

No. INSPIRE INTERNSHIP/4/2017-18/22  
GOVERNMENT OF INDIA  
MINISTRY OF SCIENCE AND TECHNOLOGY  
DEPARTMENT OF SCIENCE AND TECHNOLOGY  
(INSPIRE PROGRAM)

Technology Bhawan  
New Mehrauli Road  
New Delhi-110 016

Date: 28<sup>th</sup> September, 2017

SANCTION ORDER

Subject: Financial assistance for organizing the INSPIRE Internship Science Camp (Ref. no. DST/INSPIRE/01/2017/000783) during 26-30 December, 2017 at Central University of Kerala, Tejaswini Hills Kasaragod-671316 Kerala.

PI: Dr. Sudha Kappalli, Associate Professor/Program Co-ordinator, Department of Animal Science, School of Animal Science, Central University of Kerala, Tejaswini Hills Kasaragod- 671316 Kerala.

Sanction of the President is hereby conveyed for the organization of above mentioned INSPIRE Internship Science Camp for 150 students during 26-30 December, 2017 at Central University of Kerala, Tejaswini Hills Kasaragod- 671316 Kerala at a total cost, General component, not exceeding Rs. 9,75,000/- (Rupees Nine Lakh and Seventy Five Thousand only).

2. Sanction of the President is also accorded to the General component release of Rs. 8,00,000/- (Rupees Eight Lakh only) to the Central University of Kerala, Tejaswini Hills Kasaragod- 671316 Kerala as the initial grant for organizing the above mentioned program and the final release will be made on receipt of Utilization Certificate and Statement of Expenditure from the host Institute.

3. It is certified that travel by Air/Rail/Road (Car/Taxi etc.) in this case is urgent and considered necessary in the public interest. The sanction of the President is also accorded to the performance of Journey by Air/Train (1<sup>st</sup> Class/AC2tier/AC3tier) /Road (Own Car/taxi etc.) by the participants as per their entitlement in their parent organization.

4. Host Institute will furnish financial records in the form of the Statement of Expenditure and Utilization Certificate duly reflecting the interest earned/accrued on the above received amount by them along with INSPIRE Internship Science Camp completion Report to DST. After receiving these documents, DST will release the next/Final installment amount if applicable. This is also subject to the condition of submission of the final statement of expenditure, utilization certificate and final completion report within one year from the scheduled date of completion.

5. The Institute will maintain separate audited accounts for the Project and would keep whole of the grant in a bank account earning interest. ~~The interest earned should be reported to the DST. The interest thus earned will be treated as a credit to the institute to be adjusted towards further installment of the grant.~~

6. The expenditure involved is to be debited to

~~Demand No. 84 - Department of Science and Technology~~

3425: Other Scientific Research (Major Head)

60 - Other (Sub-Major Head)

60.200 - Assistance to other Scientific Bodies (Minor Head)

68 - Science & Technology Institutional and Human Capacity Building

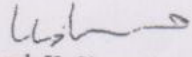
~~68.00.31 - Grant-in-aid General for the year 2017-2018 (Voted)~~

(Previous: 56.03.31 - Alliance and R&D Mission)

7. The amount of Rs. 8,00,000/- (Rupees Eight Lakh only) will be drawn by the Drawing and Disbursing Officer, DST and will be disbursed to the Central University of Kerala, Tejaswini Hills Kasaragod- 671316 Kerala. The bank details for electronic transfer of funds through RTGS are given below:-

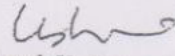
Name of the Account Holder: Central University of Kerala, Tejaswini Hills Kasaragod- 671316 Kerala,  
Bank Name: Canara Bank  
Account No.: 0711101068500  
IFSc Code.: CNRB0004111

8. The account of the grantee organization shall be open to inspection by the sanctioning authority and audit (both by C&AG of India and Internal Audit by the Principal Accounts Office of the DST), whenever the organization is called upon to do so, as laid down under Rule 236(1) of General Financial Rules 2017.
9. The grantee organization will have to enter & upload the utilization certificate in the PFMS portal. The subsequent /final installment will be released only after confirmation of the acceptance of the UC by online portal and of entry of previous UCs' by the division.
10. The organization/institute/university should ensure that the technical support/financial assistance provided to them by the Department of Science & Technology should invariably be highlighted/ acknowledged in their media releases as well as in bold letters in the opening paragraphs of their Annual Report.
11. Failure to comply with the terms and conditions of the scheme will entail full refund with interest in terms of Rule 231 (2) of GFR 2017.
12. The sanction issue under the powers delegated to the Ministries and with the concurrence of the Integrated Finance Division, Department of Science and Technology vied their Dy. No. C/2775/IFD/2017-18 dated 28.09.2017.
13. The Sanction Order is entered vide INSPIRE Sl. No. 196 in the Register of Grants.

  
(Dr. Umesh K. Sharma)  
Scientist -E

Copy forwarded for information and necessary action to:




1. Copy with two spare copies of the sanction to the Drawing and Disbursing Officer, DST, New Delhi.
2. Pay & Accounts Officer, DST, New Delhi.
3. Sanction Folder, DST, New Delhi.
4. The Principal Director of Audit  
A.G.C.R. Building  
IIIrd Floor, I.P. Estate  
New Delhi-110 002
5. The Registrar  
Central University of Kerala,  
Tejaswini Hills Kasaragod- 671316 Kerala
6. Dr. Sudha Kappalli  
Associate Professor /Program Co-ordinator  
Department of Animal Science, School of Animal Science,  
Central University of Kerala,  
Tejaswini Hills Kasaragod- 671316 Kerala
7. File Copy

  
(Dr. Umesh K. Sharma)  
Scientist -E



**DST- INSPIRE SCIENCE CAMP**  
26-31 December 2017  
**Central University of Kerala, Kasaragod**

**LIST OF SELECTED STUDENTS**

Sl.No.	Name of the applicant	Name of the School	Phone Number	Photo	% of Mark
1	Aryajothis.C	G.H.S.S.Chayyoth	9497233479 9497609704		95
2	Pavithran.K.P	GHSS Kundamkuzhy	9495769001		95
3	Athul.K	GHSS Balla East, Chemmattamvayal	9495702339		95



4	Arundhathi Padmanabhan	Jawahar Navodaya Vidyalaya, Periyē	0467 2234057 9497057838		95
5	Lakshmi Priya Vijayan	Durga HSS Kanhangad	0467 2205988 9446445988		95
6	Sanjay.M	Sree Annapurneshwari Higher Secondary School, Agalpady	9446271105		95
7	Keerthana.P	AVSGHSS Karivellur	9744732479		95
8	Anjali.P	IMNSGHSS, Mayyil	0460 2275899 9661143829		95
9	Anusree.K	GHSS Kannadiparamba	9562275027		96
10	Jilna Biju	St.Josephs HSS Vayattupparamba	9961339559		95










11	Athul Raj. K	Kendriya Vidyalaya Keltron Nagar	9495647543		95
12	Jerrit Spary.T	Poilkave HSS Edakkulam, Koyilandi	0496 2686889 8086103361		95
13	Muhammed Abin.C.H	GVHSS Mananthavady	8547690118 8547551544		100
14	Sanjay Babu.C	G.V.H.S.S Pathiripala	0491 2872023 9446903209		A1
15	Anagha.S.Gireesh	Kendriya Vidyalaya Ottapalam,Palappuram	9446123420		A1
16	Ananthita A Padmesh	Saraswathi Vidyalaya Senior Secondary School, Vattiyoorkavu	9446404397 9446404379		A1
17	Aditya Shine	St. Antony's Public School, Anakkal	9447022771		A1








18	Adithya K	Jawahar Navodaya Vidyalaya, Periy	9497611276		95
19	Anupam Chandran	Jawahar Navodaya Vidyalaya, Periy	9446673663		95
20	Aishwarya Nair	Kendriya Vidyalaya NTPC, Kayamkulam	0479 2474822 984741342		A1
21	Vishu SS	PNM HSS, Koonthallor	9746919418 9746978576		95
22	Manu.V.M	Jot, Islam HSS, Vellimadukkunnu, Marikunnu	9809750042		95
23	Ahamed Nihal Rasheed	CJHSS Chemnad	04994 240373 9633814291		100
24	Keerthana.T.V	G.H.S.S.Chayyoth	9446610575		95
25	Sreelakshmi.A	GHSS Kundamkuzhy	8304980539		95

26	Anagha.K.V	GHSS Balla East, Chemmattamvayal	0467 2208801 808618801		95
27	Aishwarya Narayanan	Jawahar Navodaya Vidyalaya, Periy	04672234057 9567144856		95
28	Hridya.A	Durga HSS Kanhangad	9207997495		95
29	Amruth P	Sree Annapurneshwari Higher Secondary School, Agalpady	04994 260607 9847292256		95
30	Vrinda Mohanan	Govt Girls HSS Payyanur	04985204104 9446895700		95
31	Nirmal Nath	IMNSGHSS, Mayyil	9497766646		95



32	Jishnu.M	Moothedath HSS Thaliparamba	0460 2209448 9744649387		95
33	Muflitha.K.P	St.Josephs HSS Vayattupparamba	9847138675		95
34	Arya Sreevalsan	Kendriya Vidyalaya Keltron Nagar	9895719300		95
35	Aadithya Krishna.V.R	R.N.M.HSS Narippatta	0496 2447509 9745966434		96
36	Muhammed Yasir.K.P	GVHSS Mananthavady	9497794293 9656938393		95
37	Aswathy.M.M	Cherupushpam Girls HSS Vadakkencherry	9744876612		96
38	T.V.Nithin	Kendriya Vidyalaya Ottapalam,Palappuram	8111827408		95

39	Aditi Maheswari	Govt .Sanskrit HSS Vadakara	0496 2523260 9539000040		95
40	Vidya Sunil	GGHSS Cotton Hill, Vazhuthakkadu	0471 2369502 9447341250		95
41	Ishani Mohan	Sharada Vidyanikethana Devinagara, Talapady	0467 2281583 9444910709		86
42	Sujith T	Jawahar Navodaya Vidyalaya, Periy	9495304911		95
43	Muhammed Zakariya.P.K	Garden Valley E.M.H.S.S Kuttippala	9846948214 8089489033		97
44	Obasho.M	Poilkave HSS Edakkulam, Koyilandi	0496 2630123 9400223423		95

45	Anirudh.J.Varma	Rajahs HSS Nileswar	0467 2281948 7560969642		95
46	Elsitta Jhomas	Sacred Heart HSS Angadikkadavu	7902970879		97
47	Nasriya.K.B	G.H.S.S.Vaduvanchal	9605224283		96
48	Sankeerthana.P.A	Iritty HSS Keezhur	0490 2458358 9446265560		100
49	Sreelakshmi Rajeevan.M.V	GHSS Kuttamath, Cheruvathur	9496138571		95
50	Vaishnav Sankar	GHSS Periyē	0467 2234343 9447474676		100
51	Athira C A	Jawahar Navodaya Vidyalaya, Periyē	0467 2234057 9388237388		95



52	Ashrai Kumar	C.H.S.S Chattanchal	9562780198 9946131638		95
53	Adithya Krishnan.N.P	H.H.S.I.B.S.H.S.S. Edaneer, Kasaragod	9497877723 9446647213		95
54	Aiswarya.V	Shenoy Smaraka G HSS Kandankali Payyanur	04985 281942 9495755915		95
55	Abhinav Raj.K.V	IMNSGHSS, Mayyil	0460 2275824 9495515824		95
56	Sreelakshmi Viswanath	Moothedath HSS Thaliparamba	9447961366 9400407221		95
57	Mary Xavior	St.Josephs HSS Vayattupparamba	9544243780		95
58	Manjima Mahesh	Kendriya Vidyalaya Ins Zamorin Ezhimala	04985 208321 9496358321	 MANJIMA MAHESH 28-10-2017	A1

59	Ajnas P	GVHSS Mananthavady	8547131858 9496473858		100
60	Fathima Bind Abdulkadir	GVHSS Neriamangalam,320807, Kothamangalam	9946925020 9446213586		99
61	Ashyan Ahmed	Kendriya Vidyalaya Keltron Nagar Mangad, Kannur	9400577531		95
62	Emi S Yona	GMGHSS, Pattom	9744503993		95
63	Roshan V P	GHSSS Cherpulassery	9744472025		95
64	Anag G R	Jawahar Navodaya Vidyalaya, Periy	8547654230 7561823684		95
65	P.Abhiram	GHSS Balla East, Chemmattamvayal	9495437633 0467 2269333		A1

66	Adwaid Aravind	Rajahs HSS Nileswar	7558855045 9496830604		95
67	Anusree.N	Kendriya Vidyalaya No-1 Easthill	9447637072 0495 2375100		A1
68	Sandra Babu	Sacret Heart CG HSS	04884 233490 9497069065		95
69	Abhijith N	Jawahar Navodaya Vidyalaya, Periy	9846470172		95
70	Niranjana.M.V	G.H.S.S.Cheemeni	04985261152 9496138977		99
71	Vismaya.P.P	GHSS Kuttamath, Cheruvathur	9605216966		95
72	Anila P	GHSS Periy	8086131804		95




73	Athul Krishna K	Jawahar Navodaya Vidyalaya, Periy	9447653632		95
74	Manuprasad.K	C.H.S.S Chattanchal	9744963791 9061237936		95
75	Aiswarya B Pradeep	Kendriya Vidyalaya No.1 CPCRI	9633789190		A1
76	Aiswarya.N	K.P.R.G.S.Govt.HSS Kalliasseri	9961365366		95
77	Anwaya Anil	Govt.Brennen HSS Thalassery.	0490 2351340 9447313164		95
78	Jesvin Denny	St. Thomas HSS Kiliyanthara	9446480031 8281623173		95

79	Vaishnavi.R.P	GHSS Naduvannur	9946753981		96
80	Athul.M.E	V.M.C.G.H.S.S. Wandoor	9447882217 8943269210		96
81	Jeevan James	AIHSS Padoor	0487 2292356 9895250477		100
82	Rohan.B	TSNMHSS, Kundurkunnu, Mannarkkad	9544838194		<90
83	Sooraj.T.S	Model Technical HSS, Kaloor	9995304008 9447001453		98
84	Saidalavi N	GHSSS Cherpulassery	7012806201		95

85	Adhil. T.M	G.H.S.S Cheruplassery	9605464663		95
86	Yadu Krishna.E.P	CJHSS Chemnad	9497842040		100
87	Muneeb.K.A	G.H.S.S Irikkur	9809806068 8281564258		100
88	Ani.K.Raghavan	Kendriya Vidhyalaya Payyanur	8547219707 9446045791		95
89	Akshay AJ	GHSS, Kadakkal	9656086214		95
90	Edwina Gijy	St. Thomas HSS Erattayar	9995774222 9447823181s		95
91	Akhila K	Dr. Ambedkar GHSS , Kodoth	9495512332		100



92	Amritha.N	GHSS Cheemeni	9400463708		99
93	Hridya.K	GHSS Kuttamath, Cheruvathur	9446674841		95
94	Sreehari M	GHSS Periy	9946973617 9656750913		95
95	Sharath Raghavan	Jawahar Navodaya Vidyalaya, Periy	7560814994		A1
96	Aishwarya.K.P	C.H.S.S Chattanchal	9544768224		95
97	Aiswarya.M	Kendriya Vidyalaya No.1 CPCRI	04994 222981 9447365721		A1
98	Yadu Krishnan. T.P	G H.S.S Chattukappara	9495577885		94

99	Swethaprabha. K	Govt.Brennen HSS Thalassery.	8547707525		95
100	Khaleesa.K	Tagore Memorial HSS,Vellora	9495090849 9400106238		95
101	Dikshit.M	Koodali HSS,Koodali Kannur	9061077844		95
102	Arya.S	GHSS Naduvannur	0496 2651693 9495306510		96
103	Arunima.N.K	KUNHALI MARAYKAR HSS	0496 2600198 9497646984		95
104	Saandeep. U	GHSS Edappal	0494 2690213 9495710709		97

105	Aavany V Babu	HSS Panangad	0480 2854056 9447673330		100
106	Amrutha Priya.K.T	St.Therese HSS,Shornur	8943994629		A1
107	Muhammed Aslam.C.I	Cardinal HSS Trikkakara	9037401070 9037256131		95
108	Harishankar S	GHSS, Kalavoor	9447035856		100
109	Alan Vijay V S	GHSS Neyyattinkara	9497850013 9497852350		95
110	Arshia S	GVBHSS Chittur	04923 222981 9495761316		95
111	Devipriya P	Jawahar Navodaya Vidyalaya, Periy	0467 2234057 9495800886		95

112	Ajay.V	Kendriya Vidyalaya Ottapalam,Palappuram	9746299780		A1
113	E.P.Ahmed Hilal	Kendriya Vidyalaya Keltron Nagar	0497 2788381 9895407761		95
114	Neha.P	IMNSGHSS, Mayyil	9526506824		95
115	Sidharth	AVSGHSS Karivellur	04985 280168 9961176188		95
116	Abhishek Krishnan	GHSS , Karunagappalli	0476 2627999 9497534999		100
117	Manjima.M.P	GHSS Kuttamath, Cheruvathur	9495417265		95

118	Aswathi M	GHSS Periyē	9946630116		95
119	Vinay Sasidharan	Jawahar Navodaya Vidyalaya, Periyē	9447400013		95
120	Vaishali.B.K	Kendriya Vidyalaya No.1 CPCRI	04994221018 9495339145		A1
121	Akshara.K	Chattukappara HSS	9961505652		95
122	Ananya Ganesh.C	Govt.Brennen HSS Thalassery.	04902356447 9447684496		95
123	Nikhitha Joy	Chovva HSS Chovva	9744381025		97









124	Nirupama Chandran	NHSS, Nanminda	9946917062		95
125	Mohammed Ashar.M.M	KHMHSS Valakolam	9895905979		100
126	Minshija P M	St Antony's High School, Puthenpeedika	8714156587 9447556587		95
127	Karthik.R	AKNMMAM HSS Kattukulam,	9946239241 9846284014		98
128	Gopika G	Govt.Girls HSS, Vaikom	9495110502		100

129	Aaditya chandra Prasanth	GMBHSS Harippad	9446054695 9846654695		95
130	Jessna S Kapoor	St Thomas HSS	9947099999 9446709999		95
131	Jyothi James	Jawahar Navodaya Vidyalaya, Periy	9447054662		95
132	J.R.Arjun	GHSS Balla East, Chemmattamvayal	0467 2266649 8137872533		A1
133	Abhinave S	HSS & VHSS Brahmamangalam	8547437772 7025063936		96
134	Sandra Aravind	Jawahar Navodaya Vidyalaya, Periy	9447867709		95

135	Krishnakripa G. K.	Jawahar Navodaya Vidyalaya, Periy	9747358995 0467 2234057		95
136	Sandiptha Rag P	Dr. Ambedkar GHSS , Kodoth	9446270929		100
137	Santo Paul	St. Judes HSS Vellarikundu	9495296583		95
138	Padmanabha Patteri.K.P	Rajahs HSS Nileswar	0467 2281983 9495572328		95
139	Riya.A	G.H.S.S Azhikode	9747639024		95
140	Nandana Rathna	G.H.S.S Koyyam	0460 2261710 9495126254		96

141	Neha Mathew	Sacred Heart HSS Angadikkadavu	98098228815		97
142	Medha.A.P	Kendriya Vidhyalaya Payyanur	04985 209879 9947431029		95
143	Ashby Sreejan	Perambra HSSS, Perambra	0496 2614271 9447014271		95
144	Ayisha	NHSS, Vakayad	9946487387 8281364400		95
145	Sreelakshmi.P.S	AVHSS Ponnani	8086603545 8593031275		95
146	Maya.M	RPMHSS Panangattiri , Panangattiri	9526379384 8281497396		100

147	Sushil Thomas David	CMS College HSS, Kottayam	04812562383 9446486541		95
148	Aleena Jiji	Jawahar Navodaya Vidyalaya, Periy	9446084234		95
149	Sreelakshmi P	Jawahar Navodaya Vidyalaya, Periy	0467 2234057 9497600796		95
150	Sooraj.C	GHSS Kundamkuzhy	9400243935		95
151	Surya.S.Sunil	GHSS Balla East, Chemmattamvayal	9447691819		95

152	Adithya Jayakrishnan	GHSS Kannadiparamba	9496243991		95
153	Akshaya Kumar.V.K	GHSS Kundamkuzhy	7026584524		95
154	N K Mahitha	Jawahar Navodaya Vidyalaya, Periy	9746353917		95
155	Gayathri.G	Cherupushpam Girls HSS Vadakkencherry	9349874979		96















































**LIST OF MENTORS WITH ADDRESS WHO PARTICIPATED & MENTORED IN DST-INSPIRE  
INTERNSHIP SCIENCE CAMP ORGANISED BY CENTRAL UNIVERSITY OF KERALA,  
KASARAGOD DURING 26-31 DECEMBER 2017**

Sl.No.	Name of the Mentor	Address	Title of the Talk
1	Prof.(Dr.) Virender Lal Chopra	Former Director-General –ICAR Former Chancellor Central University of Kerala, Kasaragod	
2	Prof. S. SivaSubramanian	Former Vice Chancellor Bharathiar University NICHE,TN Email: profssn@hotmail.com	Facets of Nanotechnology
3	Dr. G. Anilkumar	Senior Professor School of Biological Sciences and Technology (SBST) VIT University, Vellore, Tamilnadu Email: gopianilkumar@gmail.com	Biological Rhythms
4	Prof. T. S. Natarajan	Professor Dept. of Physics IIT, Thirupathi Email: tsniit@iittp.ac.in	Excellence through Experiments-A session with Spectacular Experiments in Physics
5	Dr. Aswin Sai Narain Seshasayee	Faculty NCBS Bangalore Email: aswainsainarain@gmail.com	Dynamics in Stasis:bacterial adaptation in 'stationary'phase
6	Dr. A. Vijayakumar	Professor Dept. of Mathematics CUSAT, Cochin Email: vambat@gmail.com	Excitements and challenges in Mathematics
7	Dr. C. Vijayan	Professor Dept. of Physics IIT, Madras Email: cvijayan@iitm.ac.in	A practice session on Scientific & creative thinking
8	Dr. A. P. Nandini	Senior Project Officer Teaching- Learning Centre IIT, Madras Email: apnandini@yahoo.com	Visualization and Exploration of Functions

9	Dr. Kuruvilla Joseph	Dean(Student Activities), Senior Professor Dept. of Chemistry IIST, Trivandrum Email: kjoseph.iist@gmail.com	Nanoscale materials- a boon to society
10	Dr. Rajneesh Bhutani	Professor Dept. of Earth Science Pondicherry University Email: rbhutani@gmail.com	We, the humans, in the Earth systems
11	Dr. K. S. S. Moosath	Professor Dept. of Mathematics IIST, Thiruvananthapuram Email: smoosath@gmail.com	Matrix- An oblong arrangement of terms
12	Dr. Mahesh Hariharan	Associate Professor Dept. of Chemistry IISER Thiruvananthapuram Email: mahesh@iisertvm.ac.in	Femtosecond Spectroscopy





inspire

*Innovation in Science Pursuit for Inspired Research*

A National Programme being Implemented by



**DEPARTMENT OF SCIENCE & TECHNOLOGY**

Government of India

**INSPIRE**  
Internship

*A Programme motivating Young talents towards Science*

**2017 DECEMBER 26-31**

*Organised by*



**CENTRAL UNIVERSITY OF KERALA**  
KASARAGOD

# Invitation

Dear Colleague,

We are so glad to inform that, Central University of Kerala, Kasaragod, is hosting the **Innovation in Science Pursuit for Inspired Research (INSPIRE) Internship** for Plus One students. This innovative programme is implemented by Department of Science and Technology, Government of India for attracting young talents towards Science. The main objective of INSPIRE is to communicate the young students of the country the excitements of creative pursuit of Science and attract talents to the study of Science at an early stage, thus building the required critical human resource pool for strengthening and expanding the Science and Technology system and Research & Development base in our Country.

The INSPIRE Internship residential programme is scheduled from **26-31 December 2017**. The venue for the programme is **Jawahar Navodaya Vidyalaya, Periya, Kasaragod, Kerala**.

The opening ceremony will be on 26<sup>th</sup> December 2017 at 2 PM with **Prof. (Dr.) M. Arunachalam**, Head, Department of Animal Science, Central University of Kerala welcoming the gathering and **Sri. Vijaya Krishnan K. M.**, Principal, Jawahar Navodaya Vidyalaya, Kasaragod, delivering the presidential address. **Prof. (Dr.) G. Gopa Kumar**, Hon'ble Vice-Chancellor, Central University of Kerala, Kasaragod will inaugurate the programme. **Dr. M. Muralidharan Nambiar**, Controller of Examinations, Central University of Kerala, **Prof (Dr). John Stephen Moolakkattu**, Dean, School of Global studies, Central University of Kerala, **Prof. (Dr.) K. P. Suresh**, Dean, School of Education, Central University of Kerala, **Prof. (Dr.) T. Dennis Thomas**, Dean, School of Biological Sciences, Central University of Kerala, will felicitate the programme.

For the closing ceremony, **Prof. (Dr.) Virender Lal Chopra**, Hon'ble former Chancellor, Central University of Kerala, Kasaragod and former DG, ICAR has kindly consented to deliver the valedictory address and the function will be presided over by **Prof. (Dr.) G. Gopa Kumar**, Hon'ble Vice-Chancellor, Central University of Kerala. **Shri. A. Y. Reddy**, Deputy Commissioner, Navodaya Vidyalaya Samithi, Hyderabad and **Dr. Radhakrishnan Nair**, Registrar, CUK will also address the participants during the valedictory function.

You are cordially invited to join the programme.

Thank you

Yours sincerely

**Prof. (Dr.) G. Gopa Kumar**

Chairman,  
INSPIRE Science Camp  
Vice Chancellor  
Central University of Kerala

**Dr. Pratheesh P.**

Joint- Co-ordinator  
INSPIRE Science Camp

**Dr. Sudha K.**

Programme Co-ordinator  
INSPIRE Science Camp



2017 December 26 Tuesday

- 1:00 PM : Registration
- 2:00 PM - 4:00 PM** : **Opening Ceremony**
- 2:00 PM : Prayer
- 2:05 PM Welcome Address : **Prof. (Dr.) M. Arunachalam**  
*Head, Department of Animal Science,  
Central University of Kerala*
- 2:10 PM Introductory Remarks : **Dr. Sudha K.**  
*Programme Co-ordinator,  
INSPIRE Science Camp*
- 2:15 PM Presidential Address : **Sri. Vijaya Krishnan K. M.**  
*Principal,  
Jawahar Navodaya Vidyalaya, Kasaragod*
- 2:30 PM Inaugural Address : **Prof. (Dr.) G. Gopa Kumar**  
*Hon'ble Vice Chancellor  
Central University of Kerala*
- 3:00 PM Key note address : **Prof. (Dr.) S. Sivasubramanian**  
*Advisor (Research & Development)  
Vels University, Chennai  
(Former Vice-Chancellor of Bharathiar &  
Noorul Islam Universities)*
- 3:30 PM Felicitations : **Dr. M. Muralidharan Nambiar**  
*Controller of Examinations,  
Central University of Kerala*
- Prof. (Dr.) John Stephen Moolakkattu**  
*Dean, School of Global studies,  
Central University of Kerala*
- Prof. (Dr.) K. P. Suresh**  
*Dean, School of Education  
Central University of Kerala*
- Prof. (Dr.) T. Dennis Thomas**  
*Dean, School of Biological Sciences,  
Central University of Kerala*
- 3:55 PM Vote of Thanks : **Dr. Pratheesh P.**  
*Joint Co-ordinator, INSPIRE Science Camp*
- Stage Co-ordination by **Dr. Eftikhar Ahamed B.** *Asst. Professor, CUK*



- 4:00 PM - 4:45 PM : *Tea/Coffee Break*
- 4:45 PM - 5:00 PM Address by **Sri. Vijaya Krishnan K. M.**  
*Principal, JNV, Kasaragod*
- 5:00 PM - 6:00 PM : Interactions with **Dr. Umesh K. Sharma**  
*Scientist, DST, Govt. of India*
- 6:00 PM - 7:00 PM : Ice breaking session  
**Dr. M. K. Madhusoodanan**  
*Associate Professor, NAM College, Kallikkandy*
- 7:00 PM - 8:00 PM : *Dinner*

### 2017 December 27 Wednesday

- 6:00 AM- 6:30 AM : *Morning warm up activities*
- 7:30 AM - 8:30 AM : *Breakfast*
- 8:30 AM- 8:40 AM : *Walk with Scholars*

9:00 AM - 11:00 AM

#### SESSION 1.1

- Rapporteur : **Dr. Gnanavel Soundararajan**  
*Assistant Professor, Dept. of Mathematics*
- Lecture : **Dr. A. Vjayakumar**, *CUSAT, Cochin*

### Excitements and Challenges in Mathematics

- 10:30 AM : Interaction
- 11:00 AM - 11:30 AM : *Tea/Coffee Break*

11:30 AM - 1:00 PM

#### SESSION 1.2

- Rapporteur : **Dr. S. Anbazhagi**  
*Assistant Professor, Dept. of EVS*
- Lecture : **Dr. S. Sivasubramanian**  
*Vels University, Chennai*

### Facets of Nanotechnology

- 12:30 PM : Interaction
- 1:00 PM - 2:00 PM : *Lunch Break*



2:00 PM - 4:00 PM

### SESSION 1.3

Rapporteur

: **Dr. E. Prasad**  
*Assistant Professor, Dept. of Physics*

Lecture

: **Dr. T. S. Natarajan**  
*IIT, Thirupathi*

### **Excellence through Experiment - A session with Spectacular Experiments in Physics**

3:30 PM

: Interaction

4:00 PM - 4:15 PM

: *Tea/Coffee Break*

4:15 PM - 5:30 PM

### SESSION 1.4

Indoor interaction with Mentors, Teachers of Central Universities of Kerala and Invited School Teachers

5:30 PM - 6:30 PM

### SESSION 1.5

Outdoor Interaction with Mentors, Teachers, Research Scholars and INSPIRE Alumni

6:30 PM - 7:00 PM

: Interaction with  
**Dr. Radhakrishnan Nair**  
*Registrar, Central University of Kerala*

7:00 PM - 7:30 PM

: **Christmas Celebration**  
Co-ordinated by **Dr. Shaini P.**  
*Assistant Professor, CUK*

7:30 PM - 8:30 PM

: *Dinner*

8:30 PM - 9:00 PM

: **Session for Thinking Process on New Innovative Ideas**

Co-ordinated by

- 1) **Dr. H. P. Gurushankara**  
*Assistant Professor, CUK*
- 2) **Dr. Gnanavel Soundararajan**  
*Assistant Professor, CUK*
- 3) **Dr. T. Thasleema**  
*Assistant Professor, CUK*
- 4) **Dr. Jasmine M. Shah**  
*Assistant Professor, CUK*





## 2017 December 28 Thursday

6:00 AM – 6:30 AM : Morning warm up activities

7.30 AM - 8.30 AM : *Breakfast*

8:30 AM – 8:40 AM : **Walk with Scholars**

**9:00 AM - 10:30 AM**

### SESSION 2.1

Rapporteur : **Dr. Jasmine M. Shah**  
*Assistant Professor, Dept. of Plant Science*

Lecture : **Dr. Aswin Sai Narain Seshasayee**  
*NCBS, Bangalore*

### **Dynamics in stasis: bacterial adaptation in 'stationary' phase**

10:00 AM : Interaction

10:30 AM -11:00 AM : *Tea/Coffee Break*

**11:00 AM -12:30 PM**

### SESSION 2.2

Rapporteur : **Dr. Deepa Janardanan**  
*Assistant Professor, Dept. of Chemistry*

Lecture : **Dr. Mahesh Hariharan**  
*IISER, Thiruvananthapuram*

### **Femtosecond Spectroscopy**

12:00 PM : Interaction

12: 30 PM- 02: 00 PM : *Lunch Break*

**2:00 PM -3:30 PM**

### SESSION 2.3

Rapporteur : **Dr. Sandeep K.**  
*Assistant Professor, Dept. of Geology*

Lecture : **Dr. S. Srinivasalu**  
*Anna University, Chennai*

### **The Nuances of “Geology - A Creative Science”**

2:30 PM : Interaction

3:30 PM– 4:00 PM : *Tea/Coffee Break*

**4:00 PM -5:00 PM**

### SESSION 2.4

Indoor Interaction with Mentors, Teachers, INSPIRE alumni, Research Scholars and P.G students



5:30 PM- 7:00 PM

### SESSION 2.5

Outdoor Interaction with **Prof. (Dr). G. Gopa Kumar**, Hon'ble Vice Chancellor, Central University of Kerala

7:00 PM -8:00 PM

: *Dinner*

8:00 PM- 9:00 PM

: Cultural Programmes by the Participants  
Co-ordinated by

- 1) **Dr. H.P. Gurushankara**  
*Cultural Programme Co-ordinator*
- 2) **Dr. Swapna S. Nair**  
*Associate Professor, CUK*

### 2017 December 29 Friday

6:00-6:30 AM

: Morning warm up activities

7.30 AM - 8.30 AM

: *Breakfast*

8:30 AM- 8:40 AM

: **Walk with Scholars**

09:00 AM-10:30 AM

### SESSION 3.1

Rapporteur

: **Dr. Ali Akbar K.**  
*Assistant Professor, Dept. of Mathematics*

Lecture

: **Dr. K. S. Subrahmanian Moosath**  
*IIST, Thiruvananthapuram*

### Matrix – An oblong arrangement of terms

10:00 AM

: Interaction

10:30 AM -11:00 AM

: *Tea/Coffee Break*

11:00 AM-12:30 PM

### SESSION 3.2

Rapporteur

: **Dr. M. Bhagiya Lakshmi**  
*Assistant Professor, Dept. of Chemistry*

Lecture

: **Dr. Kuruvilla Joseph**  
*IIST, Thiruvananthapuram*

### Nanoscale materials – a boon to society

12:00 PM

: Interaction

12:30 PM- 02:00 PM

: *Lunch Break*



2:00 PM – 3:30 PM

### SESSION 3.3

- Rapporteur : **Dr. Shaini P.**  
*Assistant Professor, Dept. of Mathematics*
- Lecture : **Dr. Nandini A. P.**  
*IIT, Chennai*

## Visualization and Exploration of Functions

- 3:00 PM : Interaction
- 3:30 PM – 3:45 PM : *Tea/Coffee Break*

3:45 PM-5:15 PM

### SESSION 3.4

- Rapporteur : **Dr. P. M. Aneesh**  
*Assistant Professor, Dept. of Physics*
- Lecture : **Dr. C. Vijayan**  
*IIT, Chennai*

## A Practice Session on Scientific and Creative Thinking

5:30 PM-7:00 PM

### SESSION 3.5

Indoor/ Outdoor Interaction with Mentors, Teachers, Research Scholars and INSPIRE Alumni

- 7:00 PM- 8:00 PM : *Dinner*
- 8: 00 PM- 9:00 PM : Interaction with INSPIRE Alumni and Organizing Committee members

**2017 December 30 Saturday**

- 7:00 AM- 8:00 AM : *Breakfast*
- 8:00 AM : Proceed to Riverside Transit Campus, CUK for Lab Experiments

9:00 AM -5:00 PM

### SESSION 4.1

## Laboratory Experiments

- General Convener : **Dr. Rajendra Pilankatta**  
*Associate Professor, Dept. of BCMB*



**Subject**

**Co-ordinators**

Physical Sciences

- : **Dr. Manikandan Rangaswamy**  
*Assistant Professor, Dept. of Mathematics*
- : **Dr. T. Thasleema**  
*Assistant Professor, Dept. of Computer Science*
- : **Dr. A. Saktivel**  
*Associate Professor, Dept. of Chemistry*
- : **Dr. Swapna S. Nair**  
*Associate Professor, Dept. of Physics*

Biological Sciences

- : **Dr. V. B. Sameer Kumar**  
*Assistant Professor, Dept. of BCMB*
- Dr. Jasmine M. Shah**  
*Assistant Professor, Dept. of Plant Science*
- Dr. L. Divya**  
*Assistant Professor, Dept. of Animal Science*
- Dr. Padmesh P. Pillai**  
*Associate Professor, Dept. of Genomic Science*

Earth Sciences

- : **Dr. Sijin Kumar A.V.**  
*Assistant Professor, Dept. of Geology*
- Dr. Rishram Ramanan**  
*Assistant Professor Dept. of EVS*

5:00 PM

- : **Proceed to CUK main Campus, Periya**

**5:30 PM-7:00 PM**

**SESSION 4.2**

**Walk with Mentors, Teachers, Research Scholars and INSPIRE Alumni at CUK main Campus**

7:00 PM – 8:00 PM

- : *Dinner*

8:00 PM – 9:00 PM

- : **Cultural Programmes** by CUK students  
Co-ordinated by

- 1) **Dr. H. P. Gurushankara**  
*Cultural Programme Co-ordinator*
- 2) **Dr. Swapna S. Nair**  
*Associate Professor, CUK*

**2017 December 31 Sunday**

7:00AM – 7: 45 AM

- : *Breakfast*

7:45 AM - 8:10 AM

- : **Walk with Scholars**



8:30 AM -10:00 AM

### SESSION 5.1

- Rapporteur : **Dr. Sijin Kumar A. V.**  
*Assistant Professor, Dept. of Geology*
- Lecture : **Dr. Rajneesh Bhutani**  
*Pondicherry University*

### We, the humans, in the Earth System

9:30 AM : Interaction

10:00 AM -11:30 PM

### SESSION 5.2

- Rapporteur : **Dr. Ramachandran Kotharambath**  
*Assistant Professor, Dept. of Animal Science*
- Lecture : **Dr. G. Anilkumar**  
*VIT University, Vellore*

### Biological Rhythms

11:00 AM : Interaction

11:00 AM -11:15 AM : *Tea Break*

11:15 AM -11:45 AM

### SESSION 5.3

Interaction with Mentors and Panel discussion on '**Prospects of a Career in Science**'

11:45 AM - 12:30 PM

### SESSION 5.4

- Interaction : **Prof. (Dr.) Virender Lal Chopra**  
*Hon'ble former Chancellor,  
Central University of Kerala  
and former DG, ICAR*
- 12:30 PM- 1:00 PM : *Lunch Break*
- 1:00 PM : **Proceed to CUK Campus**
- 1:30 PM –2:00 PM : **Session for Group Photo**



## 2:00 PM - 4:00 PM

## Closing Ceremony

Venue	: CUK Campus Multipurpose Hall
2:00 PM	: Prayer
2:05 PM Welcome Address	: <b>Dr. Rajendra Pilankatta</b> <i>General Convener (Laboratory Experiments) INSPIRE Science Camp</i>
2:10 PM Report Presentation	: <b>Dr. Pratheesh P.</b> <i>Joint Co-ordinator, INSPIRE Science Camp</i>
2:20 PM Presidential Address	: <b>Prof. (Dr.) G. Gopa Kumar</b> <i>Hon'ble Vice Chancellor, Central University of Kerala</i>
2:30 PM Address by Chief Guest:	<b>Prof. (Dr.) Virender Lal Chopra</b> <i>Hon'ble former Chancellor Central University of Kerala and former DG, ICAR</i>
3:00 PM Address by	: <b>Shri. A. Y. Reddy</b> <i>Deputy Commissioner, Navodaya Vidyalaya Samithi, Hyderabad</i>
3:10 PM Address by	: <b>Dr. Radhakrishnan Nair</b> <i>Registrar, CUK</i>
3:20 PM	: <b>Feedback from Participants</b>
3:40 PM	: <b>Remarks by Mentors</b>
3:50 PM	: <b>Presentation of Memento to the Winners</b>
3:55 PM Vote of Thanks	: <b>Dr. Sudha K.</b> <i>Programme Co-ordinator INSPIRE Science Camp</i>
4:00 PM	: Certificate Distribution

Stage co-ordination by **Dr. Elezebeth Mathews**, *Asst. Professor, CUK*

**National Anthem**

*Tea/Coffee*





## **CENTRAL UNIVERSITY OF KERALA**

### **Kasaragod**

The Central University of Kerala, Kasaragod, came into being in 2009 under the Central Universities Act 2009 (Parliament Act No. 25 of 2009). The University is founded on the noble vision of a 'caring wisdom' and is guided by the lofty ideals of academic and social commitment, moral steadfastness and, intellectual and spiritual enlightenment, as reflected in its vision statement. Located in a region characterized by linguistic and ethnic diversity adorned by cultural richness, the University seeks to harness the local resources – human, intellectual, social, artistic and cultural, while bringing in the best that is globally available, thus maintaining a fruitful, symbiotic relationship with a region that profoundly needs an educational uplift. The University opened its academic portals in October 2009 with 17 students enrolling in two PG programmes that functioned from a rented building at Nayanmarmoola (Vidyanagar). From this modest beginning, CU Kerala has grown into a prestigious institution with eleven schools comprising twenty two departments offering twenty one postgraduate and research programmes and UG programmes with a total enrolment of around 1440 students, in the academic year of 2017-18.

Dr. G. Gopa Kumar, the present Vice Chancellor is a veteran academician, eminent social scientist and astute political analyst, who assumed office on 7 August 2014. His vision is to transform the CU Kerala as the epicentre of development in Malabar region in particular and Kerala in general and to keep the national character and outlook in its academic and extracurricular activities.





**DST- INSPIRE SCIENCE CAMP**  
**CENTRAL UNIVERSITY OF KERALA**

26-31 DECEMBER 2017

**DST-INSPIRE INTERNSHIP SCIENCE CAMP: FEEDBACK FROM THE MENTOR**

1. Name and Address of the Mentor: *Prof T S Natarajan*  
(With e-mail address & Mob. No.) *IIT Tirupathi*  
*9962609753*
2. Date of Participation in the Camp: *27/12/2017*
3. Comments about the Infrastructural capacity of the organizing Institute:  
*Very good*
4. Comments on the boarding and lodging facilities made available:  
*Very good*
5. Mentors views on the INSPIRE Internship Camp:  
*Excellent effort*
6. Comments about the interaction with the participating students:  
*Very lively and interesting*
7. Suggestions to further improve the INSPIRE Internship camps:  
*—*
8. Overall impact of the INSPIRE Internship Camp:  
*Excellent*

Signature of the Mentor



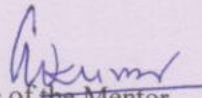


**DST- INSPIRE SCIENCE CAMP**  
**CENTRAL UNIVERSITY OF KERALA**

26-31 DECEMBER 2017

**DST-INSPIRE INTERNSHIP SCIENCE CAMP: FEEDBACK FROM THE MENTOR**

1. Name and Address of the Mentor:  
(With e-mail address & Mob. No.) **Dr. A. VIJAYAKUMAR**  
**PROFESSOR, DEPT. OF MATH**  
**CUSAT**  
**(vijay@cusat.ac.in**  
**9447608851)**
2. Date of Participation in the Camp: **20/12/2017**
3. Comments about the Infrastructural capacity of the organizing Institute:  
**EXCELLENT.**
4. Comments on the boarding and lodging facilities made available:  
**EXCELLENT. VERY WELL TAKEN CARE OF**
5. Mentors views on the INSPIRE Internship Camp:  
**I have been a MENTOR since 2011.**  
**A very rewarding project.**
6. Comments about the interaction with the participating students:  
**Very good.**
7. Suggestions to further improve the INSPIRE Internship camps:  
**May extend for 7 days.**
8. Overall impact of the INSPIRE Internship Camp:  
**Excellent.**

  
Signature of the Mentor.



**DST- INSPIRE SCIENCE CAMP**  
**CENTRAL UNIVERSITY OF KERALA**



26-31 DECEMBER 2017

**DST-INSPIRE INTERNSHIP SCIENCE CAMP: FEEDBACK FROM THE**  
**MENTOR**

1. Name and Address of the Mentor:  
(With e-mail address & Mob. No.) *Prof. S. SIVASUBRAMANIAN  
(Former VC of Bharathiar & Nnamdi Azikiwe  
Universities) Advisor R&D, VELS  
University, Chennai - 600 117*
2. Date of Participation in the Camp: *26<sup>th</sup> and 27<sup>th</sup>*
3. Comments about the Infrastructural capacity of the organizing Institute: *Good.*
4. Comments on the boarding and lodging facilities made available: *U. Good.*
5. Mentors views on the INSPIRE Internship Camp: *Excellent*
6. Comments about the interaction with the participating students: *U. Good*
7. Suggestions to further improve the INSPIRE Internship camps: *Should be in the  
University campus itself.*
8. Overall impact of the INSPIRE Internship Camp: *U. Good.*

*S. Sivasubramanian*  
*27/12/17*  
Signature of the Mentor





**DST- INSPIRE SCIENCE CAMP**  
**CENTRAL UNIVERSITY OF KERALA**

26-31 DECEMBER 2017

**DST-INSPIRE INTERNSHIP SCIENCE CAMP: FEEDBACK FROM THE MENTOR**

1. Name and Address of the Mentor:  
(With e-mail address & Mob. No.)  
Aswin Sai Navin-S  
NCBS, GKVK  
Bellary Rd. Bangalore-65
2. Date of Participation in the Camp: 27th and 28th Dec 2017.
3. Comments about the Infrastructural capacity of the organizing Institute:  
I was very positively impressed by the campus at Navodaya school.
4. Comments on the boarding and lodging facilities made available:  
Excellent. It may be better to have accommodation at a walking distance.
5. Mentors views on the INSPIRE Internship Camp:  
It is a great initiative.
6. Comments about the interaction with the participating students:  
The students were shy to start with, but warmed up rather nicely.
7. Suggestions to further improve the INSPIRE Internship camps:  
Maybe have more lab visits.
8. Overall impact of the INSPIRE Internship Camp:  
Excellent. It must be ramped up to reach more kids.

Signature of the Mentor



**DST- INSPIRE SCIENCE CAMP**  
**CENTRAL UNIVERSITY OF KERALA**

26-31 DECEMBER 2017

**DST-INSPIRE INTERNSHIP SCIENCE CAMP: FEEDBACK FROM THE MENTOR**

1. Name and Address of the Mentor: **MAHESH HARIHARAN**  
(With e-mail address & Mob. No.) **SCHOOL OF CHEMISTRY**  
**IISER - THROUVANANTHAPURAM**
2. Date of Participation in the Camp: **28/12/2017**
3. Comments about the Infrastructural capacity of the organizing Institute:  
**Overall infrastructure is excellent. Audio system & powerpoint worked in perfect way. All the arrangements are made nicely.**
4. Comments on the boarding and lodging facilities made available:  
**Very nice arrangement for boarding and lodging.**
5. Mentors views on the INSPIRE Internship Camp:  
**This is a great program to inspire school kids towards higher education. Mentors of diverse expertise give flavours of what are the opportunities available for the students to pursue in the future.**
6. Comments about the interaction with the participating students:  
**Students are very interactive asking relevant questions from the topic presented as well as the career opportunities.**
7. Suggestions to further improve the INSPIRE Internship camps:  
**Since more and more students interested, similar programs have to be held more in numbers in different batches.**
8. Overall impact of the INSPIRE Internship Camp:  
**This program will show the effects in the future in terms of excellence from the students who participate in this program.**

**Mahesh**  
Signature of the Mentor





**DST- INSPIRE SCIENCE CAMP  
CENTRAL UNIVERSITY OF KERALA**

26-31 DECEMBER 2017

**DST-INSPIRE INTERNSHIP SCIENCE CAMP: FEEDBACK FROM THE MENTOR**

1. Name and Address of the Mentor: *K. S. S. Moosath*  
(With e-mail address & Mob. No.) *Professor & Head  
Dept. of Mathematics  
srmossath @ gmail.com 11ST, Truvandrum*
2. Date of Participation in the Camp: *29.12.17*
3. Comments about the Infrastructural capacity of the organizing Institute: *Good*
4. Comments on the boarding and lodging facilities made available: *Very Good*
5. Mentors views on the INSPIRE Internship Camp: *Students are very active and is well planned.*
6. Comments about the interaction with the participating students: *Students show interest in learning new ideas.*
7. Suggestions to further improve the INSPIRE Internship camps: *include group activities with simple topics.*
8. Overall impact of the INSPIRE Internship Camp: *well organized and is an encouragement for students*

*K. S. S. Moosath*  
Signature of the Mentor  
*29.12.17*





**DST- INSPIRE SCIENCE CAMP  
CENTRAL UNIVERSITY OF KERALA**

26-31 DECEMBER 2017

**DST-INSPIRE INTERNSHIP SCIENCE CAMP: FEEDBACK FROM THE MENTOR**

1. Name and Address of the Mentor: *Dr. Kusuville Joseph*  
(With e-mail address & Mob. No.) *Senior Professor & Dean*  
*II ST, Valiamala, TUM*  
*9447366479* *kusuville@iist.ac.in*
2. Date of Participation in the Camp: *29/12/2017*
3. Comments about the Infrastructural capacity of the organizing Institute:

*Very Good*

4. Comments on the boarding and lodging facilities made available:

*Very Good*

5. Mentors views on the INSPIRE Internship Camp:

*Excellent*

6. Comments about the interaction with the participating students:

*Brilliant students*

7. Suggestions to further improve the INSPIRE Internship camps:

8. Overall impact of the INSPIRE Internship Camp: *Selected students can be given internship programmes at various national institutes/university with attractive fellowship*  
*Excellent as a follow-up programme*

Signature of the Mentor

*(2) Follow-up programmes should be strengthened*



**DST- INSPIRE SCIENCE CAMP**  
**CENTRAL UNIVERSITY OF KERALA**

26-31 DECEMBER 2017

**DST-INSPIRE INTERNSHIP SCIENCE CAMP: FEEDBACK FROM THE MENTOR**

1. Name and Address of the Mentor:  
(With e-mail address & Mob. No.)  
*Dr. A.P. NANDINI.  
apnandoni@yahoo.com.  
9444176096*
2. Date of Participation in the Camp: *29.12.17.*
3. Comments about the Infrastructural capacity of the organizing Institute: *Very good.*
4. Comments on the boarding and lodging facilities made available:  
*Excellent*
5. Mentors views on the INSPIRE Internship Camp:  
*well coordinated.*
6. Comments about the interaction with the participating students:  
*Students are extremely involved*
7. Suggestions to further improve the INSPIRE Internship camps:  
*Sessions will be more effective for the participants if the number group is divided into 2 or 3.*
8. Overall impact of the INSPIRE Internship Camp: *Excellent*

Signature of the Mentor





**DST- INSPIRE SCIENCE CAMP**  
**CENTRAL UNIVERSITY OF KERALA**

26-31 DECEMBER 2017

**DST-INSPIRE INTERNSHIP SCIENCE CAMP: FEEDBACK FROM THE MENTOR**

1. Name and Address of the Mentor:  
(With e-mail address & Mob. No.)

Prof. C. VIJAYAN  
cviijayan@iitm.ac.in  
9445749851

2. Date of Participation in the Camp:

29/12/17

3. Comments about the Infrastructural capacity of the organizing Institute:

Very good.

4. Comments on the boarding and lodging facilities made available:

Excellent

5. Mentors views on the INSPIRE Internship Camp:

very nicely organized  
in spite of the large number

6. Comments about the interaction with the participating students:

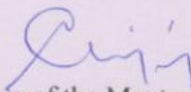
The level of interaction was very good

7. Suggestions to further improve the INSPIRE Internship camps:

Perhaps have duplicate sessions with  
half the number for  
better effectiveness.

8. Overall impact of the INSPIRE Internship Camp:

Excellent

  
Signature of the Mentor  
(C. VIJAYAN)



**DST- INSPIRE SCIENCE CAMP  
CENTRAL UNIVERSITY OF KERALA**

26-31 DECEMBER 2017

**DST-INSPIRE INTERNSHIP SCIENCE CAMP: FEEDBACK FROM THE MENTOR**

1. Name and Address of the Mentor: *Dr. Anil Kumar G*  
(With e-mail address & Mob. No.) *Professor*  
*School of Business and Technology, VIT, Vellore*
2. Date of Participation in the Camp: *30/12/2017 and 31/12/2017*
3. Comments about the Infrastructural capacity of the organizing Institute: *632014*  
*Good facilities to hold such a camp.*
4. Comments on the boarding and lodging facilities made available:  
*good*
5. Mentors views on the INSPIRE Internship Camp:  
*This is an excellent venture to enrich our students at a young stage. I feel this should be continued in more elaborate way involving*
6. Comments about the interaction with the participating students: *Students from small states of India. Needs improvement. Students should come forward for more discussions*
7. Suggestions to further improve the INSPIRE Internship camps:  
*Students from other states should also be included; may not be every time, but ~~once in a while~~ in few of the camps.*
8. Overall impact of the INSPIRE Internship Camp:  
*I have great impression about the Science Camp (INSPIRE), the way it was conducted. Dr. Sudha, the Co-ordinator and the team deserve congratulations.*

Signature of the Mentor

*Anil Kumar G.*

*31/12/2017*





**DST- INSPIRE SCIENCE CAMP**  
CENTRAL UNIVERSITY OF KERALA

26-31 DECEMBER 2017

**DST-INSPIRE INTERNSHIP SCIENCE CAMP: FEEDBACK FROM THE MENTOR**

1. Name and Address of the Mentor: *Rajneesh Bhutani*  
(With e-mail address & Mob. No.) *Dept of Earth Sciences*  
*Pondicherry University*  
*rbhutani@gmail.com, 9443636424*
2. Date of Participation in the Camp: *29-31 Dec. 2017*
3. Comments about the Infrastructural capacity of the organizing Institute:  
*All required infrastructure was available*
4. Comments on the boarding and lodging facilities made available: *Excellent*
5. Mentors views on the INSPIRE Internship Camp:  
*This is an important activity and I believe that it is achieving its stated objective of inspiring young students to take up basic sciences, at least in case of a few students, as*
6. Comments about the interaction with the participating students: *evident by the alumni students were quite forthcoming and interactive of the program. and I enjoyed the interaction.*
7. Suggestions to further improve the INSPIRE Internship camps:  
*organizers have taken many many innovative steps like group interactions with mentors, walk with mentors. It might be*
8. Overall impact of the INSPIRE Internship Camp: *a good idea to let the students have some formal interaction with each other.*  
*Overall, I think, a student participant would have been going back with some enriching experience.*

Signature of the Mentor



**DST- INSPIRE SCIENCE CAMP**  
**CENTRAL UNIVERSITY OF KERALA**



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26-31 DECEMBER 2017

**INSPIRE INTERNSHIP SCIENCE CAMP: FEEDBACK FORM FOR STUDENT**

1. Name and Address of the student:

(With their school name, e-mail address & Mob. No.)

Amutha Priya K.T , Karuvammathu Thattathil , Koonathara P.O  
ST. Therese HSS, Shoranur. 8943994629 , 7034417548  
eshylamair@gmail.com

2. Comments about the Infrastructural capacity of the organizing Institute:

Good , sufficient infrastructural facilities .

3. Comments on the boarding and lodging facilities made available:

Non confusing , good boarding & lodging facilities.  
Actually, the stay in hostel really taught us to  
save water , not to waste it .

4. Comments about the payment of Travelling cost to the participating students:

5. Comments on the interactive talks delivered by the Mentors:

Interactive section was nice! We all got chances to talk  
and interact with mentors. Even they were ready to  
answer silly questions.



6. Comments on the practical/hands on experience:

Great experience, because we saw so many interesting things, that we may not see in our entire life. They show us a glimpse of what we will do, if we take or choose different fields.

7. Student views on the INSPIRE Internship Camp:

Life changing camp. INSPIRE Camp really created a confusion in my mind, what to choose for future. Now I have a variety of career options to thought of.

8. Comments on the scientific discussion with the Mentors:

Mentors gave us so many "threads" of thoughts for thinking. They gave overall information about every field.

9. Suggestions to further improvement of the INSPIRE Internship camp:

I think all coordinators have tried their maximum to make this camp best. Also Camp was also a success. My suggestion is that you guys should continue organizing camps, because other students should also want to get this opportunity like that we got.

10. Overall impact of the INSPIRE Internship Camp:

The impact of INSPIRE Camp was very huge. It have really helped in creating so many thoughts in my mind about different career option. I would really like to be a part of inspire programmes. Hope I would get more chances to be a part I thank all of them for selecting me.

Signature of the Student

Sudha mam, love you so much. You are really an inspiring role model. The character that I like about Sudha mam is her 'simplicity'.

- LOVE this inspiring INSPIRE camp. Thank you.



**DST- INSPIRE SCIENCE CAMP**  
**CENTRAL UNIVERSITY OF KERALA**



C5 G

26-31 DECEMBER 2017

**INSPIRE INTERNSHIP SCIENCE CAMP: FEEDBACK FORM FOR STUDENT**

1. Name and Address of the student: **AISWARYA-M**  
(With their school name, e-mail address & Mob. No.)

K-V-No.1 CPRI Kasaragod. School Address = K-V-No-1 CPRI, PO Kudlu R.S.D  
email :- **aiswaryakvksd@gmail.com**  
Mob :- **9447365721, 9495536981**

2. Comments about the Infrastructural capacity of the organizing Institute:

Infrastructural capacity was good. But the students at the back could not actively involve in the sessions due to large no. of students.

3. Comments on the boarding and lodging facilities made available:

It was good. The bag provided proved very efficient. So that we would not miss the bag.  
Hostel facilities were quite good. except the availability of the water.

4. Comments about the payment of Travelling cost to the participating students:

Its a very good idea. Students could afford for a free cost camp.

5. Comments on the interactive talks delivered by the Mentors:

It was good. Even we were able to personally approach the eminent personalities.  
The teachers really motivated us. They ~~gave~~ showed us the right direction.



6. Comments on the practical/hands on experience:

The practicals were interesting. We could visualise many things. But the only problem was, the groups were large. So one group had many members. So, we couldn't see the experiments clearly.

7. Student views on the INSPIRE Internship Camp:

INSPIRE Internship camp was really good. We the students got the correct guidance into the field of science. We got golden opportunities to meet many eminent personalities and interact with them.

8. Comments on the scientific discussion with the Mentors:

It was good. I could gather many extra knowledge in science. ~~So~~ topics like nanotechnology, femtosecond spectroscopy was new to me. But now I am familiar with those topics.

9. Suggestions to further improvement of the INSPIRE Internship camp:

- class could have done like some group will present something
- groupwise activities could also have been included.
- groupwise the practicals should have been done by the students.

10. Overall impact of the INSPIRE Internship Camp:

Got inspired. Got more information in the field of science. I also got basic ideas in the field of science. INSPIRE Internship camp has improved my knowledge in science. I could understand the various fields in science.

Signature of the Student

*Arshad*



**DST- INSPIRE SCIENCE CAMP**  
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**INSPIRE INTERNSHIP SCIENCE CAMP: FEEDBACK FORM FOR STUDENT**

1. Name and Address of the student:

(With their school name, e-mail address & Mob. No.)

Aishwarya K.P - Mappikengad house (P.O) Panayal, (via) Bekal, Kavaragod.  
CHSS Chattanchal  
Mob No : 9544768224

2. Comments about the Infrastructural capacity of the organizing Institute:

The whole 'INSPIRE' crew inculcated new excitements of science in each individual. We are gratitude to participate in this residential camp hosted by Central University of Kerala. The programme implemented by DST results only in success because of the presence of well planned <sup>facilities</sup> and proper hospitality.

3. Comments on the boarding and lodging facilities made available:

The JNU took the initiative to implement the boarding and lodging facilities. Even though there was only less availability of water at some extent, we adjusted it. Moreover we realised that we must struggle to lead a successful life.

4. Comments about the payment of Travelling cost to the participating students:

My house situates nearby itself. So travelling cost was not a problem.

5. Comments on the interactive talks delivered by the Mentors:

The mentors interacted with us effectively. Thereby we realised the significance of various science fields and related terms. We cleared our doubts too.



6. Comments on the practical/hands on experience:

We visited various departments of CUK. We met with research scholars of respective departments. We realised new technologies and its significance.

7. Student views on the INSPIRE Internship Camp:

The 'INSPIRE' Residential camp really moulded our character effectively. The camp has able to inculcate scientific thoughts in us to fix my goal and carrier.

8. Comments on the scientific discussion with the Mentors:

The different sessions about various subjects helped us to know more about it. We realised the unknown terms. The mentors taught the scopes of each field to be taken as our carrier. The title itself reveals that it is too inspiring.

9. Suggestions to further improvement of the INSPIRE Internship camp:

According to my view, it is better to have a subject on entrance test practise and other major exams.

10. Overall impact of the INSPIRE Internship Camp:

The camp helped me to mingle with new friends. The interaction and discussion with mentors helped to increase knowledge about unfamiliar topics. The camp nurtured us by providing moral qualities as to be scientific.

  
Signature of the Student





**DST- INSPIRE SCIENCE CAMP**  
**CENTRAL UNIVERSITY OF KERALA**



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26-31 DECEMBER 2017

**INSPIRE INTERNSHIP SCIENCE CAMP: FEEDBACK FORM FOR STUDENT**

1. Name and Address of the student:

(With their school name, e-mail address & Mob. No.)

Sharath Raghavan

Jawahar Navodaya Vidyalaya  
Periyar, Kasargod.

Madathil (H),

Achickanam P.O., Ammankulam

Email- Sharathomg5@gmail.com.

- Ammankulam (via) Pin 671320

2. Comments about the Infrastructural capacity of the organizing Institute:

The hostel stay was really good. and it was all good.

3. Comments on the boarding and lodging facilities made available:

Best in cleanliness and well managed.

4. Comments about the payment of Travelling cost to the participating students:

5. Comments on the interactive talks delivered by the Mentors:

Resourceful and ~~also~~ informative.

6. Comments on the practical/hands on experience:

On My experience with the lab facilities in the CUk campus, the practical session was extremely good and had driven me with curiosity.

7. Student views on the INSPIRE Internship Camp:

The camp is really nice. The organising was ~~was~~ that good and all the volunteers were really good.

8. Comments on the scientific discussion with the Mentors:

Most of the question was answered and they thought us about the opportunities awaiting for us in the field of Science.

9. Suggestions to further improvement of the INSPIRE Internship camp:

Science field trip could have been included.

10. Overall impact of the INSPIRE Internship Camp:

The best Science Camp I have ever been part of. Memorable.

  
Signature of the Student



**DST- INSPIRE SCIENCE CAMP**  
**CENTRAL UNIVERSITY OF KERALA**



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26-31 DECEMBER 2017

**INSPIRE INTERNSHIP SCIENCE CAMP: FEEDBACK FORM FOR STUDENT**

1. Name and Address of the student: *Aiswarya B. Pradeep.*  
(With their school name, e-mail address & Mob. No.)

*K.V No.1 CPCRI, Kasaragod. - ,  
Mobile no. - 9633789190.*

2. Comments about the Infrastructural capacity of the organizing Institute:

*The infrastructural ~~on~~ capacity was spellbound. The two projectors on the either side made sure that the slides are visible to all. The way everything was organised was in a really ~~good~~ comfortable manner.*

3. Comments on the boarding and lodging facilities made available:

*The boarding ~~and~~ lodging facilities provided on the very first and last days of the camp were really a well managed one. It was really systematic. The lodging facilities were better than what was thought of. We had a comfortable stay.*

4. Comments about the payment of Travelling cost to the participating students:

*First of all, the camp was conducted free of cost for every students. The only expenditure was of the transport. Now, it is also being provided to the participating students. So, I think it ~~is~~ <sup>is</sup> very helpful for those who ~~don't~~ <sup>lack</sup> access to ~~more~~ <sup>enough</sup> money.*

5. Comments on the interactive talks delivered by the Mentors:

*The interactive talks delivered were really interesting. It was overwhelming to know many unanswered questions that stayed in our minds. The mentors were really open minded and ~~know~~ <sup>kind</sup> enough to share all the informations.*



6. Comments on the practical/hands on experience:

The practical sessions were good enough but there was lack of time to view all the laboratories and experiment. The facilities were pretty good and we had a nice time with the mentors.

7. Student views on the INSPIRE Internship Camp:

INSPIRE Internship camp has really made me ask questions on even small things that happen. A change in personality, curiosity have also arisen in me.

It was, in total an informative, innovative and inspiring camp.

8. Comments on the scientific discussion with the Mentors:

The scientific discussion with mentors were very informative.

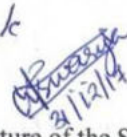
It has really awakened the sense of scientific skills in us. It was really fantastic to find out the different career options provided in the science field.

9. Suggestions to further improvement of the INSPIRE Internship camp:

The camp was really an inspiring one. Some suggestions are that, not to ask such suggestions. Because I found everything well up to the mark. The food, amenities, interactive sessions.

10. Overall impact of the INSPIRE Internship Camp:

It has really inspired me a lot. It has made me strong enough to stick on to my career or ambition. I got a lot of information, which I am sure that will help me a lot in future. I thank everyone, including God because I got such an opportunity.

  
Signature of the Student



**DST- INSPIRE SCIENCE CAMP**  
**CENTRAL UNIVERSITY OF KERALA**



26-31 DECEMBER 2017

**INSPIRE INTERNSHIP SCIENCE CAMP: FEEDBACK FORM FOR STUDENT**

1. Name and Address of the student:

(With their school name, e-mail address & Mob. No.)

*Arundhathi Padmanabhan,*

*JNV Periyar, Kasaragod*

*arundhathiadithyan2000@gmail.com, Mob - 9447057838*

2. Comments about the Infrastructural capacity of the organizing Institute:

*It was fine, the washrooms, deermatories were hygienic.*

*The water was just released on in specific given timings and at some point of the camp days, it created havoc among the students, but water scarcity is indeed a problem in these regions.*

3. Comments on the boarding and lodging facilities made available:

*As described above*

4. Comments about the payment of Travelling cost to the participating students:

*It's a good activity, coz many students have spared their christmas celebration for travelling purposes.  
So valuing their sincerity.*

5. Comments on the interactive talks delivered by the Mentors:

*Speaking about the interactive sessions, I was girl who walked in with many questions, now at the end of the camp I am the same girl who walks out with many answers and decisions. Very exuberating pleasurable sessions*

*Very active.*

*But missed an interactive session with Dr kuruvila.*



6. Comments on the practical/hands on experience:

Good, & interesting & thrilling experience.  
Invokes curiosity in us.

7. Student views on the INSPIRE Internship Camp:

An essential, apt best camp, I've  
ever participated. It could mould a  
student.

8. Comments on the scientific discussion with the Mentors:

Yes, it could answer many of our wonderful questions.

9. Suggestions to further improvement of the INSPIRE Internship camp:

Topics like Space Science could be introduced. In the initial  
period of selection, you could ask for selected students ambitions  
and so, sessions could be planned like wise according to  
the popular interest. Session could include competitions (scientific)  
& at last it could've end with some inspirational ~~videos~~ videos.

10. Overall impact of the INSPIRE Internship Camp:

Changed for better

A Great Exposure, indeed excellent.

  
Signature of the Student





**DST- INSPIRE SCIENCE CAMP**  
**CENTRAL UNIVERSITY OF KERALA**



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26-31 DECEMBER 2017

**INSPIRE INTERNSHIP SCIENCE CAMP: FEEDBACK FORM FOR STUDENT**

1. Name and Address of the student: Ananya Ganesh.c  
(With their school name, e-mail address & Mob. No.)

Govt. Beemden HSS, Thalassery  
genesha.n.c@gmail.com  
9447684496

2. Comments about the Infrastructural capacity of the organizing Institute:

CUK has provided us with all the necessary facilities.  
I did not feel any discomfort. It was good.

3. Comments on the boarding and lodging facilities made available:

The lodging facilities made at JNV was good. But we felt water scarcity. On the first two days it was very difficult then I tried to adjust with it. Now I am OK with my accommodation.

4. Comments about the payment of Travelling cost to the participating students:

It is a very good method because ~~students~~ it will be beneficial for students coming from longer distances.

5. Comments on the interactive talks delivered by the Mentors:

Every talks were really inspiring. ~~Before~~ I have improved a lot after coming here.

6. Comments on the practical/hands on experience:

The most interesting one of was the practical session. The visualisation of many theories made us easy to understand the Concepts.

7. Student views on the INSPIRE Internship Camp:

It was really appreciable. Many students across Kerala including me, have got an accurate aim about their future. I learned many important things after coming here.

8. Comments on the scientific discussion with the Mentors:

After the scientific discussions with Mentors I became more interested towards the world of science.

9. Suggestions to further improvement of the INSPIRE Internship camp:

The only one thing that I felt was that, the volunteers should provide us with <sup>our</sup> phone at the night to call our parents. But they gave their phone on the next morning to call our parents. It was good.

10. Overall impact of the INSPIRE Internship Camp:

It made many impact on my life. It was really an golden opportunity for me to get-interacted with many eminent Scientists, research scholars and the students all across Kerala.

Signature of the Student





**DST- INSPIRE SCIENCE CAMP**  
**CENTRAL UNIVERSITY OF KERALA**



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26-31 DECEMBER 2017

**INSPIRE INTERNSHIP SCIENCE CAMP: FEEDBACK FORM FOR STUDENT**

1. Name and Address of the student:

(With their school name, e-mail address & Mob. No.)

NK · Mahitha

Jnvahas Navodaya Vidyalaya Periyar, Kasaragod  
manjumahitha123@gmail.com. 9746353917

2. Comments about the Infrastructural capacity of the organizing Institute:

The central University of Kerala (CUK), organising institute had made the camp very comfortably and it was conducted in a ordered way.

3. Comments on the boarding and lodging facilities made available:

The lodging facilities were very good. They had made all the arrangement before the arrival of the students.

4. Comments about the payment of Travelling cost to the participating students:

5. Comments on the interactive talks delivered by the Mentors:

The interaction with different mentors were very excellent and were very effective. It had cleared many of our questions about various things.



6. Comments on the practical/hands on experience:

The practical session was a different experience. It was very exciting and well arranged.

7. Student views on the INSPIRE Internship Camp:

INSPIRE Internship Camp was very effective. We could interact with many resource person and got lot of information which will be very useful in the future.

8. Comments on the scientific discussion with the Mentors:

The scientific discussion with the mentors gave a lot of information about the scientific things. It was very effective, interesting.

9. Suggestions to further improvement of the INSPIRE Internship camp:

The camp was good.

10. Overall impact of the INSPIRE Internship Camp:

Able to get lot of information about various aspects of scientific field. Got lot of information about various science related premier institutes and different courses and got enough opportunities to interact with many resource person from various part of the country.

Signature of the Student





**DST- INSPIRE SCIENCE CAMP**  
**CENTRAL UNIVERSITY OF KERALA**



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26-31 DECEMBER 2017

**INSPIRE INTERNSHIP SCIENCE CAMP: FEEDBACK FORM FOR STUDENT**

1. Name and Address of the student: -  
(With their school name, e-mail address & Mob. No.)

2

NANDANA RATHNA  
ANAND BHAVAN  
P.O KOYVAM  
KANNUK  
G.HSS KOYVAM, KANNUK  
9495126254

2. Comments about the Infrastructural capacity of the organizing Institute:

Organizing institute have a good infrastructural capacity except water.

3. Comments on the boarding and lodging facilities made available:

From lodging facilities the water is less only less available.

Other facilities are made available good with comfortable

4. Comments about the payment of Travelling cost to the participating students:

From Thalipavamba to karbagadu I spend 41 Rs. and from there to Periyar, JNV we come through the auto.

5. Comments on the interactive talks delivered by the Mentors:

It is a very good experience and gave many ideas of science.

6. Comments on the practical/hands on experience: Experience has a good hands on this camp.

7. Student views on the INSPIRE Internship Camp: It was really a ~~e~~ inspiring camp that gave us many  $\Delta$  innovations, ~~and e~~ ideas and experience.

8. Comments on the scientific discussion with the Mentors: The discussion with mentors clear the doubts of ~~us about~~ science.

9. Suggestions to further improvement of the INSPIRE Internship camp: The water from the lodge is ~~only~~ one and ~~only~~ one <sup>at</sup> problem we ~~faced~~ <sup>faced</sup> this camp. Otherwise this ~~was~~ camp has not any false

10. Overall impact of the INSPIRE Internship Camp: We could understand the different department of science and we could met many of highly known persons.

Signature of the Student





**DST- INSPIRE SCIENCE CAMP**  
**CENTRAL UNIVERSITY OF KERALA**



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26-31 DECEMBER 2017

**INSPIRE INTERNSHIP SCIENCE CAMP: FEEDBACK FORM FOR STUDENT**

1. Name and Address of the student: Ananya Ganesh.c  
(With their school name, e-mail address & Mob. No.)

Govt. Beemden HSS, Thalassery  
genesha.n.c@gmail.com  
9447684496

2. Comments about the Infrastructural capacity of the organizing Institute:

CUK has provided us with all the necessary facilities.  
I did not feel any discomfort. It was good.

3. Comments on the boarding and lodging facilities made available:

The lodging facilities made at JNV was good. But we felt water scarcity. On the first two days it was very difficult then I tried to adjust with it. Now I am OK with my accommodation.

4. Comments about the payment of Travelling cost to the participating students:

It is a very good method because ~~students~~ it will be beneficial for students coming from longer distances.

5. Comments on the interactive talks delivered by the Mentors:

Every talks were really inspiring. ~~Before~~ I have improved a lot after coming here.

6. Comments on the practical/hands on experience:

The most interesting one of was the practical session. The visualisation of many theories made us easy to understand the Concepts.

7. Student views on the INSPIRE Internship Camp:

It was really appreciable. Many students across Kerala including me, have got an accurate aim about their future. I learned many important things after coming here.

8. Comments on the scientific discussion with the Mentors:

After the scientific discussions with Mentors I became more interested towards the world of science.

9. Suggestions to further improvement of the INSPIRE Internship camp:

The only one thing that I felt was that, the volunteers should provide us with <sup>our</sup> phone at the night to call our parents. But they gave their phone on the next morning to call our parents. It was good.

10. Overall impact of the INSPIRE Internship Camp:

It made many impact on my life. It was really an golden opportunity for me to get-interacted with many eminent scientists, research scholars and the students all across Kerala.

Signature of the Student







**DST- INSPIRE SCIENCE CAMP**  
**CENTRAL UNIVERSITY OF KERALA**



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26-31 DECEMBER 2017

**INSPIRE INTERNSHIP SCIENCE CAMP: FEEDBACK FORM FOR STUDENT**

1. Name and Address of the student:

(With their school name, e-mail address & Mob. No.): - Nikhitha Joy, D10 Joy Joseph N,  
Alaiippara (H), Kappumkara, Azhikode (S), Kannur, 670009.  
Chorva Higher Secondary School, Chorva, Kannur.  
nikhitha910@gmail.com  
97464381015, 9605073598.

2. Comments about the Infrastructural capacity of the organizing Institute: Infrastructural capacity of organising institute was ~~very~~ so nice. Especially our volunteers and the masters of brain, our ~~adha~~ ~~miss~~ miss. Really it's a fabulous program.

3. Comments on the boarding and lodging facilities made available: I'm not comfortable with hostel facilities. Especially water. Some times we could not bath. It was our main problem. But the other facilities are good and we can adjust with all other facilities. And food was very tasty. I loved it.

4. Comments about the payment of Travelling cost to the participating students: To me It was a small high amount. Because my journey was in bus. ~~to~~ Kannur (Azhikode) to Kasargod (Perise)

5. Comments on the interactive talks delivered by the Mentors: I like it. It was so useful. Especially I like the class of Dr. Kammitha Joseph. But I did not get a chance to interact with him. He had no time to interact with us. I felt so sad. And all others are really very good.



6. Comments on the practical/hands on experience: ~~make~~ <sup>make</sup> excitement in my mind. I loved this section. Especially chemistry and physics. And I've ~~an~~ request that you would include a sky observation session. Because so many students ~~are~~ <sup>are</sup> here, who ~~are~~ <sup>are</sup> interest in space.
7. Student views on the INSPIRE Internship Camp: I've no words to this camp. It was a fabulous experience in my life. I was so sad about my lack of confidence. But this camp could give the confidence. Now I'm sure that I can achieve my goal I'm so confident.
8. Comments on the scientific discussion with the Mentors: The discussion could change my small mind. It was very useful. I could know about my dream campus IIST and so many other campuses. Nanotechnology class was good. I could realise that the science is an amazing thing. It's so wonderful.
9. Suggestions to further improvement of the INSPIRE Internship camp: ~~I~~ I think ~~this~~ this camp ~~is~~ can wear the crown of an ideal camp. It was an another APT Abdul Kalam. Because of the motivation words of Professors. But if we have ~~an~~ sky observation session, it will reach the high position of camps.
10. Overall impact of the INSPIRE Internship Camp: I'm really grateful to our ~~duelha~~ miss. Every lectures are awesome and very useful. This camp ~~has~~ <sup>can</sup> change my life, every one's life. And there will always feel the influence of this camp in our ~~daily~~ future.

Signature of the Student



**DST- INSPIRE SCIENCE CAMP**  
**CENTRAL UNIVERSITY OF KERALA**



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26-31 DECEMBER 2017

**INSPIRE INTERNSHIP SCIENCE CAMP: FEEDBACK FORM FOR STUDENT**

1. Name and Address of the student: Aarany V. Babu, P/O Babu V. G, Velluparambil (H),  
(With their school name, e-mail address & Mob. No.) Kazhuvilangu, P.O. Mathilakam, Thrissur.  
school - HSS Parangood email address - vjbabuv@gmail.com.  
mob. No - 9447673330

2. Comments about the Infrastructural capacity of the organizing Institute:

Infrastructural capacity is good. The auditorium ~~also~~ could accommodate its students very comfortably. And the mess also was good.

3. Comments on the boarding and lodging facilities made available:

The dormitories were clean and neat. But the number of washrooms were less and the water was available only on some specific time in washrooms.

4. Comments about the payment of Travelling cost to the participating students:

Payment of travelling cost is going in a good way. There is no need to change the mode of payment of travelling cost.

5. Comments on the interactive talks delivered by the Mentors:

It was very informative sessions. The experiences of the mentors ~~make~~ us motivate us. Through this sessions we could solve our doubts.



6. Comments on the practical/hands on experience: It was the most interesting session in the inspire camp. It attracts our mind to science. Especially the chemistry practical. We could know about many machines using for the experiments. All the teachers explained well about the experiment.

7. Student views on the INSPIRE Internship Camp: It attracts every science stream students to the science. And help us to take a decision about future. It gives a wonderful experience and the students can explore ~~the~~ the science in this camp.

8. Comments on the scientific discussion with the Mentors:


It was very informative. They solve our doubts through the scientific phenomena. They also add more knowledge with our answer. They also teach us to analyse a problem.

9. Suggestions to further improvement of the INSPIRE Internship camp:

Inspire is a very good camp for children. I think lodging facilities should be improve more. And the sessions with physics were comparatively less. So have to include more physics sessions. And if the lab sessions divide into all days it would be more effective and comfortable.

10. Overall impact of the INSPIRE Internship Camp:

We all are attracted to the study of science by this camp. It is marvellous and effective camp that can be given to a student. The program should be continue ~~also~~ in coming years also.



Signature of the Student





**DST- INSPIRE SCIENCE CAMP**  
**CENTRAL UNIVERSITY OF KERALA**



68

26-31 DECEMBER 2017

**INSPIRE INTERNSHIP SCIENCE CAMP: FEEDBACK FORM FOR STUDENT**

1. Name and Address of the student: Ananya Ganesh.c  
(With their school name, e-mail address & Mob. No.)

Govt. Beemden HSS, Thalassery  
genesha.n.c@gmail.com  
9447684496

2. Comments about the Infrastructural capacity of the organizing Institute:

CUK has provided us with all the necessary facilities.  
I did not feel any discomfort. It was good.

3. Comments on the boarding and lodging facilities made available:

The lodging facilities made at JNV was good. But we felt water scarcity. On the first two days it was very difficult then I tried to adjust with it. Now I am OK with my accommodation.

4. Comments about the payment of Travelling cost to the participating students:

It is a very good method because ~~students~~ it will be beneficial for students coming from longer distances.

5. Comments on the interactive talks delivered by the Mentors:

Every talks were really inspiring. ~~Before~~ I have improved a lot after coming here.

6. Comments on the practical/hands on experience:

The most interesting one of was the practical session. The visualisation of many theories made us easy to understand the Concepts.

7. Student views on the INSPIRE Internship Camp:

It was really appreciable. Many students across Kerala including me, have got an accurate aim about their future. I learned many important things after coming here.

8. Comments on the scientific discussion with the Mentors:

After the scientific discussions with Mentors I became more interested towards the world of science.

9. Suggestions to further improvement of the INSPIRE Internship camp:

The only one thing that I felt was that, the volunteers should provide us with <sup>our</sup> phone at the night to call our parents. But they gave their phone on the next morning to call our parents. It was good.

10. Overall impact of the INSPIRE Internship Camp:

It made many impact on my life. It was really an golden opportunity for me to get-interacted with many eminent Scientists, research scholars and the students all across Kerala.

Signature of the Student





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## DST-INSPIRE INTERNSHIP SCIENCE CAMP: SUMMARY OF FEEDBACK BY THE PROGRAMME CO-ORDINATOR

1. Name and Address of the Host Institute: Central University of Kerala, Periyar, Kasaragod
2. Date/Duration of the INSPIRE Internship Camp: 26-31 December 2017
3. Number of participating INSPIRE Interns: 156

Sl.No.	Summary of INSPIRE Interns Comments on:	Poor (1)	Satisfactory (2)	Good (3)	Very Good (4)	Excellent (5)
1	The Infrastructural capacity of the organizing Institute		22		48	86
2	Boarding and lodging facilities			46	60	50
3	Payment of Travelling cost			84	72	
4	Interactive talks & Discussion with the mentors				24	132
5	Hands on experience			32	80	44
6	Suggestions to further improve the INSPIRE Internship camps:  Camp visit by DST officials would have great impact and also much inspiration not only to the institution and also to the participants.					

Note: Sum total of the Feedback (1+2+3+4+5) should be equal to the number of participating INSPIRE Interns. This summary shall be completed based on the individual INSPIRE Interns feedback submitted for the respective INSPIRE Internship Science camp.

Signature of the Programme Co-ordinator

**Dr. SUDHA. K**  
 Associate Professor, Department of Animal Science  
 School of Biological Science  
 Central University of Kerala  
 Riverside Transit Campus, Padannakkad  
 Kasaragod, Nileshevar 671314, Kerala, India



## RECYCLING AND PROCESSING OF WASTE TO CONSERVE RESOURCE

"Where there is cleanliness, there is god himself"  
- Mahatma Gandhi.

"India is the world's second most populous country with millions of people living in the urban and rural areas. Being a developing country with huge population, one can imagine the quantity of waste produced daily. These include both organic and inorganic like food waste, sewage, toilet, agricultural, plastic wastes, wastes from refineries and highly toxic wastes including hospital wastes, batteries etc. Management of these wastes is a very difficult problem as apart from the 'Cooperation' and Municipality, these wastes aren't collected mostly. So most people litter these waste in roadsides and open places. Management of these wastes is the need of the hour as numerous diseases spread during rainy seasons because of these wastes.

Though the government has launched numerous programs like "Swachh Bharat Abhiyan", there need to be more management of the wastes. The most important part is there should be somebody to collect these wastes from the people. In Kerala, "Kudumbashree" has been very successful in collecting the wastes from the houses of people all around. They need to collect the organic (~~the~~ wastes such as food waste) and inorganic wastes (like plastic wastes which are neatly cleaned and dried by the people, broken glasses, leather, ~~old~~ old cloths etc.). The organic wastes including both food waste and other fallen leaves can be made into manure. These manure can be produced by small entrepreneurs and can be supplied to the farmers or people in need for low costs. For ~~these~~ setting up such small business, initially the government must provide support. Both the cotton, jute and polyester cloths can be made into reusable bags which can be used for shopping. These can be produced collectively by the people and sold at exhibitions. Also very helpful materials like baskets, decorative flowers and vase, pen holders, photo frames, toys and other decorative items can be made from plastic bottles and other plastic materials and sold at exhibitions. Mats,



Metal wastes can be collected and sent for recycling. These can be either done individually or collectively. Also metal electrodes can be removed from batteries / electric cells and sent for recycling.

• There is a process called Pyrolysis. Pyrolysis is a process in which the waste materials like old wood (furniture), leather, rubber tyres etc. are heated at high temperatures beyond their melting and by chemical processes are turned into fuels. Though this set up is initially a bit costly, but we can easily manage the wastes like rubber, leather etc, old furniture/wood etc.

But the care should be taken that all these wastes sent should be neat and clean. Recycling is the last option. The most important is to reduce. Then to reuse and at last to recycle. Recycling factories can be set up by individuals or collectively. For example in Westhill in Calicut, a young entrepreneur has set up a plastic recycling factory. He collects the waste plastic wastes from Kunderumbashree and suppliers and recycles which will fetch him ₹ 30 per packet of recycled plastics.

Another initiative can also be taken. This is a very important concept. We should bring such a system that we should increase the cost of all plastic items by a small amount of ₹ 5 or ₹ 10. Then the people should be urged to return these plastic wastes neatly to those shopkeepers or people collecting these wastes. At that time for each plastic commodity the person should be returned the extra money. Also the person collecting these should get some small amount of ₹ 2 to ₹ 3. This will ensure people will no longer throw away wastes. Also waste tanks with small opening for disposing only plastic wastes should be installed at every city which can be drained to avoid robbery.

But also other factories producing different things can be appreciated and provided some privilege if they take ~~the~~ wastes which are produced from their products like packets, wrappers etc.

Electrical wastes can also be sent for recycling and the wires and small equipments can be used to make decorative items at home.

The most important thing is that we are responsible for our own wastes produced. Being eco friendly is most important.



- As bricks: Fill clayey soil in equal sized old plastic bottles cut at the ends in the form of cylinders. After filling the clayey soil, arrange them in the form of bricks one above the other and plaster with mud. This technique can be used in house/ tent constructed for short period of time.
- Old used cotton in hospitals: Clean properly the cotton used in hospitals neatly. Very ~~use~~ much care to be taken in properly cleaning the used cotton. Then use them to fill the bed cots (soft bed cots) and sofa settees.
- In our dress materials, there are net materials (in churidars etc.) Sew them together and use as mosquito net.
- Use old used juice straws in chemical laboratories for taking the chemicals from conical flasks in place of new glass straws.
- Use your water used for cleaning and washing vessels in home garden than fresh water.
- Modify the used juice straws by shortening their ~~the~~ diameter by cutting them and making them small and fix a nib at ~~the~~ one end. Then modify a used normal straw as pen's body after small modifications. Pens can be made from waste materials.
- Grind nicely old newspaper sheets using water. After they form a nice paste spread them with same width applying some gum. Then allow them to dry. Your cardboard is ready and use them as your clip board after fixing the pin and make your own files and paper holders from them.
- New furniture can be made from old. Take the old but strong wooden particles and use them to make new furniture.
- Waste management: Increase the amount of plastics from initial amount by ₹ 8 to ₹ 10. When people should be urged to return them. When they return them, that <sup>amount</sup> should be returned back. This can prevent the throwing of plastics on environment.



RECYCLING AND PROCESSING  
TO CONSERVE RESOURCES

Waste management is one of the major problem faced by our society in the present century. With the increase in urbanisation, the amount of wastes generated are increasing day by day. This is posing a problem both for the nature and mankind. It's high time we find a solution to this major threat.

The 3 R's - 'Reuse', 'Reduce' and 'Recycle' are one of the best ways to treat non-biodegradable wastes such as plastics. The disposal of plastic bags and bottles in water bodies are causing a major threat to the aquatic organisms living there. By bringing a stop to this, we can make a drastic change in the present situation. The use of waste recycling bins which separates the non-biodegradable wastes from the degradable ones can be used to minimise its effect. With the help of sensors, we can perfectly identify the non-degradable wastes such as plastics and in turn recycle them into useful products. These recycled

products can be again reused and in this way we can reduce the amount of plastics disposed in the environment.

Another way to recycle the non-biodegradable wastes is by making new products with them for crafts and showcasing purposes. The plastic bags and bottles can be treated and recycled to create new products.

The process of landfilling with a more developed technology can be used to treat a major amount of wastes.

At home, we can reduce the amount of wastes generated by proper treatment and recycling of products.

The "Bio-gas plant" can be installed in every home to dispose degradable wastes and in turn generate electricity with it. This is not just a waste management method, but also an energy conservation one. Water treatment plants are also a good way to treat waste water. The wastewater from kitchen, washrooms etc can be treated with appropriate methods and can be used for various other purposes. The vermi-compost plant is another meticulous step. With the use of natural bio-degraders, we can process waste and this processed waste can be further used as manure for agriculture.



## RECYCLING, PROCESSING OF WASTE RESOURCES.

# C1/15.

To reduce the amount of non-biodegradable waste such as plastic get accumulated in our surroundings, we can build a completely automatic recycling machine.

\* In this machine, we can dispose all our household wastes.

\* At the opening of the disposal area, it should have a sensing mechanism to differentiate between the biodegradable and non-biodegradable wastes.

\* The bio-degradable wastes should be treated using appropriate methods and the manure formed could be transported to the soil for agricultural purposes.

\* At the top of the disposal bin, there should be an ultrasonic sensor. This ultrasonic sensor should be connected to a circuit and attached to the lid of the bin so that, when the bin is full, the ultrasonic sensor detects the presence of objects at the top and automatically closes the lid. This can be programmed using an arduino.

\* The non-biodegradable wastes collected should be treated scientifically and should be recycled into new useful products.

\* When one round of waste is usefully recycled, the lid opens again for the next filling.

\* The non-biodegradable materials collected can also be treated and made into useful raw materials that could be given to the factories to produce our products.



# RECYCLING & PROCESSING OF WASTE TO CONSERVE RESOURCES

Athi K. Raghavan  
Kendriya Vidyalaya  
Payyanur  
C4/22

This is a very striking topic for today's modern & fast growing & running India. Recycling is very ~~se~~ essential ~~for~~ word or an essential process to which we have to put our mind on & think deeply. As our life is changing so rapidly in every second, we ~~are~~ are running behind every new technologies, we've to emerge with new ideas. Ideas that are innovative to this society. Innovative itself give us ~~a~~ the picture that it is beneficial for the society. Such a big problem is PLASTIC. Processing plastic, ~~more~~ or recycling plastic doesn't create a solution for the society. We've to vanish the word 'plastic' & ~~to~~ have to think of a substitute for it. ~~Such a slight~~ It's the time to think & act. ~~And~~ Introduction of such a biodegradable polymer from pseudo stem of banana would really change ~~#~~ & the position of plastic from our daily life. As the pseudo stem of banana is rich in fibres there will be strong bond between the fibres.

By treating it with a strong base like NaOH, the bond can be loosened and it ~~will~~ would become more flexible. ~~It~~ To some extent it can substitute plastic. As there are several items made of plastic & this new polymer or a form of polymer can ~~substitute~~ plastic be used as ~~a~~ the carrying bags, etc..

But our challenge lies in making its life span greater as it is a biodegradable, plant extract it may ~~have~~ face some challenges.

Also by processing several waste such as thermocols, plastics, tyres, etc... ~~we may get~~ i.e by mixing these and grinding it up then after heating at a very high temperature, we ~~can~~ would get a polymer to ~~substitute~~ which can be used ~~as~~ in many industries for machine parts.

As India is <sup>in the</sup> ~~a~~ list of developing countries with many young minds with ~~is~~ sparking innovative ideas, ~~that~~ within a few years we can assure the Indians that it would reach in the list of developed countries by processing wastes up by recycling our ~~val~~ valuable resources.



# RECYCLING, PROCESSING OF WASTE RESOURCES.

Ani. K. Raghavan  
K.V. payyanur  
C4/22

It has been found that in large scale plantation areas pseudo stem of banana is wasting at a high rate.

Also the plastic waste of plastic has been a ~~very~~ major issue to be solved.

Such a solution is our ~~invention~~ 'ECOPLASTICUS'.  
'ECOPLASTICUS' itself give us a idea that it is related to plastic.

The procedure is, boil the pseudo stem of banana about an hour and strain the water out. Grind it and mix with NaOH so that the lignocellulosic bond ~~to~~ <sup>between</sup> the pseudo stem is loosened so as to make it flexible like plastic. Dipping in NaOH must be ~~at~~ upto 2 hours.

This is then passed into roller which can flatten it into a sheet and then it dried in bright sunlight for only one day. This can be dyed using natural dyes ~~like~~ <sup>like</sup> turmeric, beetroot, hyacinth, ~~rhizome~~ <sup>rhizome</sup> of ~~etc.~~ <sup>etc.</sup> rhizome of water lily. To some extent it can substitute plastic like phone cover, table cloth, carry bags etc....

Our aim was to irradiate plastic from our society and make it plastic free nation.

This 'ECOPLASTICUS' can be made ~~transparent~~ translucent by treating it with  $H_2O_2$  (hydrogen peroxide).

[Applied for patent]





RECYCLING & PROCESSING OF WASTE TO CONSERVE RESOURCES

MEDHA A.P  
K.V. PRAYANUR  
C7/9

Recycling just dashes our mind by putting up the 4Rs essential for life. But recycling is not just about plastic recycling. Many researches as well as tests are running in its recycling in which using it in tarring is quite interesting.

When considering the Environment as a film the main villain is PLASTIC but a key role is also played by thermocol. Alcohol is the solvent for it.

A newspaper writing about the harms of thermocol ~~put~~ switched on a light in me which lead for its investigation. It was observed that thermocol when dipped in citric acid (orange peels in water) could come up with fibre which can be further developed to fabric.

Biodegradable waste are now no matter of concern as biogas plant are common now-a-days.

Now-a-days the science fairs are almost filled with peel innovations. Many fruit peels such as orange, banana have really turned out to be a substitute to plastic. Treating them with less polluting chemicals were allowed to react with it. The power of these peels could also be used for water purification.

We've done a project in which we made plastic from banana stem. I was successful in making useful items out of it. The banana pseudostem when treated with NaOH sol. could do it. Next step of making it transparent was using the cheaply available  $H_2O_2$  sol.

Inventory of many sensors & other useful items from these materials is not sufficient. The common man is now so unaware of the technologies we've.

Recycling something is not a secrete or science to be brought for science fairs (PERSONAL OPINION). It is all about implementing & using it in the right sense. I think that's the reason why we Indians lay back. (PERSONAL OPINION). I hope ~~the~~ We can bring a change here.

# RECYCLING, PROCESSING OF WASTE RESOURCES

Medha A.P  
K.V. PATYANUR  
C7/9

In many plantation areas where there is overuse of fertilisers, the banana pseudostem which is normally used for consumption can't be used.

We developed a polymer using the banana pseudostem which can be a substitute to plastic to a limit. As banana pseudostem is rich in fibres the polymer thus formed will be strong.

## PROCEDURE

The steamed banana pseudostem is chopped & grinded.

This slurry is dipped in NaOH sol.

The thus obtained mixture is flattened & dried under sunlight.

After drying that can be brought out.

A plastic like, flexible, resistant to water & inextensible sheet is obtained.

## WHY NaOH?

As NaOH is a strong alkali, it has the capacity to loosen the ligno cellulose bond between the fibres which makes it so.

We've also tested it other bases but the best result was obtained using NaOH

## AIM TO MAKE IT TRANSPARENT

We have been curiously trying hard to make the material translucent & made it translucent by dipping it in  $H_2O_2$  sol. (20% vol.).

## DYES USED

We've used turmeric, beetroot, water lily rhizome as dyes.

By this innovation the plastic waste can be reduced as well as the natural plant resources that is a waste can be used effectively.



We've named this material as 'ECOPLASTICUS',  
as a slightly latinised word.

Our next aim is to try mixing it with other  
fibres.  
(We've applied for patent)



## CENTRAL UNIVERSITY OF KERALA

### Brief Report of the DST-INSPIRE Science Camp 26-31 December 2017

Students' residential camp for skill development.

Inspire Internship Science Camp hosted by Central University of Kerala, Kasaragod, held from 26 December 2017 to 31 December 2017 was attended by 175 students from 99 schools (shortlisted from a total of 832 eligible applications from 124 schools) across the length and breadth of Kerala) and 15 invited school teachers and 12 INSPIRE alumni. The camp became the venue for fruitful interactions between reputed scientists and young talents.

Prof. (Dr.) G. Gopa Kumar, Hon'ble Vice-Chancellor, Central University of Kerala, opened the programme on 26 December 2017. In the inaugural speech, Prof. (Dr.) G. Gopa Kumar highlighted the importance of science in the economic growth of the country and the need for utilizing scientific research for the uplift of weaker section of our society. Shri. Vijayakumar K.M. Jawahar Navodaya Vidyalaya, Kasaragod presided over the function. Welcome address was delivered by Prof. (Dr.) M.Arunachalam, Head, Department of Animal Science, Central University of Kerala. Dr. Sudha K, Associate Professor in Animal Science, delivered the introductory remarks on the programme. Prof. S. Sivasubramanian from Vels University, Chennai, in his keynote address, remarked that "it is only through such Science camps that we can develop scientific temper in the minds of young India with which we can secure the future of our nation." Prof. (Dr.) K.P. Suresh, Dean, School of Education, Central University of Kerala highlighted the significance of studies and research in the field of basic sciences during his felicitation address. Dr. Pratheesh P., proposed the vote of Thanks.

A well designed and well facilitated Ice breaking session arranged in the evening helped the participants to bond together more quickly.

The camp made an indelible impression upon the minds of the budding talents of Kerala as the student feedback at the valedictory function indicated a complete restructuring of many students attitude towards basic sciences education at the graduation level. The organizers had established virtual communication between highly interested students and mentors as the objective of the camp is fulfilled only if the participants get a follow up.

The mentors included a galaxy of 13 scientists and academicians from reputed national institutions such as Indian Institute of Technology, Madras, Indian Institute of Technology, Tirupati, Indian Institute for Space Science and Technology, Thiruvananthapuram, Institute of Interdisciplinary Science Education and Research, Thiruvananthapuram, Vels University, Chennai, Vellore Institute of Technology, Vellore, Pondicherry Central University, Pondicherry, and Cochin University of Science and Technology, Kochi and Central University of Kerala who inculcated the spirit of scientific research through their inspiring interactions with participants. The programme was also blessed with the presence of Padmabhushan Prof. (Dr.) Virender Lal Chopra, the Hon'ble Chancellor, Central University of Kerala and the renowned plant scientist who shared his experiences, challenges and endeavors with the young minds during his interaction with the participants. A series of 21 sessions including lectures, indoor and outdoor interaction with mentors and scholars, and laboratory experiments/demonstrations on various disciplines of science were organized during the five days scientific sessions (8.30 AM to 7.00 PM). The series of higher order of questions that followed every presentation proved to be the barometer of involvement and scientific thought that

transacted young minds. The active participation of the students in the interactive sessions with eminent scientists from various national institutes of repute proved to be a benchmark of the success of the objective of the INSPIRE Internship programme.

In the lecture on the topic *'Excitements and Challenges in Mathematics'*, on 27<sup>th</sup> December 2017, Dr. A. Vijayakumar, CUSAT, Kochi explained the unexpected applications of mathematics in different areas like space mission, medical sciences etc. The session gave valuable insight on the fact that Mathematics is omnipresent.

*'Facets of Nanotechnology'* by Prof. S. Sivasubramanian( Vels University ,Chennai) introduced Nanochemistry and the technology of building useful things by nanomaterials to the students. In the lecture he stressed the different behavioral patterns of nanomaterials, their forms, preparation, mechanisms, and applications. The lecture was followed by *'Excellence through experiment: A session with spectacular Experiments in Physics'* by Dr. T.S. Natarajan (IIT, Tirupati), a journey from the early fundamental experiments to the most modern discoveries and chances in Physics. He inculcated scientific interest in the students discussing the basic concepts of Physics through experimental demonstrations.

When bacteria run out of nutrients, they enter 'stationary phase', during which the size of the bacterial population remains constant, except during brief bursts of excess cell death. However, this phase is in fact very dynamic, with waves of variant bacteria rising and falling. Dr. Aswin Sai Narain Seshasayee introduced this exciting phenomenon during his talk *"Dynamics in stasis: bacterial adaptation in stationary phase"* on 28<sup>th</sup> December 2017. Several biological events, that include vision and photosynthesis, occur in ultrafast timescale. Scientists from various disciplines have collectively worked over several decades to



understand such processes in chemical and biological systems. In the talk on '*Femtosecond Spectroscopy*' Dr. Mahesh Hariharan (IISER, Thiruvananthapuram) explained various spectroscopic measurements to understand some fundamental reactions in chemistry and biology.

The scientific session on 29 December 2017 opened with Dr. K.S. Subrahmanian Moosath's (IIST, Trivandrum) talk on '*Matrix- An Oblong Arrangement of Terms*' where he discussed various developments regarding matrices and determinants and the ways in which available tools might shape the development of that mathematical idea and the types of informal and intuitive ways that students might conceptualize that idea. Dr. Kuruvilla Joseph (IIST, Trivandrum) in his talk '*Nanoscale materials – a boon to society*' gave a follow up of the lecture by Dr. S. Sivasubramanian stressing on the 'bottom up and top down methods' in nanosciences and the wide range of its applications.

*'Visualization and Exploration of Functions'* by Dr. A.P. Nandini (IIT, Chennai) sensed that students regard Mathematics as a tough and abstract subject at higher levels because they are unable to visualize and relate the newer and abstract concepts to practical applications. In her lecture she introduced the art and science of visualization of functions, limits and continuity, simple and effective open software to the students which enables them to experiment and explore the concepts clearly. Dr.C. Vijayan (IIT, Chennai) through his talk '*A Practice Session on Scientific and Creative Thinking*' induced the students the idea that logical thinking alone cannot help a scientist but unconventional thinking as well should. Curiosity and creative thinking should always remain. The session provided several examples, stories, puzzles and paradoxes to introduce innovative and unconventional ways of thinking.

*'We , The Humans, in the Earth System'* by Dr. Rajneesh Bhutani (Pondicherry University) on 31<sup>st</sup> December 2017 led an investigation

into the working of nature. The lecture discussed the irrecoverable alterations made by humans in the earth system, the Anthropocene – age of humans and how it threatens human existence. The talk ***‘Biological Rhythms’*** by Dr. G. Anilkumar (VIT, Vellore) gave an interesting explanation to the question – *Why do we sleep at night?* He discussed about circadian rhythms, the past and recent researches regarding the seasonal changes in the body of organisms, and their synchronization with external factors.

Apart from the science talks, there were Laboratory experiments/demonstrations involving 10 science laboratories including Mathematics, Computer Science, Chemistry, Physics, Biochemistry, Molecular Biology, Plant Science, Animal Science, Genomic science, Geology and Environmental Science thanks to the meticulous preparation and dedicated efforts of Dr. Rajendra Pilankatta, General Convener (Laboratory Experiments) and Practical co-ordinators Dr. Padmesh P. Pillai, Dr. Swapna S. Nair, Dr. Manikandan Rangaswamy, Dr. T. Thasleema, Dr. A. Sakthivel, Dr. V.B. Sameer Kumar, Dr. Jasmine M. Shah, Dr. L. Divya, , Dr. Sijin Kumar A.V. and Dr. Rishiram Ramanan and their associates.

Interactive indoor sessions involving 3-4 external mentors and faculties of Central University of Kerala were also active at the end of each day’s scientific sessions. In the evening, seven groups of participants were formed and each group was facilitated for outdoor interaction with the group of External and Internal Mentors. In the outdoor interaction arranged on 28<sup>th</sup> December with Prof. (Dr.) G. Gopa Kumar, Hon’ble Vice Chancellor, Central University of Kerala and the renowned social scientist, the students involved in active and long discussion on the challenges faced by the educational system in India.

During the session for Thinking Process on New innovative ideas, on 27 December, all participants prepared a write up on the topic “Recycling and processing of waste to conserve Resources” and all were evaluated meticulously. The best three write ups were selected for prizes thanks to the dedicated efforts of the session co-ordinators Dr. H.P. Gurushankara, Dr. Gnanavel Soundararajan, Dr. T. Thasleema, and Dr. Jasmine M. Shah, Assistant Professors, CUK. During the camp days 15 minutes (8.30am – 8.40am) was spared for *Walk with Scholars* where the students had informal interaction with faculty members and research scholars of Central University of Kerala, and Inspire alumni.

Participants happily celebrated the Christmas with Prof. (Dr.) G. Gopa Kumar, Hon’ble Vice-Chancellor, Central University of Kerala, Mentors and fraternity of CUK and INSPIRE alumni on 27<sup>th</sup> December 2017. Dr. Shaini P, Assistant Professor in Mathematics, CUK delivered the Christmas message. Sessions were also active with morning warm up activities, walk with Scholar, and evening cultural events by the CUK students thanks to the genuine efforts of Co-ordinators Dr. Shaini P and H.P.Gurushankara, Assistant Professors and Dr. Swapna S. Nair, Associate Professor, CUK. Informal interactions at the sidelines of the program as those during the coffee breaks and lunch hours enabled smooth networking of the participants with the Mentors. The participating students involved in productive discussion, one of the perceptible success index of the programme. Students were also provided with a platform to express their extra-curricular talents.

The valedictory function on 31 December 2017 was presided over by Prof (Dr) Gopa Kumar, Hon’ble Vice Chancellor, Central University of Kerala. The chief guest of the ceremony was Padmabhushan Prof (Dr). Virender Lal Chopra, Hon’ble Chancellor, Central University of Kerala and the renowned plant scientist. Dr. Radhakrishnan Nair, Registrar,



Central University of Kerala addressed the gathering with his pleasant and inspiring speech. The welcome address was delivered by Dr. Rajendra Pilankatta, Associate Professor in Biochemistry and Molecular Biology. The camp report was presented by Dr. Pratheesh P. Assistant Professor in Geology and Joint Co-ordinator, INSPIRE Science camp. This public function crossed all time barriers as the participants and Mentors started outpouring their feelings. Words of praise flowed from every mouth for the great affection and care shown by the organizers to make the participants comfortable and derive maximum benefit from the mentors. The ceremony was ended with vote of thanks by Dr. Sudha K, Programme Co-ordinator, INSPIRE Science Camp.

It won't be an exaggeration to say that Inspire internship Science Camp met the expectations of everyone. The message that such carefully charted and organized programme gives us is that genuine efforts never fail to pay off dividends. There is no doubt that DST's efforts in developing similar breeding grounds for science education and research throughout the country would pay rich rewards in the days to come.

*'This is a story of team effort and the credit goes to the student volunteers, INSPIRE Alumni, research scholars ,faculty members and administrative staff of the University who spent sleepless nights, the mentors who made a lasting impression upon the students, and the overall participation shown by everyone.'*