

**P.M.GOVERNMENT COLLEGE, CHALAKUDY**  
**NATIONAL WORKSHOP ON “MATH COMPUTING”**  
**26 – 27 OCTOBER 2018**

**Sponsored by the Directorate of Collegiate Education and Organized by the  
Department of Mathematics and Computer Science**

**REPORT OF THE WORKSHOP “MATH COMPUTING” ON 26-27 OCTOBER 2018**

Preparation for the conduct of the two day national workshop on “MATH COMPUTING” organized by the Department of Mathematics and the Department of Computer Science and Sponsored by the Directorate of Collegiate Education, Thiruvananthapuram on OCTOBER 26<sup>th</sup> & 27<sup>th</sup>, 2018 had began a month early. Work related to the printing of brochures and banner was completed by 9<sup>th</sup> October 2018. Around 60 brochures and 40 banners were printed. Brochures were sent to around 55 Colleges. Since we had to use cloth for the banner, expenses incurred were a little more than we expected. Clerical work related to the conduct of the workshop was done by Ms. Sunija, Senior Clerk, of this college. Diesel to run the generator in case of an emergency was bought by Sri. Antony, Office Attendant of this college. The Software for the programme was installed by Ms. Jwala, System Administrator, infibnet lab of this college. Who was of great help since the entire workshop was conducted in the computer lab. All participants were given necessary stationary items – pen, file, notebook and copy of the syllabus.

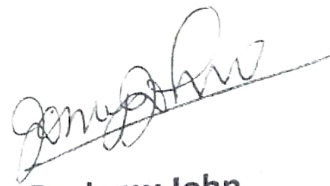
The Inaugural session of the two day National workshop commenced with a prayer on October 26<sup>th</sup> 2018 at 9.30 am. In the absence of the Principal Dr. Manikandan Nair, the Vice-Principal, Dr. Sreerexha N presided over the function. Dr. G N Prakash , Head of the Department, welcomed the gathering. Dr. K Vishnu Namboothiri, Assistant Professor, Government College, Ambalappuzha, inaugurated the programme. Mr. Krishnadas K, Assistant Professor , Co- ordinator of the National wokshop delivered vote of thanks.

The morning session commenced at 10.00 am immediately after the inauguration. Both segments of the forenoon session was handled by Dr K Vishnu Namboothiri, Assistant Professor, Government College, Ambalappuzha about the topic Python Programming. The afternoon session was handled by Dr. Noufal A, Assistant Professor, CUSAT, Cochin about the topic Doing Math with Python. The classes on the first day (26<sup>th</sup> October 2018) come to an end at 4.50 pm.

The four sessions of the second day (27<sup>th</sup> October 2018) were handled by Dr. P S Srinivasan, Assistant Professor, Bharathidasan University, Tiruchirappalli about the topic Latex. The sessions began at 9.30 am and end at 4.40 pm. The Valedictory session commenced at 4.45 pm. The feed backs were collected from the participants and all stated that the workshop was enriching. The certificates were distributed to the participants and the workshop was officially wound up at 5.00 pm.

Refreshments including breakfast, lunch, tea and snacks in the forenoon and afternoon sessions were provided to the resource persons and forty participants on both days. The workshop was helpful to impact knowledge and awareness about Python Programming in Python and documentation in Latex among the participants. We express our sincere gratitude to the Directorate of Collegiate Education for providing sufficient fund for the fruitful commencement of the workshop.

Chalaky  
02 / 11 / 2018



**Dr. Jomy John**  
**(Joint Co-ordinator)**

**Dr. JOMY JOHN**  
Assistant Professor  
Dept. of Computer Science  
Government College, Chalaky



**Krishnadas K**  
**(Co-ordinator)**

**Krishnadas. K.**  
Assistant Professor of Mathematics  
Department of Mathematics,  
P.M. Govt. College, Pottu, Chalaky - 680722

## Organizing Committee

Patron  
Dr. Manikantam Nair V  
Principal  
Dr. G. N. Prakash  
Head, Department of  
Mathematics  
Sri. Krishnadas K.  
Assistant Professor  
Dr. Jomy John  
Head, Department of  
Computer Science  
Members  
Smt. Jeepamol J Palathingal  
Sri. Albert Antony T  
Smt. Magi P. M.  
Dr. Sathian M. K.  
Smt. Jisny M. J.  
Kum. Nikhitha P. B.  
Sri. Jinto E. J.  
Kum. Sruthy K Velayudhan

## Programme

### 26th October 2018 (Friday)

Registration 8.45 am to 9.30 am  
Inauguration 9.30 am to 10.00 am  
Session 1  
Speaker 10.00 am to 11.30 am  
Topic Dr. K. Vishnu Namboothiri  
Basics of Python Programming  
Tea Break 11.30 am to 11.40 am  
Session 2  
Speaker 11.40 am to 1.10 pm  
Topic Dr. K. Vishnu Namboothiri  
Doing Math with Python  
Lunch Break 1.10 pm to 1.40 pm

Session 3  
Speaker 1.40 pm to 3.10 pm  
Topic Dr. Noufal A  
Doing Math with Python  
continuation

Tea Break 3.10 pm to 3.20 pm

Session 4  
Speaker 3.20 pm to 4.50 pm  
Topic Dr. Noufal A  
Python : Plotting

### 27th October 2018 (Saturday)

Session 5  
Speaker 9.30 am to 11.00 am  
Topic Dr. P. S. Sreenivasan  
Preparing LaTeX Documents:  
A brief introduction

Tea Break 11.00 am to 11.15 am

Session 6  
Speaker 11.15 am to 12.45 pm  
Topic Dr. P. S. Sreenivasan  
Various necessary components  
to include in an article

Lunch Break 12.45 pm to 1.30 pm

Session 7  
Speaker 1.30 pm to 3.00 pm  
Topic Dr. P. S. Sreenivasan  
Layout of an article and a  
question paper

Tea Break 3.00 pm to 3.10 pm

Session 8  
Speaker 3.10 pm to 4.40 pm  
Topic Dr. P. S. Sreenivasan  
Mathematics typesetting made  
easy & various math packages

Valedictory Session - 4.45 pm to 5.00 pm

## National Workshop on Math Computing October 26-27, 2018

Organized by



The Department of Mathematics  
and  
The Department of Computer  
Science

Panampilly Memorial

Government College, Chalakudy  
Thrissur, Kerala

Sponsored by

Directorate of Collegiate Education,  
Government of Kerala

The Department of Mathematics and Computer Science, Panampilly Memorial Government College, Chalakudy are conducting a two day National Workshop on Math Computing on 26<sup>th</sup> and 27<sup>th</sup> October, 2018 with the support of the Directorate of Collegiate Education, Government of Kerala. We solicit the esteemed presence and active participation of students and faculty from your institution.

With warm regards,

Dr. Manikantan Nair V.  
Principal

Sri. Krishnadas K  
Co-ordinator

Dr. Jomy John  
Joint Co-ordinator

### About the College

Panampilly Memorial Government College, Chalakudy, established in 1975, is wholly owned and managed by the Government of Kerala. It marked the fulfilment of a long cherished dream of the people of this semi-urban highland geographical entity. The college is situated at Potta, 6 km away from Chalakudy town. It is named after the late Sri. Panampilly Govinda Menon, prominent National leader and one of the foremost architects of modern Kerala.

### About the Departments

The department of Mathematics was established as a UG department in 1998. In 2012, it was upgraded with PG in Mathematics. We frequently conduct national level seminars/workshops. The department has been organising a monthly lecture series titled MATHLET (Mathematical Analysis

Through Hearty Lectures by Eminent Teachers) for PG students from August 2016.

The department of Computer Science was established in 1998, offering complementary course in Computer Science for undergraduate programmes and has been co-operating with activities to enrich the fraternity.

### About the Workshop

The Departments of Mathematics and Computer Science are conducting a two day national workshop on  $\LaTeX$  and Python for the benefit of the academic community. The workshop aims to enhance the documentation skills in  $\LaTeX$  and programming skills in Python.

$\LaTeX$ , a free open software, is an extremely powerful markup language for creating structured documents. It is a standard writing tool for documents involving a large number of mathematical equations making it efficient for writing research publications. The workshop will explore the basics of creating simple documents as well as advanced topics including plotting of graphs, bibliography and beamer.

Python is portable, flexible, user-friendly general purpose programming language for developing complex scientific and numeric applications. The navigation of the workshop begins with core concepts of Python giving emphasis to NumPy and SciPy. The workshop is scheduled to have a significant amount of hands-on-hours of practice of all important concepts of Python and  $\LaTeX$ .

### Who can participate?

The participants will be benefited more if they have basic knowledge of some programming language. They preferably should know at least

what  $\LaTeX$  is useful for. The participants are expected to bring a (preferably Linux OS installed) laptop preloaded with Python 3.x and  $\LaTeX$ .

### Registration

There will be no registration fee. Those who wish to participate in the National workshop are requested to contact the Co-ordinator, on or before 22<sup>nd</sup> October 2018. The department will provide local hospitality to all the registered participants. All the participants would be eligible for duty leave as per order no. P1/41437/04/COLL. EDN. dated 20.11.2004

### Contact

Sri. Krishnadas K. (Mob. No. 9447411354)

Dr. Jomy John (Mob. No: 9446438725)  
email: pmgcmaths@gmail.com

### Invited Speakers

Dr. P. S. Srinivasan  
Department of Mathematics  
Bharathidasan University  
Tiruchirappalli

Dr. K. Vishnu Namboothiri  
Department of Mathematics  
Government College, Ambalappuzha  
Alappuzha

Dr. Noufal A.  
Department of Mathematics  
Cochin University of Science and Technology  
Cochin, Kerala

PANAMPILLY MEMORIAL  
GOVERNMENT COLLEGE, CHALAKUDY

Potta P. O., Thrissur - 680 722, Kerala, India

(Affiliated to Calicut University)

National Workshop on

Math Computing

*Cancelled*

*Certificate*

This is to certify that .....

..... has attended the National Workshop on

“Math Computing” conducted on 26<sup>th</sup> and 27<sup>th</sup> October 2018 by the Department of Mathematics and Computer Science, Panampilly Memorial Government College, Chalakudy and sponsored by the Directorate of Collegiate Education, Government of Kerala, Thiruvananthapuram.

Sri. Krishnadas K.  
Co-ordinator

Dr. Jomy John  
Joint Co-ordinator



Dr. Manikantan Nair V.  
Principal



Department of Mathematics,  
Panampilly Memorial Government College, Chalakudy,  
National Workshop on

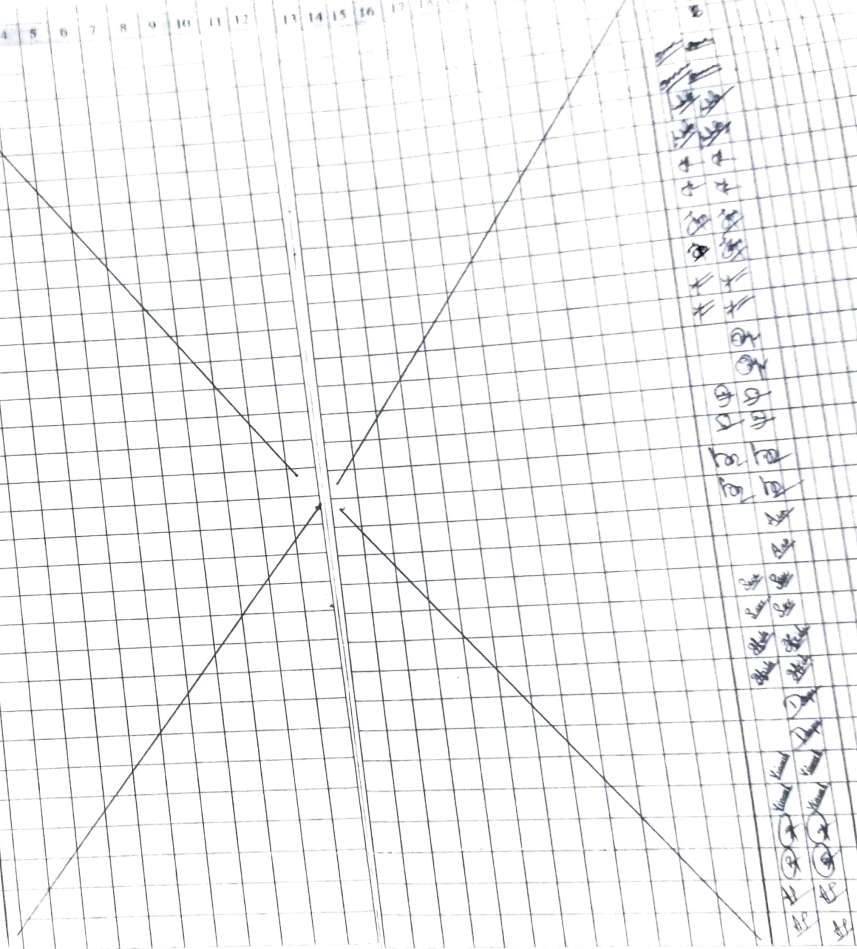
1	Dr K. Vishnu Namboothiri	M
2	Assistant Professor West College, Anubalappuzha	E
3	Dr. Nandini A	M
4	Assistant Professor CUSAT	E
5	Ashwin Mathew	M
6	Assistant Professor St Thomas College, Thrissur	E
7	Bino Sebastian	M
8	Assistant Professor M.A. College, Kothamangalam	E
9	S. Sreevarghese	M
10	Assistant Professor K.K.T. West College, Pulat	E
11	Anji S. Mathan	M
12	Assistant Professor L.P. College, Sreevarghese	E
13	Rajmakumar K.A.	M
14	Assistant Professor PMGC, Chalakudy	E
15	Jisha Jesu C	M
16	Vennala College, Thrissur	E
17	Jemba V.U.	M
18	Vennala College, Thrissur	E
19	Noothu T.S.	M
20	St Thomas College, Thrissur	E
21	Kozhickal S	M
22	St Thomas College, Thrissur	E
23	Jeepramol J. Palathingal	M
24	Assistant Professor PMGC, Chalakudy	E
25	Dr G.N. Prakash	M
26	Assistant Professor PMGC, Chalakudy	E
27	Albert Antony T	M
28	Assistant Professor PMGC, Chalakudy	E
29	Magr P.M.	M
30	Assistant Professor PMGC, Chalakudy	E
31	Sathian M.K.	M
32	Assistant Professor PMGC, Chalakudy	E

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Sl / No. NAME DATE

Sl / No.	NAME	DATE
33	De P S Srinivasan Assistant Professor Bharathidasan University	M
34	Shinto M. Kurikose Assistant Professor P.M.G. College, Chalakudy	M
35	Evedharan P N Assistant Professor P.M.G. College, Chalakudy	M
36	De Tejomon N A Associate Professor P.M.G. College, Chalakudy	M
37	Kadambari P G Assistant Professor P.M.G. College, Chalakudy	M
38	Fousiya RA Assistant Professor P.M.G. College, Chalakudy	M
39	De Deepa K S Assistant Professor P.M.G. College, Chalakudy	M
40	De Leena Samuel Assistant Professor P.M.G. College, Chalakudy	M
41	Siea S Assistant Professor P.M.G. College, Chalakudy	M
42	Dr. AicBana V.P Assistant Professor MNSS College, Kattiyam	M
43	Sreedevi S L Research Scholar University of Kerala	M
44	Fidha Jabeen KTP MPhil Scholar University of Kerala	M
45	Deepa S Assistant Professor Sree Krishna College, Guruvayur	M
46	Vinodh Kumar Assistant Professor LBS College of Engineering, Kankamp	M
47	Girish M C Assistant Professor P.M.G. College, Chalakudy	M
48	Anjali Prakash Assistant Professor P.M.G. College, Chalakudy	M



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# National Workshop On “ MATH COMPUTING ”

26 - 27 October 2018

Organised by

Department of Mathematics and Computer Science, PMG College, Chalakudy

Sponsored by

The Directorate of Collegiate Education , Government of Kerala, Thiruvananthapuram

## Syllabus for the Workshop

### Python (3.x)

Most of the basic tools in python will be introduced. The 3.x version of Python will be used which is slightly different from 2.x versions in features.

#### 1. Basics

Basic computation using in the Python shell, writing simple programs using variables, input and output operations, accepting various type of inputs. saving the program files and running it via IDE, lists, sets, slicing of lists, strings, operations on lists, operations on strings like sorting, reversing, programs demonstrating use of lists and sets, dictionaries, using library functions especially standard math functions, cmath library, constants available in the library like pi, e

#### 2. Advanced

Conditional statements if-else-else if, while, for loops. The range keyword, programs like finding arithmetic mean, finding gcd using direct methods and using Euclidean algorithm, handling matrices using numpy module, Newton-Raphson method, Bisection method, Plotting of mathematical functions using matplotlib module.

### LaTeX

Typesetting an article especially question papers with lots of math content will be the theme of these sessions. The topics intended are mainly creating, compiling, and viewing a standard article file in LaTeX using some popular open source IDE, numbering the questions and subquestions using enumerate environment, the flexibility of enumerate environment, the top layout of a question paper, sectioning the question paper and continuing the numbering with the help of enumerate package, typesetting simple math expressions and complex math equations, labelling equations and referring to them, aligning text using various environments and commands like hspace, vspace.

Both these sessions are in the “hands on training” mode. The participants are expected achieve basic knowledge of the programming language Python and necessary understanding of the LaTeX software after the sessions so that they would be able to very much explore further advanced topics in their own.