

## Department of Applied Mathematics

### Research Activity Report (Jan 2018- June 2018)

#### 1) Research activities of the faculty members:

Number of faculty in the Department : 16  
Number of faculty with Ph D qualification : 12  
Number of faculty pursuing Ph D : 02

#### A). Papers published by the faculty members in National and International Journals:

S. No.	Name of Faculty	Title of the paper	Name of the Journal	Date
1	Subbu Alias Suba and Muthucumaraswamy.R	Soret Effect, Rotation Effect and MHD Effect on an impulsively started isothermal semi-infinite vertical plate	International Journal of Pure and Applied Mathematics	Jan 2018
2	Subbu Alias Suba and Muthucumaraswamy.R	Radiative MHD Flow along a Semi-infinite Vertical Plate with Hall Current, Chemical Reaction and Uniform Mass Flux in a Rotating System	TAGA Journal	Mar 2018
3	K. Vijayalakshmi, R. Umadevi, R. Muthucumaraswamy R.	Oscillating plate in nanofluid with uniform heat and mass flux under the effect of MHD radiation and chemical reaction is analysed by Runge-Kutta Method	TAGA Journal	Mar 2018
4	Vijayalakshmi AR, Selva Jayanthi M	Implicit Scheme Solution of Unsteady MHD Flow	Appl. Math. Inform. Sci.	Mar 2018
5	S. Prabhu, M. Arulperumjothi, G. Murugan, V.M. Dhinesh, J. Praveen Kumar	On Certain Counting Polynomial of Titanium Dioxide Nanotubes	Nanoscience & Nanotechnology-Asia	March 2018

6	S. Prabhu, A.K. Arulmozhi, M. Arulperumjothi	On Power Domination in Certain Chemical Graphs	International Journal of Pure and Applied Mathematics	Jan 2018
7.	S. Prabhu, G. Murugan, Natarajan Muthuraman	On Degree-Distance Index of Hexagonal Network	Int. J. Adv. Res. Basic Engg. Sci. and Tech.	March 2018
8.	Micheal Arockiaraj, Jia-Bao Liu, S. Prabhu, M. Arulperumjothi	On the Zagreb and Wiener polarity indices of $C_3$ -free chemical nanostructures	Utilitas Mathematica	March 2018
9.	N Ramalingam, S Karthikeyan, V Swaminathan, S Prabhu	Star Domination and Star Irredundance in Graphs	Utilitas Mathematica	May 2018

B). Papers presented by the faculty members in National and International conferences/ symposiums/ workshops:

S. No.	Name of Faculty	Title of the paper	Name of the Conference/ symposium/ workshop	National/ International	Date
1	Subbu Alias Suba and Muthucumar aswamy.R	Computational Manipulation of a radiative MHD flow with Hall current and chemical reaction in the presence of rotating fluid	National Conference on Mathematical Techniques and its Application	National	2018

C). National and International Conferences / symposiums / workshops attended by the Faculty members:

S. No.	Name of Faculty	Name of the Conference/ symposium/ workshop	Place	International / National	Date
1	Dr. A.R. Vijayalakshmi	STC on Nonlinear PDE: Theory and Numerics	IIT M	National	22 – 27 Jan 2018

2	Ms. Suba	Outreach Programme	National College, Trichy	National	25 – 28 Jan 2018
3	Dr.R.Umadevi	Workshop on Fluid Dynamics and its Applications	Easwari Engg. College, Chennai	National	12 <sup>th</sup> April 2018
4	Mrs. K.Vijayalakshmi				
5	Dr S Prabhu	TEW on Algebra, Analysis and Topology of p-adic Numbers	IMSc	National	21-26, May 2018

**2) Departmental research activities:**

A). Symposium, Conferences, Workshop and Guest lecturers Conducted: Nil

S. No.	Name of the Event	Place	Period	Funding Agency	National/ International	Convener and Faculty In charge
-	-	-	-	-	-	-

B) Ongoing funded projects in the in the Department: Nil

S. No.	Name of the Project	Funding Agency	Period & Amount Sanctioned	Coordinators	Status of the project
-	-	-	-	-	-

C). Projects submitted to Funding Agencies by the Department:

S. No.	Name of the Project	Funding Agency	Period & Amount	Coordinators
1	Numerical Simulation of Hall Effects on Moving Vertical Plate with Heat and Mass Transfer	NBHM, DAE	22,40,160	Dr.R.Muthucumaraswamy Dr.A.R.Vijayalakshmi
2	Investigation of Landmarks in Interconnection Networks Using Parallel and Distributed Computing	NBHM, DAE	12,66,000	Dr.S.Prabhu
3	A Study on Phasor Measurement Unit (PMU) Placement Problem	RSOP, CPRI	2,53,000	Dr.S.Prabhu

D). Research centre status of the department: Yes

**3) Student Research Activities:**

1) A). List of projects carried out by the students in the department as in house and Industrial project: **Nil**

S. No.	Name of Student	Title of the Project	Inherent project maker	In house	Industry
-	-	-	-	-	-

B). Research Publications by students in National and International Journal:

S. No.	Name of Student	Title of the paper	Journal Name	Date
1	S. Prabhu, G. Murugan, <b>Natarajan Muthuraman</b>	On Degree-Distance Index of Hexagonal Network	Int. J. Adv. Res. Basic Engg. Sci. and Tech.	March 2018
2	S. Prabhu, M.Arulperumjothi, G. Murugan, V.M. Dhinesh, J. Praveen Kumar	On Certain Counting Polynomial of Titanium Dioxide Nanotubes	Nanoscience & Nanotechnology-Asia	March 2018

C). Research Presentations by students in National and International Conferences/ symposiums/ workshops: **Nil**

S. No.	Name of Student	Title of the paper	Name of the Conference/ symposium/ workshop	National/ International	Venue	Date
-	-	-	-	-	-	-

D) National and International Conferences/ symposiums/ workshops attended by the students: **Nil**

S. No.	Name of Student	Name of the Conferences/ symposiums/ workshops	National/ International	Venue	Date
-	-	-	-	-	-

4) **Sponsorship details of faculty and students:**

I) **Sponsorship for faculty members:**

A) Faculty sponsored for presentation in National Conferences/ symposiums/ workshops: **Nil**

S. No	Name of the Faculty	Date	Title of the Paper	Name of the Conferences/ symposiums/ workshops	Venue	Sponsorship Amount(Rs.)
-	-	-	-	-	-	-

B) Faculty sponsored for presentation in International Conferences/ symposiums/ workshops: **Nil**

S.No	Name of the Faculty	Date	Title of the Paper	Name of the Conferences/ symposiums/ workshops	Venue	Sponsorship Amount(Rs.)
-	-	-	-	-	-	-

C) Faculty sponsored for attending national Conferences/ symposiums/ workshops: **Nil**

S. No	Name of the Faculty	Date	Name of the Conference/ symposium/ workshop	Venue	Sponsorship Amount(Rs.)
-	-	-	-	-	-

## II) Sponsorship for Students: Nil

A) Students sponsored for presentation in National Conferences/ symposiums/ workshops:

S.No	Name of the Faculty	Date	Title of the paper	Name of the Conference/ symposium/ workshop	Venue	Sponsorship Amount(Rs.)
-	-	-	-	-	-	-

B). Students sponsored for presentation in International Conferences/ symposiums/ workshops:

S.No	Name of the Faculty	Date	Title of the paper	Name of the Conference/ symposium/ workshop	Venue	Sponsorship Amount(Rs.)
-	-	-	-	-	-	-

C). Students sponsored for attending national Conferences/ symposiums/ workshops:

S.No	Name of the Faculty	Date	Name of the Conference/ symposium/ workshop	Venue	Sponsorship Amount(Rs.)
-	-	-	-	-	-

### 5) Research cell(s) /area(s) of research in the department:

Computational Fluid Dynamics  
 Complex Analysis  
 Algebra  
 Fuzzy Algebra  
 Stochastic Process  
 Graph Theory and Parallel Computing  
 Differential Equations

### 6) Consultancy work in the department: Nil

### 7) Patent information: Nil