

# ASTRO CLUB OF CEG - ANNUAL REPORT 2019

The Astro Club of CEG came into action officially on 18th December 2018 under the approval of Dean Prof.Dr.T.V.Geetha and Student Advisor Dr.Swamynathan. Herewith I'm attaching the annual report of our activities so far.

**STAFF ADVISOR: DR.A.SURESH BABU, ASSOCIATE PROFESSOR, DEPT. OF  
MANUFACTURING ENGINEERING**



**Event :** Open Call

**Date of event:** 02/01/2019

**Venue:** Hall No. 81 Red Building & Ground, College of Engineering, Guindy

**Number of students attended:** 42

During the Open Call, we explained about our ideas for this year and also asked for suggestions from the attendees. We also conducted an interactive quiz session for the students. We gave a take away popsockets wit our club logo to the students who attended the open call.





**Event :** Hands-On Telescope Workshop

**Date of event:** 10/01/2019

**Venue:** Hall No. 85 Red Building & Ground, College of Engineering, Guindy

**Number of students attended:** 65

**Sponsoring organisation:** Space India

**Organiser:** Astro Club of CEG

On January 10<sup>th</sup> 2019, Astro-club of CEG organised a workshop on Hands-on telescope with SPACE INDIA. The workshop was open to those who were interested in astrophysics. Mr. Neeraj Ladia explained us the different types of telescopes and how they work starting from who and how it was discovered.



The workshop started at 5PM with a theory session extending up to 6PM. Students were provided with loads of information like list of major telescopes that are active. They were even taught on how different types of telescopes were discovered and, on the principles, they work on. They were grouped in 2's and each group were given a telescope to assemble.

Once that was over at 6PM students were in the ground focusing their telescopes on the moon. They also saw the moon on reflector telescopes to see how both the images varied. Mr. Neeraj Ladia showed us the different constellations that were visible in the sky. They also saw the dying star Betelgeuse and the young star Rigel in the constellation Orion and the brightest star Sirius below it.

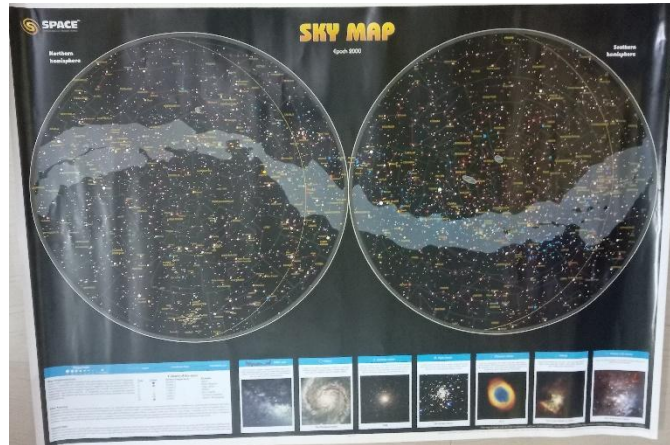


Students and others were thrilled to watch The Moon very close using 4 Dobsonian telescope. They were also asked to focus their telescopes towards Mars. Once the star gazing session was over, we were shown how craters are created on the moon with a help of a small demonstration.



After that, students went back to our room to collect our certificates to end the workshop. Students were given a small guide for amateurs guide to astronomy and an A1 sized Sky Map that can be used to observer stars and constellations.





Overall this workshop gave students a brief introduction to the history of telescopes, their types, how to handle and use them to observe the heavens of the Sky. From the feedback we came to know that the only limitation & negative they saw is 'time' and 'light pollution' in the city. Other than that the event was very well organised with prior information about date time and venue. Space India team had planned this event very well that it was a giant success and a very useful workshop.



We thank our Dean Dr. T. V. Geetha mam, Student Advisor Dr. M. Pradeep Kumar sir & Dr. S. Swamynathan and Staff Advisor Dr. A. Suresh Babu sir for giving us the permission to conduct this workshop.

We have also attached the students' details who attended the workshop with this report.

## **HANDS-ON TELESCOPE WORKSHOP STUDENTS LIST**

<b>S.NO.</b>	<b>NAME</b>	<b>BRANCH</b>	<b>YEAR</b>
1	SHIVANI RAMAKRISHNAN	ECE	1
2	ARUNA.S	ECE	1
3	AARTI.V	CSE	1
4	ABIRAMI MAHESH VIJAY	CSE	1
5	ROHIT GOPALAKRISHNAN	CSE	1
6	LEKHA SHANTHINI.R	CSE	1
7	LAKSHMI NARASIMMAN	EEE	1
8	T.S.SRINEDHI	IT	1
9	DHARANI.M	CSE	1
10	K.C.GEETHANJALI	CSE	1
11	G.PRIYADHARSHINI	ECE	1
12	J.SOWMIYA	ECE	1
13	R.SORNA MARIUM	ECE	1
14	T.K.SUBASRI	ECE	1
15	S.KEERTHI PRIYA	ECE	1
16	V.PRIYANKA	ECE	1

17	JAGATHEESWARI.M	ECE	1
18	AKSHAYA.K.V	ECE	1
19	P.SANDEEPSINGH	MATERIALS SCIENCE	1
20	SAINATH.R.A	MATERIALS SCIENCE	1
21	P.PRADEEPRAJAN	MATERIALS SCIENCE	1
22	D.ASHWIN	MATERIALS SCIENCE	1
23	JACOB BIJU	INDUSTRIAL	1
24	KIRAN KUMAR.K	MECHANICAL	1
25	S. DEEPTHI	ECE	2
26	M. SABEENA	GEO INFORMATICS	2
27	G. POOJA	GEO INFORMATICS	2
28	A. KAMALI	GEO INFORMATICS	2
29	MUTHU SHALINI.S	EEE	2
30	SAHITYA.K	INDUSTRIAL	2
31	AKSHITA ARUNKUMAR	CSE	2
32	PREMALAKSHMI.P	ECE, SAIRAM	2
33	K.K.GAYATHRI	ECE	2
34	SWADESH	CSE	2
35	ANUSHA.K	INDUSTRIAL	2
36	HARI SUDAN	ECE	2
37	MUTHUSANKARANARAYANAN.S	MINING	2
38	SANDHIYA.N	ECE	2
39	T.ABIRAMI	ECE	2
40	AJMAL SHAREEF	MECHANICAL	2
41	ARCHANA.B	ECE, SAIRAM	2
42	HARI KISHORE	ECE	2
43	KRITHVINI	APPAREL	2
44	MUTHU ANNALAKSHMI.A	IT	2
45	SATHANA.P	SAP	2
46	GOKUL KANNA	FOOD TECH	2
47	YOGA BARRATHWAJ	MECHANICAL	3
48	SAI ANIRUDH	EEE	3

49	DEEPIKA.V.S	ECE	3
50	NIVETHAA.D	ECE	3
51	SHRIKANTH.N	EEE	3
52	AMITA SHERINE	EEE	3
53	BAVYA.V	CSE	3
54	Y.RAJALAKSHMI	EEE	3
55	PREETHI.S	FOOD TECH	3
56	VASAVI.H	FOOD TECH	3
57	PADMAPRIYA.N	ECE	3
58	RANJIT KUMAR	MECHANICAL	4
59	ARAVIND YOGESH	SCHOOL	5th Std
60	GIRISH KUMAR O.B	SCHOOL	9th Std
61	YAKSHETHA.N	SCHOOL	9th Std
62	M.VISHNUVARTHANAN	PRINTING, TF	PhD
63	S.KOTHAI	PRINTING, TF	PhD
64	MARSHAL LOUIE.J	PRINTING, TF	PhD
65	PRABHAKARAN.K	SECURITY ANALYST,HCL	WORKING

## SUMMARY

YEAR	NO. OF STUDENTS
I	23
II	21
III	11
IV	1

<b>NO. OF PHD SCHOLARS</b>	3
<b>OTHERS</b>	4

**Event:** Group Discussion and Projects Discussion Session

**Date of event:** 25/01/2019

**Venue:** Hall No. 81 Red Building & Ground, College of Engineering, Guindy

**Number of students attended:** 40

Following the success of workshop, we started having group discussions as a part of our all meets to improve the knowledge in space science and astronomy. In the same meet, we discussed about starting new project proposals on observations using open telescopic data.



**Event :** Group Discussions and Video Conferencing Sessions

**Date of event:** 08/02/2019

**Venue:** Hall No. 84 Red Building & Ground, College of Engineering, Guindy

**Number of students attended:** 33

As our every meet routine, we had group discussions followed by Video Conferencing Sessions by our Alumni in the line of Space Science, Astronomy and Aerospace Engineering. The alumni include Indu Varadharajan doing PhD in Planetary Science at DLR, German Aerospace Centre, Thaswin doing Space Masters degree at Swedan and Hari Prasath doing Masters in Rocket Launchers in ISAE-SUPERO France. Students found these sessions extremely useful and wanted more of these.





**Event :** Introduction To Python Class

**Date of event:** 23/02/2019 and 24/02/2019

**Venue:** Hall No. 81 Red Building & Ground, College of Engineering, Guindy

**Number of students attended:** 25

### **Introduction:**

As the world is moving towards a more technical and technology dependent future, it has become indispensable for every student irrespective of their major to at least know one coding language. Python is gaining popularity and replacing MATLAB in many fields of science as the tool for fast prototyping and writing for research code. It is free and open source, available almost in every platform by default and is very easy to learn. Python classes were conducted for the second, third and fourth year students of CEG in order to give them a little heads up about the basics which will also be useful for learning other programming languages.



### **The Objective:**

The main motive for conducting these classes were

- to provide an insight into what Python really is and how it can be used for writing and coding stuff.
- to teach the basics that will enable the students to use Python in future for various other projects.

Students from third and final years volunteered to teach the interested students.

### **Overview:**

The classes commenced on 23/02/2019 with the introduction to Python by Bavya Varatharajan. The Python software (version 3.7) along with text editing software was distributed to the students who didn't already have those. Topics that were covered on that day include introduction to python, Conditional statements, looping and Control statements. Students were able to easily understand the concepts and had their many doubts clarified during the practical sessions that were conducted along with the theory sessions. They found it particularly easy since C programming language was taught to them earlier in their first year.



Assignments and practice problems were posted and the answers were discussed the following day.

The following day had two sessions (F.N & A.N) with the topics String manipulation, List, Tuples and Dictionaries being covered by final year students Santhosh Lakshmanan and Sivaraj. The answers and also the different methods that can be used for solving the assignment problems were discussed. The practical sessions were crucial to understand how coding works. Both the sessions were interactive and engaging and the demos kept the lecture from getting boring.

The upcoming classes will cover the remaining few topics.

### **Conclusion:**

Anything we ever learn can be retained and improved only when we practice it. This is no exception to that. The students were encouraged to practice what was taught and also to use python in every possible way to solve problems in order to get a better picture of what it is and how it is used.

## PYTHON CLASS STUDENTS LIST

S.No.	Name	Department	Year
1	Rohit V Gopalakrishnan	CSE	I
2	Vettrivelan M	ECE	I
3	Dinesh	Cse	I
4	Abirami Mahesh Vijay	CSE	I
5	Vinoth raj	Printing tech	II
6	N.R.Gobika	Printing technology	II
7	Sahitya K	Industrial	II
8	Smruthi	IST	II
9	Janani	Ece	II
10	Raghul	Mechanical	II
11	Arunprasath	Mechanical	II
12	Monica Jawahar	Information technology	II
13	Pooja G	Geo informatics	II
14	Giri Sakthi A	B.E Geo Informatics	II
15	Kavichelvan G K	Geo-Informatics	II
16	BHUPATHI K	CIVIL-GEO INFO	II
17	Anusha.K	Industrial Engineering	II
18	Darshan	ECE	II
19	Lava Sudheer Kumar bathula	ECE	II
20	Yoga Barrathwaj R M	Mechanical Engineering	III
21	S.Abinaya	BE-GEO INFORMATICS	III
22	Shakina Bi.S	B. E. Materials Science And Engineering	III
23	Dhanya. J	B.E.Materials Science and Engineering	III

24	Santhosh.P	Mech	III
25	Mohan Kumar. M	B.E.Materials Science and Engineering	III

## SUMMARY

YEAR	NO. OF STUDENTS
I	4
II	15
III	6

GENDER	NO. OF STUDENTS
Boys	14
Girls	11

We are planning to continue this class on Machine Learning and motivate the students with observation projects.

**Event :** Interactive Talk on Pulsars

**Date of event:** 08/03/2019

**Venue:** Hall No. 84 Red Building & Ground, College of Engineering, Guindy

**Number of students attended:** 15

This meet was a general informative one. We discussed about, "What are Pulsars? What are Milli second Pulsars? How do they form? How to detect a binary star? And the story of first Exoplanet discovery. Then in the end about psr b1257+12's binary companion? Te hypothesis of how tree stars were formed there".

#### **DIGITAL MEDIA PLATFORMS:**

We are active in posting our meets and events in facebook(as Astronomy and Planetary Sciences Club of CEG with 1000 page likes), instagram(as @astroclub\_ceg with around 400 followers) and whatsapp group(with around 250 members). Along with event posters and meet notifications, in our instagram page, we post everyday science content(astronomy memes on Monday, scientists and history on Tuesday, quiz on Wednesday, discoveries on Thursday, facts on Friday, astrophotography on Saturday and paradigm shift theories on Sunday) with a separate team in our club devotes to digital media(design and content)

In addition to these, we frequently had meets on discussing what to do next year and how to develop the club to a next level to create wonders in space science from CEG.

Apart from these activities in the two months from the time we started this club, before this academic year ends, we are planning to complete few simple observation projects and present them during a technical talk by eminent speakers and scientists by the end of march tentatively. After that, we will be electing the next set of office bearers and have an official valediction. We once again thank our management in helping us performing all these activities being a new club.

#### **CONTACT:**

**AKSHARA VISWANATHAN: 9003914556 (PRESIDENT) Final Year ECE**

**SIVARAJ KUMAR: 7092846921 (VICE PRESIDENT) Final Year Mechanical Engineering**