EMEA COLLEGE OF ARTS AND SCIENCE, KONDOTTI

Aided by Govt. of Kerala, Affiliated to University of Calicut
Reaccredited with A Grade by NAAC

Research Methodology Seminar Series

Talk 2: Active Galactic Nuclei: A Laboratory for Extreme Physics

Double Main department of Mathematics and Physics

Date: 16/12/2022

Research Methodology seminar series

Talk 2: Active Galactic Nuclei: A Laboratory for Extreme Physics

The double Main Maths and Physics department, EMEA college conducted the Second edition of research methodology seminar on 16th December from 2.15 to 3:30 at seminar hall. This seminar was coordinated by the head of the department Dr Ramsiya M. The seminar session was chaired by by Lt. Abdul Rasheed P (Principal, EMEA College, Kondotty) and Dr.Sunder Sahayanathan was the chief guest. Dr.Sunder Sahayanathan is scientist F in Astrophysical science division, Babha atomic research centre, Mumbai. He is a reviewer in many reputed journals in Astrophysics. He guided more than 10 Ph. D students from IIA, TIFR, Calicut University, etc. He has various publications in many reputed journals including MNRAS, The Astrophysical journal etc. His areas of interest include broadband spectral modelling of Active Galactic Nuclei, Particle Acceleration in Active Galactic get morphology.

The second edition of research methodology series discusses the research problems in blazars and Active galactic nuclei. Active galactic nuclei were the most powerful sources in the universe with core luminosities of the order of 10^{44}ergs\sec, anchoring relativistic jets extending up to mega parsec scales. Under the present understanding, this enormous power derived from the gravitational potential of a super massive black hole of mass 10^8 solar mass, located at the centre of the galaxy. This talk briefly explains the decades of rigorous research that led us to conclude the extra galactic nature of these sources, the advent of radio astronomy after world war II and the typical energetics of these fascinating sources.

Dr. Sunder clearly explains the growth of radio astronomy and other spectroscopic techniques, history of radio astronomy, etc. The students were asked the questions related to the spectroscopic technique explained by him. At the end of session, he interacted with students and cleared their doubts. The seminar ended with the vote of thanks by Henna.

RESEARCH METHODOLOGY SEMINAR SERIES

TALK 2 : ACTIVE GALACTIC NUCLEI: A LABORATORY FOR EXTREME PHYSICS

Principle Adress:

Lt Abdul Rasheed P
(Principal, EMEA College, Kondotty)

Resource Person

Dr. Sunder Sahayanathan
Scientist, Theoretical Astrophysics Section
Bhabha Atomic Research Centre

DEC. 2022 16 SEMINAR HALL, EMEA
FRIDAY - 2.30-3.30 PM

Cordinator: Dr. Ramsiya M
Mob: 99952 661 781, drramsiyam@gmail.com

DOUBLE MAIN DEPARTMENT OF MATHEMATICS & PHYSICS
EMEA COLLEGE OF ARTS AND SCIENCE, KONDOTTY
Re-accredited with ' A' Grade by NAAC

TITLE: Active Galactic Nuclei: A Laboratory for Extreme Physics

Abstract: Active Galactic Nuclei are the most powerful sources in the universe with core luminosities of the order of 1044 ergs/sec, anchoring relativistic jets extending up to mega parsec scales. Under our present understanding, this enormous power is derived from the gravitational potential of a super massive black hole of mass 108 solar mass, located at the center of the galaxy. In this talk, I will briefly about the decades of rigorous research that led us to conclude the extra galactic nature of these sources, the advent of radio astronomy after world war II, and the typical energetics of these fascinating sources.

Brief Bio

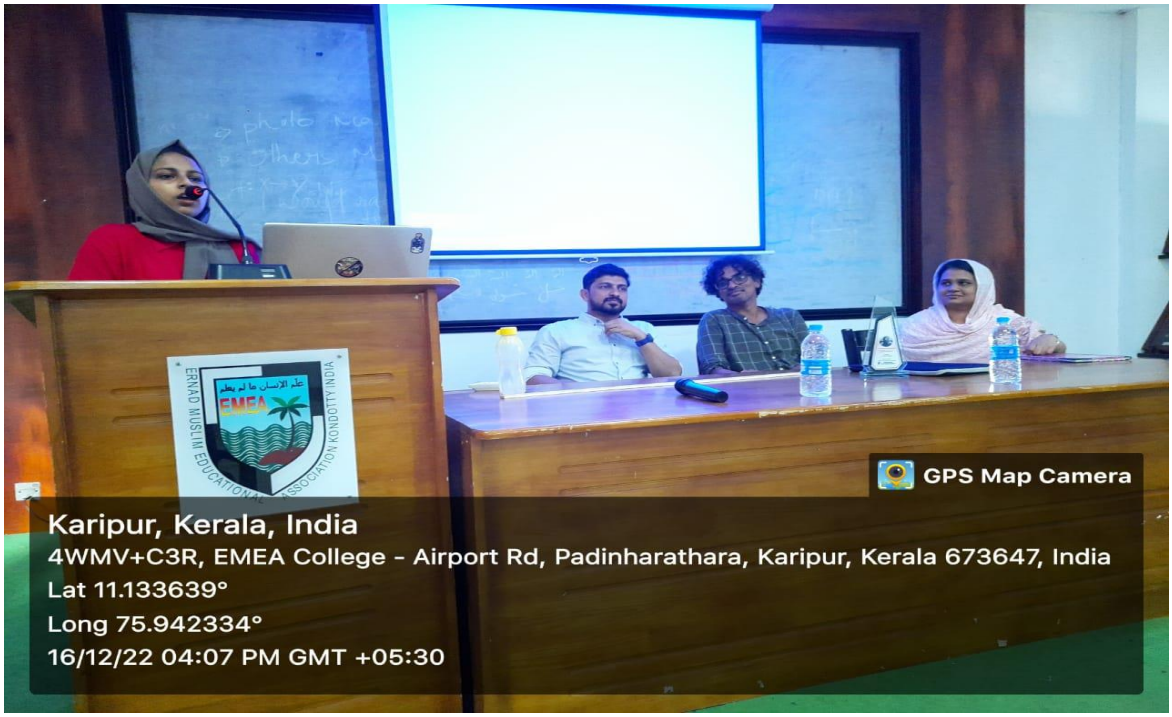
Dr. Sunder Sahayanathan is scientist F in **Astrophysical science division, Bhabha atomic research centre , Mumbai.** He is a reviewer in many reputed journals in Astrophysics. He guided more than 10 Ph.D students from IIA, TIFR, Calicut University, etc. He has many publications in many reputed journals including **MNRAS, The Astrophysical journal** etc . His areas of interest include broadband spectral modelling of Active Galatic Nuclie, Particle Acceleration in Active Galactic Jets, Active Galactic get morphology.

Dr Anand Narayanan
Prof, Indian Institute of Space Science & Technology (IIST), Thiruvananthapuram

Contact for registration :
Dr. Ramsiya M
99952 661 781 **drramsiyam@gmail.com**

EMEA college honouring Dr. Sunder

Dr. Sunder handling sessions.



Vote of thanks by Henna.

Participants list

Research Methodology Seminar Series

Talk 2: Active Galactic nuclie: A laboratory for extreme Physics

Resource Person: Dr. Sunder Sahayanadhan, BARC Mumbai

Sl No	Name of student	Class	Signature
1	Farhath Sherin	1st DM	
2	Shamnu Jihan. P	11	
3	Shifana. M	1st DM	
4	FATHIMA VAFNA. P	1st DM	
5	MUSSAFIRA-M	1st DM	
6	MANAL MOHAMMED	1st DM	
7	MINHA	1st DM	
8	Fathima Nusuba. K	1st DM	
9	Ahnaf K.C	1st DM	
10	Selva. MT	1st DM	
11	FATHIMA FIDA. V	1st DM	
12	HUDA SAFNAS. C.T	1st DM	
13.	NIADHA JABIN. M	1st DM	
14	SAHLA JASMIN-P	1st DM	
15	IRFANA-P	1st DM	
16	Afra	3rd DM	
17.	Shahnas -MK	3rd DM	
18	Shahana Nusriya	3rd DM	
19	Mufliha. P	3rd DM	
20	Sajla Sulthana	3rd DM	
21	Murshida KC	3rd DM	
22	Muhammed Siyas KC	3rd DM	
23	Muhammed Jasir Danish	3rd DM	
24	Muneeb A	3rd DM	
25	Muhammed Rabeeh	3rd DM	
26	IBRAHIM BADUSHA P	3rd DM	
27	Fabil Faisal PT	3rd DM	

28	Rufaida.P.P	3rd DM	
29.	Hafeefa Sishana.	3rd DM	
30	Shahul hameed-P	3rd DM	
31	Mohd. Faseeh. M	2nd DM	
32	Muhammed Shahik. P	2nd DM	
33	Shafeeq Saidalavi	2nd CS	
34	Zainu Zanan	2nd DM	
35	ANANDHU C	2nd DM	
36	Shahin adil K	2nd DM	
37	Mohamed Ashif Muhi	2nd DM	
38.	Muhammed Ramees K.P	2nd DM	
39.	Bahiya Rathod K	2nd DM	
40	Nayva - M P	2nd DM	
41	Irfana Sherin. K	2nd DM	
42	Fathima Ridha KP	2nd DM	
43	Fathima Fidha. K	2nd DM	
44	Fathima Busthana C	2nd DM	
45	Shifana Sherin. K	2nd DM	
46	Muhasina - PK	2nd DM	
47	Fathima Shabana. P	2nd DM	
48	Fathima Riya. M	2nd DM	
49	Mauda - C	2nd DM	
50	Henna K P	2nd DM	Henny
51	Jumana Shirin. T P	1st DM	
52	Shameera Shemi O P	1st DM	
53	Fasna. K P	1st DM	
54.	Ashil Shaheed K. C	1st DM	
55.	Aashad Roshan E. K	1st DM	
56.	RAYAN SHALIR C.	1st DM	
57	Muhammed Shibil. O K	1st DM	
58	Anaf P K	1st DM	
59	MOHD MUBASHIR - M P	1st DM	