystal growth and Applications (NSCGA-2020),		Effects Of Amino Acids Doped With Kcl Crystal By Slow Evaporation Techniques	organized by the department of Physics, Periyar University, Tamil Nadu, during 3rd -5th , February,2020
National Conference on Quality Enhancement and Sustenance in Higher Education	IQAC	Best Practices in Institutions, While On-Line Pedagogic approaches are included in the present Curriculum Design	on 6th March, organized by IQAC, The American College , Madurai
National Conference on Energy Science and Technology (NCEST-2020)		Preparation and Characterization of Zn doped MnO <sub>2</sub> nano particles for studying the electro chemical capacitor behaviour	4th March 2020 organized by the Department of Energy Science, Periyar University, Tamil Nadu

#### ***Papers presented in State level seminars /workshops***

State level Seminar on Instructional Design: Application of Technology in Classroom Teaching		Computer Adaptive Testing for Evaluation and Time Reduction	24th to 26th Feb. 2011, at Crescent College Of Education For Women, Madurai
Energy Fest – 2017		Airpollution induced metabolic changes in leaves	organised by School of Energy, Madurai Kamaraj University on 28/03/2017.

#### **Lectures / Talks given:**

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

<b>Name of the Seminar/Conference/Symposia Workshop etc.,</b>	<b>Name of the Sponsoring Agency</b>	<b>Title of paper</b>	<b>Institution, Place and Date</b>
Triple workshop		Usage of OHP in classroom teaching for effective instruction	held in CSI College of education, Madurai on 12.09.2009
Seminar on Women's equality		Women's rights in Indian society	conducted by Yadava College of education, Madurai on 01.03.2011
Guest lecture		NAAC Awareness and Submission Related Instructions to the Educators	in Balaji College of Education, Madurai

#### **Served as experts, chairpersons or resource persons**

<b>Name of the Seminar/Conference/Symposia Workshop etc.,</b>	<b>Name of the Sponsoring Agency</b>	<b>Institution, Place and Date</b>
Served as one of the judges in the District Level School Science Exhibition-2014	RMSA	Organized by the Education Department & RMSA on 15-11-2014, held at O.C.P.M Girls .Hr. Sec. School, Madurai.
One day Seminar On" Physics For Innovation"		organized by the department of Physics, Manonmaniam Sundaranar University Constituent College, Kanyakumari on 25.01.2020
Acted as an Organizing Committee Member and the Resource person in the " Innovation in Science Pursuit for Inspired	DST	Organized by the American college, Madurai, during 07-2-2018 to 11-2-2018

**Research activities of the student under guide ship**

Sl.No	Title	M. Phil / M.Sc/ B.Sc	Please tick if it is collaborative
1.	Green Synthesis of Carbon Nano Particles by Using Honey	<b>M.Sc</b>	
2	Characteristic Study of Co-Doped metal Oxide Semiconductors	<b>M.Sc</b>	
3	Low Temperature chemical bath deposition of ZnO : Al Thin Films For Morphological Studies	<b>M.Sc</b>	
4	Power Generation Using Piezoelectric Materials	<b>M.Sc</b>	
5	Synthesis of Zn doped MnO <sub>2</sub> nano particles for studying the electro chemical capacitor behaviour	<b>M.Sc</b>	
6	Growth of single crystal using CuSO <sub>4</sub> and study the refractive index of copper sulphate pentahydrate for various concentrations	<b>M.Sc</b>	
7	Characteristic study of Bio-oil produced from Waste Plastic for reduction of Environmental pollution	<b>M.Sc</b>	
8	Air Pollution Induced Metabolic Changes in Leaves.	<b>B.Sc</b>	
9	Characterisation of Titanium Oxide Thin Film	<b>B.Sc</b>	
10	Study and Design of Non-Invasive Blood Glucometer	<b>B.Sc</b>	
11	Designing a Solar tracker using Arduino	<b>B.Sc</b>	
12	Hall Effect Sensors And Its Applications	<b>B.Sc</b>	
13	Audio signal Transformation Using Various Spectrum	<b>B.Sc</b>	

**Overseas Academic Visits:**

1. Visited **Singapore** for presenting a paper titled “ Concept Attainment Through Computer Adaptive Testing(CAT)can overcome the Barriers like locality of the Institution at the “International conference on Emerging Trends in Multidisciplinary Research” organized by The American College during 27<sup>th</sup> & 28<sup>th</sup> December 2017, It **is funded by UGC under Travel Grant Scheme**

**Extension activities:****Other Activities / Academic Credentials:**

1. Acted as an external Examiner for Model Practical Examination on 25-04-2012,in Thiyagi Dharmakkan Amirtham College of Education
2. Served as one of the judges in the District Level School Science Exhibition-2014, organized by the Education Department & RMSA on 15-11-2014, held at O.C.P.M Girls .Hr. Sec. School, Madurai.
3. Interview panel member at the NPR College of Arts and Science on 6-5- 2018, Madurai
4. Acted as an Organizing Committee Member in the “My Vision- Corruption free India” programme organized by NLC Tamil Nadu Power Limited, Tuticorin and The American college, Madurai on 25-10-2017

**Orientation Program / Refresher Course:**

<b>Date</b>	<b>Programme</b>	<b>Remarks</b>
4-16/11/19	Faculty Development Programme on "Synthesis and Characterization of Nanomaterials" Organized by Centre for Nano science and Technology, JNTU, Hyderabad	13 Days
14-23/05/20	Indian Summer School on Crystal Growth (ISSC-2020G) Organized by IACG in Association with SSN Research Centre, Chennai	10 days
22-28/06/20	National Level <b>Faculty Development Programme</b> on "Developing Skills for Teaching Learning and Wellbeing" Organized by K.S.R. College of Education	07 days
10-14/07/20	<b>Faculty Development Programme</b> on "Smart materials and Sensors, Current updates and Future Perspectives" Organized by Stella Mary's College of Engineering	05 days
13-17/07/20	On line programme on " Skill development using Learning Assistant Tools" Organized by PG and Research department of Physics of Jamal Mohamed College under DBT Star college Scheme	05 days

**Participation in Seminars /workshops:**

<b>Date</b>	<b>Participation</b>
21.01.09	One-day Regional workshop on Application of information and communication technology for Teacher educators in Physical sciences conducted by <b>Centre for educational Research –MKU</b>
21.11.09	Regional seminar on Technology for education conducted by <b>Crescent college of education</b>
19.03.10	Workshop on Constructive based learning Approach conducted by <b>Alagappa University, Karaikudi</b>
15 & 16.06.10	Orientation course on National Curriculum Framework for Educational Research- MKU
11.11.10	Seminar on National education day conducted by <b>Madurai Kamaraj University</b>
20 - 22.01.11	Workshop on 'Web based learning' conducted by <b>CSI College of education</b>
12 - 14.09.12	National Seminar on New Materials Research and Nano technology held at <b>Government Arts College, Udagamandalam</b>
19-11- 2014	One day work shop on Materials Characterization Techniques: AFM& XRD, on , Sponsered by DST-PURSE, <b>Organized by School of Physics, Madurai Kamaraj University</b>
20-1- 2015	International Workshop On Strongly Correlated Materials(IWSCM-15), On Organized by <b>Centre for High Pressure Research, School of Physics, Bharathidasan University, Tiruchirappalli</b>

**Webinars Participated**

15-5-2020	International level Covid-19 Pandemic webinar on Functional Materials for Electrochemical Sensors and Energy Storage Devices by <b>Department of Physics, Thiagarajar College, Madurai</b>
27/5/20	Webinar Organized by Ladies Club, <b>The American College, Madurai</b>
28-30/05/20	Three Days Workshop on "Data Analysis on SPSS" by <b>Department of Mathematics, The American College</b>
30/05/20	International Webinar On "Thin-Film Technologies In Our Daily Life" by <b>PG and Research Department of Physics, Nadar Mahajana Sangam S. Vellaichamy Nadar College</b>
9/06/20	Webinar on " Women at Risk Blossom" by <b>Ladies club of The American College</b>
12/06/20	Induction Training Programme for National Service Scheme Programme officers on handling the Covid-19 Era by <b>NSS of The American College</b>
24/06/20	Webinar on "Electro Analytical Technique" by <b>American college Central Instrumentation centre (ACCIC)</b>

19/06/20	One day International Webinar on “Recent Trends in Advanced Material Science” by <b>The American College, Madurai</b>
07/07/20	Webinar on “Spectroscopic Techniques-I” by <b>American college Central Instrumentation centre (ACCIC)</b>
09/07/20	Webinar on “ Analytical Techniques” by <b>American college Central Instrumentation centre (ACCIC)</b>
10&11/06./2020	A Two - Day National Level E-Workshop on”Understanding OBS Studio & Streamyard for E-Content Creation and Live Streaming” organized by <b>Dr.M.G.R Educational And Research Institute,Chennai</b>

***Training undergone***

<b>Date</b>	<b>Programme</b>	<b>Remarks</b>
16- 21.07.07	X-elerated Professional Development for Integration of Technology in Teacher Education (XPDITTE) & Intel Tech Essential Course (Master Trainer’s course)	6 days
27- 06.02.10	Data Processing in Social Sciences Research	12 days
02 - 05.05.18	“Training Programme on Academic Leadership” Organized by Centre of Academic Leadership and Education Management, Aligarh Muslim University, Aligarh at Crescent College of Education, Madurai	4 days
23 - 26.10.18	“Faculty Training Workshop” Organized by the United Board at St. Aloysius College, Jabalpur	4 days