



# ARIIA

## ATAL RANKING OF INSTITUTIONS ON INNOVATION ACHIEVEMENTS



**MHRD**  
Ministry of Human  
Resource Development  
Government of India

### Submitted Institute Data for Atal Ranking of Institutions on Innovation Achievements (ARIIA) - 2019-20

Institute Name: Indian Institute of Technology Kharagpur [ARI-U-0573]

#### Pre-Qualifier (Basic Data Requirement For Financial Year (2018-19))

Name of the Institute/ University/ Group of Institutions and any Autonomous Body ( Incubation Unit/Research Park etc.) located within same campus	Total Annual Expenditure of Institute/ University/ Group of Institutions/ any Autonomous Body ( Incubation Unit/ Research Park etc.) located within same campus (Rupees in Figure)	Total Annual Income of Institute/ University/ Group of Institutions/ any Autonomous Body ( Incubation Unit/ Research Park etc.) located within same campus (Rupees in Figure)	Balance Sheet, Income & Expenditure (or) Payment & Receipt Account for FY 2018-19 (Only PDF)
Indian Institute of Technology, Kharagpur	6780303826.00	5344093053.00	Document Uploaded in ARIIA DSP
Total (Rupees in Figure)	6780303826.00	5344093053.00	

**Institute Type : Institute of National Importance & Central Universities/CFTs**

**Total Student Base ( Enrolled Full Time) for all the Academic Programs Offered by Institute/University (Academic Year 2018-19) := 12009**

**Total Faculty Base ( Full Time) Engaged in Teaching and Research at Institute/University (Academic Year 2018-19) := 710**

#### Program Conducted by Institute Related to IPR, Entrepreneurship / Start-ups & Innovation

Name of Program (Full Name)	Program Theme	Program Type	Program Category	Organizing Department / Centre / Student Body Name	Program Start Date	Program End Date	Program Duration(in Days)	Program Location	Internal Participants (Student)	Internal Participants (Faculty)	External Participants (Student)	External Participants (Faculty)	Total Number of Participants	Had institute spent expenses either from own resource/ received fund to organise the program/activity/event?	Total Expense Amount Incurred by Institute to Organise the Program (In Rupees)
Roadmap for patent creation	IPR	Workshop	Institute Lead Activity	IIT Kharagpur	25-08-2018 00:00:00	25-08-2018 00:00:00	1	Within Campus	120	10	0	0	130	No	---
GIAN course on improved climate change adaptation strategies in water resources	Innovation	Workshop	Institute Lead Activity	School of Water resource	12-11-2018 00:00:00	16-11-2018 00:00:00	5	Within Campus	20	5	10	5	40	Yes	544000
Course on ECONOMIC ANALYSIS OF URBAN WATER SERVICES	Innovation	Exposure Visit	Institute Lead Activity	School of Water Resource	02-03-2019 00:00:00	09-03-2019 00:00:00	8	Within Campus	40	3	1	1	45	No	---
PRISM Outreach	Entrepreneurship/Startup, Innovation	Workshop	Institute Lead Activity	STEP	16-05-2018 00:00:00	16-05-2018 00:00:00	1	Within Campus	40	8	0	0	48	No	---

**Program Conducted by Institute Related to IPR, Entrepreneurship / Start-ups & Innovation**

PRISM	Entrepreneurship/Startup, Innovation	Workshop	Institute Lead Activity	STEP	02-06-2018 00:00:00	02-06-2018 00:00:00	1	Outside Campus	0	0	100	20	120	Yes	5000
PRISM Outreach	Entrepreneurship/Startup, Innovation	Workshop	Institute Lead Activity	STEP	03-08-2018 00:00:00	03-08-2018 00:00:00	1	Outside Campus	0	0	100	5	105	Yes	7000
Entrepreneurship workshop on technical textiles	Entrepreneurship/Startup, Innovation	Workshop	Institute Lead Activity	STEP	22-09-2018 00:00:00	22-09-2018 00:00:00	1	Within Campus	30	0	0	0	30	No	---
Entrepreneurship workshop on technical textiles	Entrepreneurship/Startup, Innovation	Workshop	Institute Lead Activity	STEP	06-10-2018 00:00:00	06-10-2018 00:00:00	1	Within Campus	30	0	0	0	30	No	---
Entrepreneurship workshop on technical textiles	Entrepreneurship/Startup, Innovation	Workshop	Institute Lead Activity	STEP	10-11-2018 00:00:00	10-11-2018 00:00:00	1	Within Campus	30	0	0	0	30	No	---
Technical textiles- rural innovation	Entrepreneurship/Startup, Innovation	Workshop	Institute Lead Activity	STEP	08-12-2018 00:00:00	08-12-2018 00:00:00	1	Within Campus	30	0	0	0	30	No	---
Skill development , entrepreneurship workshop on oyster mushroom cultivation and tissue culture based plant propagation technology	Entrepreneurship/Startup, Innovation	Workshop	Institute Lead Activity	STEP	05-01-2019 00:00:00	05-01-2019 00:00:00	1	Within Campus	30	0	0	0	30	No	---
Skill development , entrepreneurship workshop on oyster mushroom cultivation and tissue culture based plant propagation technology	Entrepreneurship/Startup, Innovation	Workshop	Institute Lead Activity	STEP	16-02-2019 00:00:00	16-02-2019 00:00:00	1	Within Campus	30	0	0	0	30	No	---
PRISM and FIC Serial Weekly Workshops	Entrepreneurship/Startup, Innovation	Workshop	Institute Lead Activity	STEP	06-03-2019 00:00:00	06-03-2019 00:00:00	1	Within Campus	8	2	0	0	10	No	---
PRISM and FIC Serial Weekly Workshops	Entrepreneurship/Startup, Innovation	Workshop	Institute Lead Activity	STEP	13-03-2019 00:00:00	13-03-2019 00:00:00	1	Within Campus	7	0	0	0	7	No	---

### Program Conducted by Institute Related to IPR, Entrepreneurship / Start-ups & Innovation

PRISM and FIC Serial Weekly Workshops	Entrepreneurship/Startup, Innovation	Workshop	Institute Lead Activity	STEP	27-03-2019 00:00:00	27-03-2019 00:00:00	1	Within Campus	6	0	0	0	6	No	---
EAD Ahmedabad	Entrepreneurship/Startup	Awareness, Motivational Program	Institute Lead Activity	STEP	24-10-2018 00:00:00	24-10-2018 00:00:00	1	Outside Campus	0	0	470	0	470	No	---
EAD Ambala	Entrepreneurship/Startup	Awareness, Motivational Program	Institute Lead Activity	STEP	22-10-2018 00:00:00	22-10-2018 00:00:00	1	Outside Campus	0	0	620	0	620	No	---
EAD Bhopal	Entrepreneurship/Startup	Awareness, Motivational Program	Institute Lead Activity	STEP	25-10-2018 00:00:00	25-10-2018 00:00:00	1	Outside Campus	0	0	380	0	380	No	---
EAD Chandigarh	Entrepreneurship/Startup	Awareness, Motivational Program	Institute Lead Activity	STEP	16-10-2018 00:00:00	16-10-2018 00:00:00	1	Outside Campus	0	0	450	0	450	No	---
EAD Jaipur	Entrepreneurship/Startup	Awareness, Motivational Program	Institute Lead Activity	STEP	16-10-2018 00:00:00	16-10-2018 00:00:00	1	Outside Campus	0	0	2560	0	2560	No	---
EAD Kanpur	Entrepreneurship/Startup	Awareness, Motivational Program	Institute Lead Activity	STEP	08-10-2018 00:00:00	08-10-2018 00:00:00	1	Outside Campus	0	0	1640	0	1640	No	---
EAD Mumbai	Entrepreneurship/Startup	Awareness, Motivational Program	Institute Lead Activity	STEP	13-10-2018 00:00:00	13-10-2018 00:00:00	1	Outside Campus	0	0	600	0	600	No	---
EAD Nagpur	Entrepreneurship/Startup	Awareness, Motivational Program	Institute Lead Activity	STEP	20-10-2018 00:00:00	20-10-2018 00:00:00	1	Outside Campus	0	0	440	0	440	No	---
EAD Noida	Entrepreneurship/Startup	Awareness, Motivational Program	Institute Lead Activity	STEP	10-10-2018 00:00:00	10-10-2018 00:00:00	1	Outside Campus	0	0	990	0	990	No	---
EAD Patna	Entrepreneurship/Startup	Awareness, Motivational Program	Institute Lead Activity	STEP	06-10-2018 00:00:00	06-10-2018 00:00:00	1	Outside Campus	0	0	640	0	640	No	---
EAD Pune	Entrepreneurship/Startup	Awareness, Motivational Program	Institute Lead Activity	STEP	13-10-2018 00:00:00	13-10-2018 00:00:00	1	Outside Campus	0	0	950	0	950	No	---
EAD Raipur	Entrepreneurship/Startup	Awareness, Motivational Program	Institute Lead Activity	STEP	12-10-2018 00:00:00	12-10-2018 00:00:00	1	Outside Campus	0	0	2600	0	2600	No	---
EAD Ranchi	Entrepreneurship/Startup	Awareness, Motivational Program	Institute Lead Activity	STEP	04-10-2018 00:00:00	04-10-2018 00:00:00	1	Outside Campus	0	0	1460	0	1460	No	---
EAD Udaipur	Entrepreneurship/Startup	Awareness, Motivational Program	Institute Lead Activity	STEP	13-10-2018 00:00:00	13-10-2018 00:00:00	1	Outside Campus	0	0	240	0	240	No	---

### Participation / Representation of Students and (or) Faculties in Events / Programs related to IPR, entrepreneurship / Start-ups & Innovation organized by reputed external institutions or agencies at national or international level

Name of Program (Full Name)	Program Theme	Program Type	Organizing Agency / Institute	Organizing Agency Type	Program Start Date	Program End Date	Program Duration(in Days)	Participants (Students)	Participants (Faculty)	Total Number of Participants	Awards/Recognitions/Achievements	Award / Position / Recognition	Title of Innovation / Start-up	Had institute spent expenses	Total Expense Amount
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**Participation / Representation of Students and (or) Faculties in Events / Programs related to IPR, entrepreneurship / Start-ups & Innovation organized by reputed external institutions or agencies at national or international level**

			Name									Secured	Secured the Award / Recognition	either from own resource/received fund towards sending delegation to participate/represent the program/activity/event?	Incurred by Institute? (In Rupees)
National Case Study Challenge	Innovation	Innovation Contest	IIT Guwahati	Educational Institute	01-09-2018 00:00:00	01-09-2018 00:00:00	1	1	0	1	Yes	Silver Medal	24 Mantra and the organic food market	No	---
Sludge Management in Circular Economy 2018	Innovation	Conference	International Water Association	International Agencies	23-05-2018 00:00:00	25-05-2018 00:00:00	3	0	1	1	No	---	---	Yes	132482
MSE Visiting Fellow	Innovation	Exposure Visit	University of Melbourne, Australia	Educational Institute	12-08-2018 00:00:00	26-08-2018 00:00:00	15	0	1	1	No	---	---	Yes	1497
IUKWC Grassroots Field Exposure Session Initiative on Water Quality Management	Innovation	Exposure Visit	India UK Water Center	International Agencies	13-12-2018 00:00:00	15-12-2018 00:00:00	3	2	1	3	No	---	---	No	---
Integrated Water Management Master Class	Innovation	Skill Development	Chola MS	Corporate / Industry Association	06-02-2019 00:00:00	07-02-2019 00:00:00	2	0	1	1	No	---	---	No	---
Unnat Bharat Abhiyan (UBA) Orientation Workshop a	Innovation	Workshop	MHRD, Gol	Govt. Agency (Central)	25-04-2018 00:00:00	25-04-2018 00:00:00	1	0	1	1	No	---	---	No	---
Short Term Training Workshop on Water and Energy Auditing and Water Demand Management	Innovation	Training	MNIT Jaipur	Educational Institute	03-04-2018 00:00:00	07-04-2018 00:00:00	5	0	1	1	No	---	---	No	---
Short Term Training Workshop on Water and Energy Auditing and Water Demand Management	Innovation	Training	MNIT Jaipur	Educational Institute	08-04-2018 00:00:00	12-04-2018 00:00:00	5	0	1	1	No	---	---	No	---

**Participation / Representation of Students and (or) Faculties in Events / Programs related to IPR, entrepreneurship / Start-ups & Innovation organized by reputed external institutions or agencies at national or international level**

Invited to attend an event on Rural Homestay Operators Certificate Program to promote Rural Homestay Tourism	Entrepreneurship/Startup	Exposure visit	Centre for Entrepreneurship Development National Institute of Rural Development and Panchayati Raj (NIRDPR), Guwahati Campus	Educational Institute	22-03-2019 00:00:00	22-03-2019 00:00:00	1	1	1	2	No	---	---	No	---
DST-NWO Sandpit workshop on Urban Water systems	Innovation	Workshop	DST, Gol and NWO, Netherlands	Govt. Agency (Central)	27-11-2018 00:00:00	30-11-2018 00:00:00	4	0	1	1	No	---	---	No	---
Short Term Training Workshop on Water and Energy Auditing and Water Demand Management	Innovation	Training	MNIT Jaipur	Educational Institute	28-08-2018 00:00:00	01-09-2018 00:00:00	5	0	1	1	No	---	---	No	---
Invited as an Expert in National Consultation on Driving Growth of Women-Owned Enterprises Experiences and Way Forward organized by UNDP in partnership with DAY-NRLM, World Bank and GIZ	Entrepreneurship/Startup	Seminar	United Nations Development Programme (UNDP), New Delhi	International Agencies	18-12-2018 00:00:00	19-12-2018 00:00:00	2	1	1	2	No	---	---	Yes	4876
DAAD student visit	Innovation	Exposure Visit	DAAD-Indian-Germany	Educational Institute	01-09-2018 00:00:00	28-02-2019 00:00:00	18	1	0	1	No	---	---	No	---
National Workshop on Recent Advances in Civil Engineering Research	Innovation	Workshop	NIT Jamshedpur	Educational Institute	24-01-2019 00:00:00	24-01-2019 00:00:00	1	0	1	1	No	---	---	No	---

**Participation / Representation of Students and (or) Faculties in Events / Programs related to IPR, entrepreneurship / Start-ups & Innovation organized by reputed external institutions or agencies at national or international level**

Invited as a Reviewer to attend the one-day consultative workshop for finalizing curriculum outline for mentorship program under the UNDP Disha Project	Entrepreneurship/Startup	workshop	United Nations Development Programme (UNDP), New Delhi	International Agencies	17-12-2018 00:00:00	17-12-2018 00:00:00	1	0	1	1	No	---	---	Yes	4875
Entrepreneurial Skill Development and Training of underprivileged women through UNDP Disha Project	Entrepreneurship/Startup	Workshop	United Nations Development Programme (UNDP), New Delhi	International Agencies	17-12-2018 00:00:00	17-12-2018 00:00:00	1	0	1	1	No	---	---	No	---

**Courses on Innovation, IPR and Entrepreneurship Development Offered During the Academic Period 2018-19**

Title of Course/Subject Offered	Program Theme	Type of Course	Level of Course	Program Start Date	Program End Date	Program Duration(in Days)	Mode of Delivery	Total Enrolment Number	Total Number of Students Completed	Total Numbers of Contact Hours of Course
Economics of Entrepreneurship	Entrepreneurship/Startup	Elective/Core Credit Course	Credit Course (Elective)	01-01-2019 00:00:00	01-05-2019 00:00:00	121	Offline	83	83	36
MARKETING AND MARKET RESEARCH	Entrepreneurship/Startup	Elective/Core Credit Course	Credit Course (Elective)	01-01-2019 00:00:00	01-05-2019 00:00:00	121	Offline	137	137	36
MANUFACTURING MANAGEMENT	Innovation	Elective/Core Credit Course	Credit Course (Elective)	01-01-2019 00:00:00	01-05-2019 00:00:00	121	Offline	35	35	36
FINANCIAL AND LEGAL ASPECTS OF BUSINESS	Entrepreneurship/Startup	Elective/Core Credit Course	Credit Course (Elective)	01-01-2019 00:00:00	01-05-2019 00:00:00	121	Offline	302	302	36
MANAGEMENT OF GROWTH VENTURES	Entrepreneurship/Startup	Elective/Core Credit Course	Credit Course (Elective)	01-01-2019 00:00:00	01-05-2019 00:00:00	121	Offline	90	90	36
FINANCING NEW VENTURE	Entrepreneurship/Startup	Elective/Core Credit Course	Credit Course (Elective)	01-01-2019 00:00:00	01-05-2019 00:00:00	121	Offline	54	54	36
Innovation management	Innovation	Elective/Core Credit Course	Credit Course (Elective)	01-01-2019 00:00:00	01-05-2019 00:00:00	121	Offline	59	59	36
Engineering Design Process	Innovation	Elective/Core Credit Course	Credit Course (Elective)	01-01-2019 00:00:00	01-05-2019 00:00:00	121	Offline	165	165	36
Healthcare analysis	Innovation	Elective/Core Credit Course	Credit Course (Elective)	01-01-2019 00:00:00	01-05-2019 00:00:00	121	Offline	11	11	30
Introduction to Intellectual Property Law	Entrepreneurship/Startup	Elective/Core Credit Course	Master	01-01-2019 00:00:00	01-05-2019 00:00:00	121	Offline	27	27	36
Patent Drafting and Specification Writing	Entrepreneurship/Startup	Full time Program	Master	01-01-2019 00:00:00	01-05-2019 00:00:00	121	Offline	33	33	42
Small Business Development	Entrepreneurship/Startup	Elective/Core Credit Course	Credit Course (Elective)	01-07-2018 00:00:00	20-11-2018 00:00:00	143	Offline	59	59	44

TECHNO-ENTREPRENEURIAL LEADERSHIP	Entrepreneurship/Startup	Elective/Core Credit Course	Credit Course (Elective)	01-07-2018 00:00:00	01-12-2018 00:00:00	154	Offline	70	70	36
DESIGN-DRIVEN INNOVATION	Innovation	Elective/Core Credit Course	Credit Course (Elective)	01-07-2018 00:00:00	01-12-2018 00:00:00	154	Offline	19	19	36
FOUNDATIONS OF ENTREPRENEURS	Entrepreneurship/Startup	Elective/Core Credit Course	Credit Course (Elective)	01-07-2018 00:00:00	01-12-2018 00:00:00	154	Offline	192	192	36
TECHNOLOGY ENTREPRENEURSHIP	Entrepreneurship/Startup	Elective/Core Credit Course	Credit Course (Elective)	01-07-2018 00:00:00	01-12-2018 00:00:00	154	Offline	73	73	36
ENGINEERING B-PLAN DEVELOPMENT - 1	Innovation	Elective/Core Credit Course	Credit Course (Elective)	01-07-2018 00:00:00	01-12-2018 00:00:00	154	Offline	45	45	36
Product Development	Innovation	Elective/Core Credit Course	Credit Course (Elective)	01-07-2018 00:00:00	01-12-2018 00:00:00	154	Offline	76	76	36
Entrepreneurship in Social Sector	Entrepreneurship/Startup	Elective/Core Credit Course	Credit Course (Elective)	01-07-2018 00:00:00	01-12-2018 00:00:00	154	Offline	57	57	36
Frugal Engineering	Innovation	Elective/Core Credit Course	Credit Course (Elective)	01-07-2018 00:00:00	01-12-2018 00:00:00	154	Offline	67	67	36
FINANCIAL AND LEGAL ASPECTS OF BUSINESS	Entrepreneurship/Startup	Elective/Core Credit Course	Credit Course (Elective)	01-07-2018 00:00:00	01-12-2018 00:00:00	154	Offline	60	60	36
Law of Patent- 1	Entrepreneurship/Startup	Full time Program	Credit Course (Compulsory)	01-07-2018 00:00:00	01-12-2018 00:00:00	154	Offline	40	40	42
Trademark and Design	Entrepreneurship/Startup	Full time Program	Credit Course (Compulsory)	01-07-2018 00:00:00	01-12-2018 00:00:00	154	Offline	40	40	42
Comparative Patent Law	Entrepreneurship/Startup	Elective/Core Credit Course	Credit Course (Elective)	01-07-2018 00:00:00	01-12-2018 00:00:00	154	Offline	13	13	36
International Trade Law	Entrepreneurship/Startup	Elective/Core Credit Course	Credit Course (Elective)	01-07-2018 00:00:00	01-12-2018 00:00:00	154	Offline	14	14	36
Vacuum Technology and Process Applications	Entrepreneurship/Startup, Innovation	Short term Certificate	Short Term Certificate Course	01-12-2018 00:00:00	14-12-2018 00:00:00	14	Offline	14	14	80
Vacuum Technology	Entrepreneurship/Startup	Short term Certificate	Short Term Certificate Course	12-11-2018 00:00:00	16-11-2018 00:00:00	5	Offline	40	40	30
Vacuum Technology and Process Application	Entrepreneurship/Startup, Innovation	Short term Certificate	Short Term Certificate Course	18-09-2018 00:00:00	20-09-2018 00:00:00	3	Offline	27	27	30
Vacuum Technology and Process Applications	Entrepreneurship/Startup, Innovation	Short term Certificate	Short Term Certificate Course	28-05-2018 00:00:00	01-06-2018 00:00:00	5	Offline	15	15	30
Vacuum Technology and Process Applications	Entrepreneurship/Startup, Innovation	Short term Certificate	Short Term Certificate Course	02-04-2018 00:00:00	06-04-2018 00:00:00	5	Offline	25	25	30
Product Development Laboratory	Innovation	Full time Program	Bachelor	01-07-2018 00:00:00	01-12-2018 00:00:00	154	Offline	11	11	42
Product Development Project	Innovation	Full time Program	Bachelor	01-07-2018 00:00:00	01-12-2018 00:00:00	154	Offline	52	52	42
Product Development	Innovation	Full time Program	Bachelor	01-06-2018 00:00:00	01-12-2018 00:00:00	184	Offline	60	60	42

### Innovation, Pre-Incubation & Incubation Centre/Facilities exists in campus

Name of Centre	Type of Facility	Year of Facility Creation	Facility Location / Address	Facility Incharge	Carpet Area of Facility	Had institute spent expenses either from own resource/received fund towards Establishment/Operation of	Had institute Generated Income either from Services Offered by Pre-Incubation & Incubation Centre/Facilities?
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**Innovation, Pre-Incubation & Incubation Centre/Facilities exists in campus**

						Pre-Incubation & Incubation Centre/Facilities?			
CRYOGENIC ENGINEERING CENTRE	IPR Cell / Patent Facilitation Unit / Technology Transfer Centre	2019	Cryogenic Engineering Centre, IIT Kharagpur, West Bengal-721302	Facility Incharge Name	Prof. Tapas Kumar Nandi	552 Sq. Ft.	Yes		No
				Facility Incharge Email	tkn@cryo.iitkgp.ac.in		Annual Capital Expenditure (In Rupees)	23625000	
				Facility Incharge Phone	03222283598		Annual Operational Expenditure (In Rupees)	0	
Science and Technology Entrepreneurs' Park	Incubation Unit	1986	IIT Campus, Kharagpur	Facility Incharge Name	Prof. Satyahari Dey	20000 Sq. Ft.	No		No
				Facility Incharge Email	satyahari01@yahoo.com				
				Facility Incharge Phone	9434018791				
G.S Sanyal School of Telecommunication	Centre of Excellence with Advance Tools & Equipment	1996	IIT Campus, Kharagpur	Facility Incharge Name	Prof. Raja Datta	10000 Sq. Ft.	No		No
				Facility Incharge Email	rajadatta@ece.iitkgp.ac.in				
				Facility Incharge Phone	03222282265				
M N Faruqui innovation centre	Incubation Unit	2015	IIT Campus, Kharagpur	Facility Incharge Name	Prof. Cheruvu Siva Kumar	2000 Sq. Ft.	No		No
				Facility Incharge Email	kumar@mech.iitkgp.ac.in				
				Facility Incharge Phone	03222281560				



## Innovation, Pre-Incubation & Incubation Centre/Facilities exists in campus

Signal and Image Processing Lab	Pre-Incubation Centre	2015	IIT Campus, Kharagpur	<table border="1"> <tr> <td>Facility Incharge Name</td> <td>Dr. Debdoot Sheet</td> </tr> <tr> <td>Facility Incharge Email</td> <td>debdoot@ee.iitkgp.ac.in</td> </tr> <tr> <td>Facility Incharge Phone</td> <td>03222281524</td> </tr> </table>	Facility Incharge Name	Dr. Debdoot Sheet	Facility Incharge Email	debdoot@ee.iitkgp.ac.in	Facility Incharge Phone	03222281524	500 Sq. Ft.	No	No
Facility Incharge Name	Dr. Debdoot Sheet												
Facility Incharge Email	debdoot@ee.iitkgp.ac.in												
Facility Incharge Phone	03222281524												
Embedded electronics design	Pre-Incubation Centre	2015	IIT Campus, Kharagpur	<table border="1"> <tr> <td>Facility Incharge Name</td> <td>Dr. Debdoot Sheet</td> </tr> <tr> <td>Facility Incharge Email</td> <td>debdoot@ee.iitkgp.ac.in</td> </tr> <tr> <td>Facility Incharge Phone</td> <td>03222281524</td> </tr> </table>	Facility Incharge Name	Dr. Debdoot Sheet	Facility Incharge Email	debdoot@ee.iitkgp.ac.in	Facility Incharge Phone	03222281524	500 Sq. Ft.	No	No
Facility Incharge Name	Dr. Debdoot Sheet												
Facility Incharge Email	debdoot@ee.iitkgp.ac.in												
Facility Incharge Phone	03222281524												
DHI Centre of Excellence on Advanced Manufacturing	Centre of Excellence with Advance Tools & Equipment	2014	IIT Campus, Kharagpur	<table border="1"> <tr> <td>Facility Incharge Name</td> <td>Prof. Suriya Kanta Pal</td> </tr> <tr> <td>Facility Incharge Email</td> <td>skpal@mech.iitkgp.ac.in</td> </tr> <tr> <td>Facility Incharge Phone</td> <td>03222281984</td> </tr> </table>	Facility Incharge Name	Prof. Suriya Kanta Pal	Facility Incharge Email	skpal@mech.iitkgp.ac.in	Facility Incharge Phone	03222281984	5000 Sq. Ft.	No	No
Facility Incharge Name	Prof. Suriya Kanta Pal												
Facility Incharge Email	skpal@mech.iitkgp.ac.in												
Facility Incharge Phone	03222281984												
Centre for Artificial Intelligence	Centre of Excellence with Advance Tools & Equipment	2015	IIT Campus, Kharagpur	<table border="1"> <tr> <td>Facility Incharge Name</td> <td>Prof. Sudeshna Sarkar</td> </tr> <tr> <td>Facility Incharge Email</td> <td>sudeshna@cse.iitkgp.ac.in</td> </tr> <tr> <td>Facility Incharge Phone</td> <td>03222282256</td> </tr> </table>	Facility Incharge Name	Prof. Sudeshna Sarkar	Facility Incharge Email	sudeshna@cse.iitkgp.ac.in	Facility Incharge Phone	03222282256	5000 Sq. Ft.	No	No
Facility Incharge Name	Prof. Sudeshna Sarkar												
Facility Incharge Email	sudeshna@cse.iitkgp.ac.in												
Facility Incharge Phone	03222282256												
PAM lab	Centre of Excellence with Advance Tools & Equipment	2016	IIT Campus, Kharagpur	<table border="1"> <tr> <td>Facility Incharge Name</td> <td>Prof. P.K. Dan</td> </tr> <tr> <td>Facility Incharge Email</td> <td>pkdan@see.iitkgp.ernet.in</td> </tr> <tr> <td>Facility Incharge Phone</td> <td>03222282428</td> </tr> </table>	Facility Incharge Name	Prof. P.K. Dan	Facility Incharge Email	pkdan@see.iitkgp.ernet.in	Facility Incharge Phone	03222282428	2000 Sq. Ft.	No	No
Facility Incharge Name	Prof. P.K. Dan												
Facility Incharge Email	pkdan@see.iitkgp.ernet.in												
Facility Incharge Phone	03222282428												

**Innovation, Pre-Incubation & Incubation Centre/Facilities exists in campus**

Innovation Lab	Pre-Incubation Centre	2014	IIT Campus, Kharagpur	<table border="1"> <tr> <td>Facility Incharge Name</td> <td>Prof. P P Das</td> </tr> <tr> <td>Facility Incharge Email</td> <td>ppd@see.iitkgp.ernet.in</td> </tr> <tr> <td>Facility Incharge Phone</td> <td>03222281093</td> </tr> </table>	Facility Incharge Name	Prof. P P Das	Facility Incharge Email	ppd@see.iitkgp.ernet.in	Facility Incharge Phone	03222281093	5000 Sq. Ft.	No	No
Facility Incharge Name	Prof. P P Das												
Facility Incharge Email	ppd@see.iitkgp.ernet.in												
Facility Incharge Phone	03222281093												
E-Cell	Pre-Incubation Centre	2012	IIT Campus, Kharagpur	<table border="1"> <tr> <td>Facility Incharge Name</td> <td>Prof. P.K. Dan</td> </tr> <tr> <td>Facility Incharge Email</td> <td>pkdan@see.iitkgp.ernet.in</td> </tr> <tr> <td>Facility Incharge Phone</td> <td>03222282428</td> </tr> </table>	Facility Incharge Name	Prof. P.K. Dan	Facility Incharge Email	pkdan@see.iitkgp.ernet.in	Facility Incharge Phone	03222282428	500 Sq. Ft.	No	No
Facility Incharge Name	Prof. P.K. Dan												
Facility Incharge Email	pkdan@see.iitkgp.ernet.in												
Facility Incharge Phone	03222282428												
Kolkata Extension Center	Pre-Incubation Centre	2012	kolkata	<table border="1"> <tr> <td>Facility Incharge Name</td> <td>Prof. P P Das</td> </tr> <tr> <td>Facility Incharge Email</td> <td>ppd@see.iitkgp.ernet.in</td> </tr> <tr> <td>Facility Incharge Phone</td> <td>03222281093</td> </tr> </table>	Facility Incharge Name	Prof. P P Das	Facility Incharge Email	ppd@see.iitkgp.ernet.in	Facility Incharge Phone	03222281093	2000 Sq. Ft.	No	No
Facility Incharge Name	Prof. P P Das												
Facility Incharge Email	ppd@see.iitkgp.ernet.in												
Facility Incharge Phone	03222281093												
Gopali Campus	Incubation Unit	2010	Kharagpur	<table border="1"> <tr> <td>Facility Incharge Name</td> <td>Prof. Satyahari Dey</td> </tr> <tr> <td>Facility Incharge Email</td> <td>satyahari01@yahoo.com</td> </tr> <tr> <td>Facility Incharge Phone</td> <td>9434018791</td> </tr> </table>	Facility Incharge Name	Prof. Satyahari Dey	Facility Incharge Email	satyahari01@yahoo.com	Facility Incharge Phone	9434018791	4356000 Sq. Ft.	No	No
Facility Incharge Name	Prof. Satyahari Dey												
Facility Incharge Email	satyahari01@yahoo.com												
Facility Incharge Phone	9434018791												
SRIC	IPR Cell / Patent Facilitation Unit / Technology Transfer Centre	2000	IIT Campus, Kharagpur	<table border="1"> <tr> <td>Facility Incharge Name</td> <td>MR. SUMIT BISWAS</td> </tr> <tr> <td>Facility Incharge Email</td> <td>sumit@adm.iitkgp.ac.in</td> </tr> <tr> <td>Facility Incharge Phone</td> <td>03222282190</td> </tr> </table>	Facility Incharge Name	MR. SUMIT BISWAS	Facility Incharge Email	sumit@adm.iitkgp.ac.in	Facility Incharge Phone	03222282190	2000 Sq. Ft.	No	No
Facility Incharge Name	MR. SUMIT BISWAS												
Facility Incharge Email	sumit@adm.iitkgp.ac.in												
Facility Incharge Phone	03222282190												

### Innovation, Pre-Incubation & Incubation Centre/Facilities exists in campus

TECHNOLOGY BUSINESS INCUBATOR	Incubation Unit	1986	IIT Campus, Kharagpur	Facility Incharge Name	Prof. Satyahari Dey	1000 Sq. Ft.	No	No
				Facility Incharge Email	satyahari01@yahoo.com			
				Facility Incharge Phone	9434018791			
Centre for Intelligent Transportation	Pre-Incubation Centre	2018	IIT KHARAGPUR	Facility Incharge Name	Anandaroop Bhattacharya	1000 Sq. Ft.	No	No
				Facility Incharge Email	adeanir@adm.iitkgp.ac.in			
				Facility Incharge Phone	913222282034			

### Grants / Funds Received by Pre-Incubation & Incubation Centre / Facilities exists in Campus

Name of Centre	Source of Grant / Fund	Agency Name	Agency Type	Had Received Grants / Funds by Pre-Incubation & Incubation Centre / Facilities exists in Campus?	Total Grants / Funds Received by Pre-Incubation & Incubation Centre / Facilities exists in Campus (In Rupees)
CRYOGENIC ENGINEERING CENTRE	Funding Agency	Diamond Jubilee Fund	Govt. Agency (Central)	No	---
SRIC	Funding Agency	DSIR	Govt. Agency (Central)	Yes	50000
SRIC	Funding Agency	DSIR	Govt. Agency (Central)	Yes	300000
SRIC	Funding Agency	DSIR	Govt. Agency (Central)	Yes	230000
SRIC	Funding Agency	HDFC	Corporate / Industry Association	Yes	6000000

### Idea / Prototype / Innovation have received Grant / funding from Pre-Incubation / Incubation Centre / Facilities

Name of Idea / POC / Innovation / Prototype Received Funding / Grant from Centre	Name of Centre	Stage of Innovation (TRL Stage)	Innovation Developed by	Year of Innovation / Project Started	Type of Innovation	Current Status Pre-Incubation/Incubation Support Received	Current Status of Innovation, Stage of TRL it has reached	Had Centre/institute provided any Financial support (either own resource or fund received from agencies) in terms of Seed Grant/Fund Support to Idea / Prototype / Innovations Development during the financial period 2018-19	Had the Idea/Prototype/Innovations raised any Seed fund/Angel Investment/VC during the period of receiving pre-incubation/incubation support at your Pre-incubation/incubation or institute during the financial period 2018-19	Had the Incubation Centre/institute received any income/revenue from Idea/Prototype/Innovations for the pre-incubation/incubation support and the services offered by Pre-incubation/incubation or institute during the financial period 2018-19?
Design and Development of a 5m Long Single Phase HTS Cable (LPH)	CRYOGENIC ENGINEERING CENTRE	TRL 1 : Basic research. Principles postulated and observed but no	Faculty and Student	2018	Non-IP / Non-Patented Technology	Still Under Development Process	TRL 2 : Technology formulation. Concept and application have	No	No	No

**Idea / Prototype / Innovation have received Grant / funding from Pre-Incubation / Incubation Centre / Facilities**

Name of Idea / POC / Innovation / Prototype Received Funding / Grant from Centre	Name of Centre	Stage of Innovation (TRL Stage)	Innovation Developed by	Year of Innovation / Project Started	Type of Innovation	Current Status Pre-Incubation/Incubation Support Received	Current Status of Innovation, Stage of TRL it has reached	Had Centre/institute provided any Financial support (either own resource or fund received from agencies) in terms of Seed Grant/Fund Support to Idea / Prototype / Innovations Development during the financial period 2018-19	Had the Idea/Prototype/Innovations raised any Seed fund/Angel Investment/VC during the period of receiving pre-incubation/incubation support at your Pre-incubation/incubation or institute during the financial period 2018-19	Had the Incubation Centre/institute received any income/revenue from Idea/Prototype/Innovations for the pre-incubation/incubation support and the services offered by Pre-incubation/incubation or institute during the financial period 2018-19?			
		experimental proof available.					been formulated.						
<b>Principal Innovator</b>													
Name				Type		Gender		Email		Contact			
DR. ABHAY SINGH GOUR				Faculty		Male		abhay@crya.iitkgp.ac.in		9008200553			
<b>Co-Innovator</b>													
Name				Type		Gender		Email		Contact			
Prof V Vasudeva Rao				Faculty		Male		vvrao@cryo.iitkgp.ac.in		9933078577			
Design, Development and Testing of Laboratory Scale SMES	CRYOGENIC ENGINEERING CENTRE	TRL 1 : Basic research. Principles postulated and observed but no experimental proof available.	Faculty and Student	2018	Non-IP / Non-Patented Technology	Still Under Development Process	TRL 1 : Basic research. Principles postulated and observed but no experimental proof available.	<table border="1"> <tr> <td>Yes</td> </tr> <tr> <td>Total Seed Grant/Fund Amount Disbursed to above Idea/Prototype/Innovations Development by Centre (In Rupees)</td> </tr> <tr> <td>2671000</td> </tr> </table>	Yes	Total Seed Grant/Fund Amount Disbursed to above Idea/Prototype/Innovations Development by Centre (In Rupees)	2671000	No	No
Yes													
Total Seed Grant/Fund Amount Disbursed to above Idea/Prototype/Innovations Development by Centre (In Rupees)													
2671000													
<b>Principal Innovator</b>													
Name				Type		Gender		Email		Contact			
Dr Abhay Singh Gour				Faculty		Male		abhay@cryo.iitkgp.ac.in		9008200553			

**Idea / Prototype / Innovation have received Grant / funding from Pre-Incubation / Incubation Centre / Facilities**

Name of Idea / POC / Innovation / Prototype Received Funding / Grant from Centre	Name of Centre	Stage of Innovation (TRL Stage)	Innovation Developed by	Year of Innovation / Project Started	Type of Innovation	Current Status Pre-Incubation/Incubation Support Received	Current Status of Innovation, Stage of TRL it has reached	Had Centre/institute provided any Financial support (either own resource or fund received from agencies) in terms of Seed Grant/Fund Support to Idea / Prototype / Innovations Development during the financial period 2018-19	Had the Idea/Prototype/Innovations raised any Seed fund/Angel Investment/VC during the period of receiving pre-incubation/incubation support at your Pre-incubation/incubation or institute during the financial period 2018-19	Had the Incubation Centre/institute received any income/revenue from Idea/Prototype/Innovations for the pre-incubation/incubation support and the services offered by Pre-incubation/incubation or institute during the financial period 2018-19?																																								
	Cryogenic level sensor based on flux expulsion of superconductors	CRYOGENIC ENGINEERING CENTRE	TRL 3 : Applied research. First laboratory tests completed; proof of concept.	Faculty and Student	2018	<table border="1"> <tr> <th colspan="2">IP / Patented Technology</th> </tr> <tr> <td>Applied for Patent</td> <td>Yes</td> </tr> <tr> <td>Patent Application No</td> <td>2019 3103 3540</td> </tr> <tr> <td>Year of Patent Application</td> <td>2019</td> </tr> </table>	IP / Patented Technology		Applied for Patent	Yes	Patent Application No	2019 3103 3540	Year of Patent Application	2019	Completed but No Further Action Taken	TRL 3 : Applied research. First laboratory tests completed; proof of concept.	No	No																																
IP / Patented Technology																																																		
Applied for Patent	Yes																																																	
Patent Application No	2019 3103 3540																																																	
Year of Patent Application	2019																																																	
No	<table border="1"> <tr> <th colspan="10">Principal Innovator</th> </tr> <tr> <th>Name</th> <th>Type</th> <th>Gender</th> <th>Email</th> <th>Contact</th> <th colspan="5"></th> </tr> <tr> <td>Dr Venimadhav Adyam</td> <td>Faculty</td> <td>Male</td> <td>venimadhav@cryo.iitkgp.ac.in</td> <td>9775021822</td> <td colspan="5"></td> </tr> </table>										Principal Innovator										Name	Type	Gender	Email	Contact						Dr Venimadhav Adyam	Faculty	Male	venimadhav@cryo.iitkgp.ac.in	9775021822															
Principal Innovator																																																		
Name	Type	Gender	Email	Contact																																														
Dr Venimadhav Adyam	Faculty	Male	venimadhav@cryo.iitkgp.ac.in	9775021822																																														
<table border="1"> <tr> <th colspan="10">Co-Innovator</th> </tr> <tr> <th>Name</th> <th>Type</th> <th>Gender</th> <th>Email</th> <th>Contact</th> <th colspan="5"></th> </tr> <tr> <td>Keerthana</td> <td>Student</td> <td>Female</td> <td>keerthanavenu@gmail.com</td> <td>-</td> <td colspan="5"></td> </tr> <tr> <td>Avinash</td> <td>Student</td> <td>Male</td> <td>avinash031@gmail.com</td> <td>-</td> <td colspan="5"></td> </tr> </table>	Co-Innovator										Name	Type	Gender	Email	Contact						Keerthana	Student	Female	keerthanavenu@gmail.com	-						Avinash	Student	Male	avinash031@gmail.com	-						Design analysis and development of nozzle protection system for sea									
Co-Innovator																																																		
Name	Type	Gender	Email	Contact																																														
Keerthana	Student	Female	keerthanavenu@gmail.com	-																																														
Avinash	Student	Male	avinash031@gmail.com	-																																														

**Idea / Prototype / Innovation have received Grant / funding from Pre-Incubation / Incubation Centre / Facilities**

Name of Idea / POC / Innovation / Prototype Received Funding / Grant from Centre	Name of Centre	Stage of Innovation (TRL Stage)	Innovation Developed by	Year of Innovation / Project Started	Type of Innovation	Current Status Pre-Incubation/Incubation Support Received	Current Status of Innovation, Stage of TRL it has reached	Had Centre/institute provided any Financial support (either own resource or fund received from agencies) in terms of Seed Grant/Fund Support to Idea / Prototype / Innovations Development during the financial period 2018-19	Had the Idea/Prototype/Innovations raised any Seed fund/Angel Investment/VC during the period of receiving pre-incubation/incubation support at your Pre-incubation/incubation or institute during the financial period 2018-19	Had the Incubation Centre/institute received any income/revenue from Idea/Prototype/Innovations for the pre-incubation/incubation support and the services offered by Pre-incubation/incubation or institute during the financial period 2018-19?										
CRYOGENIC ENGINEERING CENTRE	TRL 1 : Basic research. Principles postulated and observed but no experimental proof available.	Faculty and Student	2018	Non-IP / Non-Patented Technology	Still Under Development Process	TRL 1 : Basic research. Principles postulated and observed but no experimental proof available.	No	<table border="1"> <tr> <td>Yes</td> <td></td> </tr> <tr> <td>Total Seed Fund/Angel Investment/VC Fund raised by Idea/Prototype/Innovations during the period of pre-incubation/incubation support at your Pre-incubation/incubation or institute financial period 2018-19 (in Rupees)</td> <td></td> </tr> <tr> <td>0</td> <td></td> </tr> <tr> <td>Seedfund/Angel/VC Agency Name</td> <td>isro</td> </tr> <tr> <td>Agency Type</td> <td>Govt. Agency (Central)</td> </tr> </table>	Yes		Total Seed Fund/Angel Investment/VC Fund raised by Idea/Prototype/Innovations during the period of pre-incubation/incubation support at your Pre-incubation/incubation or institute financial period 2018-19 (in Rupees)		0		Seedfund/Angel/VC Agency Name	isro	Agency Type	Govt. Agency (Central)	No	
Yes																				
Total Seed Fund/Angel Investment/VC Fund raised by Idea/Prototype/Innovations during the period of pre-incubation/incubation support at your Pre-incubation/incubation or institute financial period 2018-19 (in Rupees)																				
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Seedfund/Angel/VC Agency Name	isro																			
Agency Type	Govt. Agency (Central)																			
<b>Principal Innovator</b>																				
Name		Type		Gender		Email		Contact												
Prof. T. K. Nandi		Faculty		Male		nandi_tk@rediffmail.com		03222283598												
<b>Co-Innovator</b>																				
Name		Type		Gender		Email		Contact												
Prof. Arnab Roy		Faculty		Male		arnab@aero.iitkgp.ac.in		03222283020												
Prof. Parthasarathi Ghosh		Faculty		Male		psghosh@cryo.iitkgp.ac.in		03222283594												
									Analysis of rocket propulsion test data using data fusion techniques											

**Idea / Prototype / Innovation have received Grant / funding from Pre-Incubation / Incubation Centre / Facilities**

Name of Idea / POC / Innovation / Prototype Received Funding / Grant from Centre	Name of Centre	Stage of Innovation (TRL Stage)	Innovation Developed by	Year of Innovation / Project Started	Type of Innovation	Current Status Pre-Incubation/Incubation Support Received	Current Status of Innovation, Stage of TRL it has reached	Had Centre/institute provided any Financial support (either own resource or fund received from agencies) in terms of Seed Grant/Fund Support to Idea / Prototype / Innovations Development during the financial period 2018-19	Had the Idea/Prototype/Innovations raised any Seed fund/Angel Investment/VC during the period of receiving pre-incubation/incubation support at your Pre-incubation/incubation or institute during the financial period 2018-19	Had the Incubation Centre/institute received any income/revenue from Idea/Prototype/Innovations for the pre-incubation/incubation support and the services offered by Pre-incubation/incubation or institute during the financial period 2018-19?										
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Seedfund/Angel/VC Agency Name	ISRO																			
Agency Type	Govt. Agency (Central)																			
<b>Principal Innovator</b>																				
Name		Type		Gender		Email		Contact												
Prof. T. K. Nandi		Faculty		Male		nandi_tk@rediffmail.com		03222283588												
<b>Co-Innovator</b>																				
Name		Type		Gender		Email		Contact												
Prof. Indranil Ghosh		Faculty		Male		indranil@cryo.iitkgp.ac.in		03222283588												
										Thermo structural analysis of 16 inch diameter,130 m long Liquid Oxygen pipeline during chill down process										

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Name		Type		Gender		Email		Contact												
Prof. Parthasarathi Ghosh		Faculty		Male		psghosh@cryo.iitkgp.ac.in		03222283594												
<b>Co-Innovator</b>																				
Name		Type		Gender		Email		Contact												
Prof. T. K. Nandi		Faculty		Male		nandi_tk@rediffmail.com		03222283598												
Prof. Indranil Ghosh		Faculty		Male		indranil@cryo.iitkgp.ac.in		03222283588												
									Theoretical and experimental studies on flow characteristics during change over of flow from start up tank to run tank during liquid rocket engine testing											



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Prof. Parthasarathi Ghosh		Faculty		Male		psghosh@cryo.iitkgp.ac.in		03222283594												
<b>Co-Innovator</b>																				
Name		Type		Gender		Email		Contact												
Prof. T. K. Nandi		Faculty		Male		nandi_tk@rediffmail.com		03222283598												
Prof. Indranil Ghosh		Faculty		Male		indranil@cryo.iitkgp.ac.in		03222283588												
										Study of establishment of collapse factor for pressurizing Cryogenic Liquid at different operable conditions for ground tests of Cryogenic Rocket engines										

**Idea / Prototype / Innovation have received Grant / funding from Pre-Incubation / Incubation Centre / Facilities**

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CRYOGENIC ENGINEERING CENTRE	TRL 2 : Technology formulation. Concept and application have been formulated.	Faculty and Student	2018	Non-IP / Non-Patented Technology	Still Under Development Process	TRL 2 : Technology formulation. Concept and application have been formulated.	No	<table border="1"> <tr> <td colspan="2" data-bbox="1641 416 1821 469">Yes</td> </tr> <tr> <td colspan="2" data-bbox="1641 469 1821 798">Total Seed Fund/Angel Investment/VC Fund raised by Idea/Prototype/Innovations during the period of pre-incubation/incubation support at your Pre-incubation/incubation or institute financial period 2018-19 (in Rupees)</td> </tr> <tr> <td colspan="2" data-bbox="1641 798 1821 842">0</td> </tr> <tr> <td data-bbox="1641 842 1731 979">Seedfund/Angel/VC Agency Name</td> <td data-bbox="1731 842 1821 979">ISRO</td> </tr> <tr> <td data-bbox="1641 979 1731 1101">Agency Type</td> <td data-bbox="1731 979 1821 1101">Govt. Agency (Central)</td> </tr> </table>	Yes		Total Seed Fund/Angel Investment/VC Fund raised by Idea/Prototype/Innovations during the period of pre-incubation/incubation support at your Pre-incubation/incubation or institute financial period 2018-19 (in Rupees)		0		Seedfund/Angel/VC Agency Name	ISRO	Agency Type	Govt. Agency (Central)	No	
Yes																				
Total Seed Fund/Angel Investment/VC Fund raised by Idea/Prototype/Innovations during the period of pre-incubation/incubation support at your Pre-incubation/incubation or institute financial period 2018-19 (in Rupees)																				
0																				
Seedfund/Angel/VC Agency Name	ISRO																			
Agency Type	Govt. Agency (Central)																			
<b>Principal Innovator</b>																				
Name		Type		Gender		Email		Contact												
Prof. Parthasarathi Ghosh		Faculty		Male		psghosh@cryo.iitkgp.ac.in		03222283594												
<b>Co-Innovator</b>																				
Name		Type		Gender		Email		Contact												
Prof. P. Sandilya		Faculty		Male		pavit@cryo.iitkgp.ac.in		03222283596												
									The process design of helium liquefier for 50 litre per hr helium plant development at VECC Kolkata											

**Idea / Prototype / Innovation have received Grant / funding from Pre-Incubation / Incubation Centre / Facilities**

Name of Idea / POC / Innovation / Prototype Received Funding / Grant from Centre	Name of Centre	Stage of Innovation (TRL Stage)	Innovation Developed by	Year of Innovation / Project Started	Type of Innovation	Current Status Pre-Incubation/Incubation Support Received	Current Status of Innovation, Stage of TRL it has reached	Had Centre/institute provided any Financial support (either own resource or fund received from agencies) in terms of Seed Grant/Fund Support to Idea / Prototype / Innovations Development during the financial period 2018-19	Had the Idea/Prototype/Innovations raised any Seed fund/Angel Investment/VC during the period of receiving pre-incubation/incubation support at your Pre-incubation/incubation or institute during the financial period 2018-19	Had the Incubation Centre/institute received any income/revenue from Idea/Prototype/Innovations for the pre-incubation/incubation support and the services offered by Pre-incubation/incubation or institute during the financial period 2018-19?
CRYOGENIC ENGINEERING CENTRE	TRL 2 : Technology formulation. Concept and application have been formulated.	Faculty and Student	2016	Non-IP / Non-Patented Technology	Still Under Development Process	TRL 2 : Technology formulation. Concept and application have been formulated.	No	No	No	
<b>Principal Innovator</b>										
Name		Type		Gender		Email		Contact		
Prof. Parthasarathi Ghosh		Faculty		Male		psghosh@cryo.iitkgp.ac.in		03222283594		
<b>Co-Innovator</b>										
Name		Type		Gender		Email		Contact		
Prof. Kanchan Chowdhury		Faculty		Male		kanchan@cryo.iitkgp.ac.in		03222283582		
Dr. Sandip Pal		Faculty		Male		sandip@vecc.gov.in		3323184434		
ENGINEERING NANOIONICS INTERFACE FOR HIGH IONIC CONDUCTIVITY										

**Idea / Prototype / Innovation have received Grant / funding from Pre-Incubation / Incubation Centre / Facilities**

Name of Idea / POC / Innovation / Prototype Received Funding / Grant from Centre	Name of Centre	Stage of Innovation (TRL Stage)	Innovation Developed by	Year of Innovation / Project Started	Type of Innovation	Current Status Pre-Incubation/Incubation Support Received	Current Status of Innovation, Stage of TRL it has reached	Had Centre/institute provided any Financial support (either own resource or fund received from agencies) in terms of Seed Grant/Fund Support to Idea / Prototype / Innovations Development during the financial period 2018-19	Had the Idea/Prototype/Innovations raised any Seed fund/Angel Investment/VC during the period of receiving pre-incubation/incubation support at your Pre-incubation/incubation or institute during the financial period 2018-19	Had the Incubation Centre/institute received any income/revenue from Idea/Prototype/Innovations for the pre-incubation/incubation support and the services offered by Pre-incubation/incubation or institute during the financial period 2018-19?										
CRYOGENIC ENGINEERING CENTRE	TRL 1 : Basic research. Principles postulated and observed but no experimental proof available.	Faculty	2018	Non-IP / Non-Patented Technology	Still Under Development Process	TRL 1 : Basic research. Principles postulated and observed but no experimental proof available.	No	<table border="1"> <tr> <td>Yes</td> <td></td> </tr> <tr> <td>Total Seed Fund/Angel Investment/VC Fund raised by Idea/Prototype/Innovations during the period of pre-incubation/incubation support at your Pre-incubation/incubation or institute financial period 2018-19 (in Rupees)</td> <td></td> </tr> <tr> <td>0</td> <td></td> </tr> <tr> <td>Seedfund/Angel/VC Agency Name</td> <td>SPARC</td> </tr> <tr> <td>Agency Type</td> <td>Govt. Agency (Central)</td> </tr> </table>	Yes		Total Seed Fund/Angel Investment/VC Fund raised by Idea/Prototype/Innovations during the period of pre-incubation/incubation support at your Pre-incubation/incubation or institute financial period 2018-19 (in Rupees)		0		Seedfund/Angel/VC Agency Name	SPARC	Agency Type	Govt. Agency (Central)	No	
Yes																				
Total Seed Fund/Angel Investment/VC Fund raised by Idea/Prototype/Innovations during the period of pre-incubation/incubation support at your Pre-incubation/incubation or institute financial period 2018-19 (in Rupees)																				
0																				
Seedfund/Angel/VC Agency Name	SPARC																			
Agency Type	Govt. Agency (Central)																			

**Principal Innovator**

Name	Type	Gender	Email	Contact
Dr Venimadhav Adyam	Faculty	Male	venimadhav@cryo.iitkgp.ac.in	9775021822

**Co-Innovator**

Name	Type	Gender	Email	Contact
Prof. Driscoll. J	Faculty	Female	jld35@cam.ac.uk	-
Dr. Daton	Faculty	Female	sd33@cam.ac.in	-

Development of CMOS Compatible Resistive Switching Layer and Highly Non-linear Selector for 3D-Stackable 1S1R Crossbar Array-structured Memory Cell

**Idea / Prototype / Innovation have received Grant / funding from Pre-Incubation / Incubation Centre / Facilities**

Name of Idea / POC / Innovation / Prototype Received Funding / Grant from Centre	Name of Centre	Stage of Innovation (TRL Stage)	Innovation Developed by	Year of Innovation / Project Started	Type of Innovation	Current Status Pre-Incubation/Incubation Support Received	Current Status of Innovation, Stage of TRL it has reached	Had Centre/institute provided any Financial support (either own resource or fund received from agencies) in terms of Seed Grant/Fund Support to Idea / Prototype / Innovations Development during the financial period 2018-19	Had the Idea/Prototype/Innovations raised any Seed fund/Angel Investment/VC during the period of receiving pre-incubation/incubation support at your Pre-incubation/incubation or institute during the financial period 2018-19	Had the Incubation Centre/institute received any income/revenue from Idea/Prototype/Innovations for the pre-incubation/incubation support and the services offered by Pre-incubation/incubation or institute during the financial period 2018-19?										
CRYOGENIC ENGINEERING CENTRE	TRL 1 : Basic research. Principles postulated and observed but no experimental proof available.	Faculty	2018	Non-IP / Non-Patented Technology	Still Under Development Process	TRL 1 : Basic research. Principles postulated and observed but no experimental proof available.	No	<table border="1"> <tr> <td>Yes</td> <td></td> </tr> <tr> <td>Total Seed Fund/Angel Investment/VC Fund raised by Idea/Prototype/Innovations during the period of pre-incubation/incubation support at your Pre-incubation/incubation or institute financial period 2018-19 (in Rupees)</td> <td></td> </tr> <tr> <td>0</td> <td></td> </tr> <tr> <td>Seedfund/Angel/VC Agency Name</td> <td>SPARC</td> </tr> <tr> <td>Agency Type</td> <td>Govt. Agency (Central)</td> </tr> </table>	Yes		Total Seed Fund/Angel Investment/VC Fund raised by Idea/Prototype/Innovations during the period of pre-incubation/incubation support at your Pre-incubation/incubation or institute financial period 2018-19 (in Rupees)		0		Seedfund/Angel/VC Agency Name	SPARC	Agency Type	Govt. Agency (Central)	No	
Yes																				
Total Seed Fund/Angel Investment/VC Fund raised by Idea/Prototype/Innovations during the period of pre-incubation/incubation support at your Pre-incubation/incubation or institute financial period 2018-19 (in Rupees)																				
0																				
Seedfund/Angel/VC Agency Name	SPARC																			
Agency Type	Govt. Agency (Central)																			

**Principal Innovator**

Name	Type	Gender	Email	Contact
Dr. Ayan Roy Chaudhuri	Faculty	Male	ayan@matsc.iitkgp.ac.in	03222283594

**Co-Innovator**

Name	Type	Gender	Email	Contact
Dr Venimadhav Adyam	Faculty	Male	venimadhav@cryo.iitkgp.ac.in	9775021822
DR. Dirk Wouters	Faculty	Male	-	-
DR. Vikas Rana	Faculty	Male	-	-

Solar Persistent Autonomous Vessel

**Idea / Prototype / Innovation have received Grant / funding from Pre-Incubation / Incubation Centre / Facilities**

Name of Idea / POC / Innovation / Prototype Received Funding / Grant from Centre	Name of Centre	Stage of Innovation (TRL Stage)	Innovation Developed by	Year of Innovation / Project Started	Type of Innovation	Current Status Pre-Incubation/Incubation Support Received	Current Status of Innovation, Stage of TRL it has reached	Had Centre/institute provided any Financial support (either own resource or fund received from agencies) in terms of Seed Grant/Fund Support to Idea / Prototype / Innovations Development during the financial period 2018-19	Had the Idea/Prototype/Innovations raised any Seed fund/Angel Investment/VC during the period of receiving pre-incubation/incubation support at your Pre-incubation/incubation or institute during the financial period 2018-19	Had the Incubation Centre/institute received any income/revenue from Idea/Prototype/Innovations for the pre-incubation/incubation support and the services offered by Pre-incubation/incubation or institute during the financial period 2018-19?										
CRYOGENIC ENGINEERING CENTRE	TRL 0 : Idea. Unproven concept, no testing has been performed.	Student	2017	Non-IP / Non-Patented Technology	Still Under Development Process	TRL 4 : Small scale prototype built in a laboratory environment ("ugly" prototype).	No	<table border="1"> <tr> <td colspan="2" data-bbox="1641 422 1821 470">Yes</td> </tr> <tr> <td colspan="2" data-bbox="1641 470 1821 798">Total Seed Fund/Angel Investment/VC Fund raised by Idea/Prototype/Innovations during the period of pre-incubation/incubation support at your Pre-incubation/incubation or institute financial period 2018-19 (in Rupees)</td> </tr> <tr> <td colspan="2" data-bbox="1641 798 1821 837">0</td> </tr> <tr> <td data-bbox="1641 837 1731 1189">Seedfund/Angel/VC Agency Name</td> <td data-bbox="1731 837 1821 1189">Pavan Konduri, Prabh at Vyas, Biddu Bhusan Singh, Nikhil Angad Baskhi</td> </tr> <tr> <td data-bbox="1641 1189 1731 1460">Agency Type</td> <td data-bbox="1731 1189 1821 1460">Angel Investor/Venture Capitalist/High Net worth Individual (HNIs)</td> </tr> </table>	Yes		Total Seed Fund/Angel Investment/VC Fund raised by Idea/Prototype/Innovations during the period of pre-incubation/incubation support at your Pre-incubation/incubation or institute financial period 2018-19 (in Rupees)		0		Seedfund/Angel/VC Agency Name	Pavan Konduri, Prabh at Vyas, Biddu Bhusan Singh, Nikhil Angad Baskhi	Agency Type	Angel Investor/Venture Capitalist/High Net worth Individual (HNIs)	No	
Yes																				
Total Seed Fund/Angel Investment/VC Fund raised by Idea/Prototype/Innovations during the period of pre-incubation/incubation support at your Pre-incubation/incubation or institute financial period 2018-19 (in Rupees)																				
0																				
Seedfund/Angel/VC Agency Name	Pavan Konduri, Prabh at Vyas, Biddu Bhusan Singh, Nikhil Angad Baskhi																			
Agency Type	Angel Investor/Venture Capitalist/High Net worth Individual (HNIs)																			

### Idea / Prototype / Innovation have received Grant / funding from Pre-Incubation / Incubation Centre / Facilities

Name of Idea / POC / Innovation / Prototype Received Funding / Grant from Centre	Name of Centre	Stage of Innovation (TRL Stage)	Innovation Developed by	Year of Innovation / Project Started	Type of Innovation	Current Status Pre-Incubation/Incubation Support Received	Current Status of Innovation, Stage of TRL it has reached	Had Centre/institute provided any Financial support (either own resource or fund received from agencies) in terms of Seed Grant/Fund Support to Idea / Prototype / Innovations during the financial period 2018-19	Had the Idea/Prototype/Innovations raised any Seed fund/Angel Investment/VC during the period of receiving pre-incubation/incubation support at your Pre-incubation/incubation or institute during the financial period 2018-19	Had the Incubation Centre/institute received any income/revenue from Idea/Prototype/Innovations for the pre-incubation/incubation support and the services offered by Pre-incubation/incubation or institute during the financial period 2018-19?
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Principal Innovator				
Name	Type	Gender	Email	Contact
Maitrai Maka (M)	Student	Male	makamaitrai@gmail.com	9564437761

### Start-ups have received Grant / funding from Pre-Incubation / Incubation Centre / Facilities

Name of Start-up Received Funding / Grant from Centre	Name of Centre	Year of Registration	Registered as	Start-up with Corporate Identification Number (CIN) Registration	Start-up Founded by	Type of Innovation	Current Status Pre-Incubation/Incubation Support Received	Has the Start-up Grown to a stage of Employment Generation to 10 Numbers or an annual Turnover to Rs. 50 Lakhs during the financial year 2018-19	Had Centre/institute provided any Financial support (either own resource or fund received from agencies) in terms of Seed Grant/Fund Support to Start-up during the financial period 2018-19?	Had the Start-up raised any Seed fund/Angel Investment/VC during the period of receiving pre-incubation/incubation support at your Pre-incubation/incubation or institute during the financial period 2018-19?	Had the Incubation Centre/institute Received any income/revenue from Start-up for the pre-incubation/incubation support and the services offered by Pre-incubation/incubation or institute during the financial period 2018-19 ?
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## Start-ups have received Grant / funding from Pre-Incubation / Incubation Centre / Facilities

Zelence Industries Pvt. Ltd.	SRIC	2018-19	Private Limited	U74999WB2017P TC220707	Faculty and Student	IP / Patented Technology Applied for Patent Patent Application No Year of Patent Application	No	Receiving Incubation Support from Incubation Unit	No	Yes Total Seed Grant/Fund Amount Disbursed to Start-up by Institute/Centre (In Rupees) 2500000	Yes Total Seed Fund/Angel/VC Investment/VC Fund raised by Idea/Prototype/Innovations during the period of pre-incubation/incubation support at your Pre-incubation/incubation or institute financial period 2018-19 (in Rupees) 2500000 Seed Fund/Angel/VC Agency Name TBI Agency Type Govt Agency (Central)	Yes Total Income received from Start-up for pre-incubation/incubation support and the services offered by Pre-incubation/incubation or institute during the financial period 2018-19 (in Rupees) 2500000
<b>Founder</b>												
Name			DIN Number		Type		Gender		Email		Contact	
Dr. Bidus Kanti Das			000000		Alumni Entrepreneur		Male		zelenceindustries@gmail.com		7001564058	

## Co-Incubation Partnership

Type of Partnership	Partnership Institute Name	Type of Support Offered	No. of Student Projects/ Ideas / Innovation / Startups Supported	Date of MOU / Agreement Signed on
Incubation Services/Support Received from Other Institute/Incubator	HDFC Bank	Seed fund	5	22-07-2018
Incubation Services/Support Extended to Other Institute	TU Munich	Pre-incubation	42	19-06-2018
Incubation Services/Support Received from Other Institute/Incubator	Capillary Technologies	Seed fund	6	17-08-2018

## Technology Commercialization / Transfer

<b>No Data Filled!</b>
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## Declaration

To,  
The ARIIA Committee  
MHRD's Innovation Cell  
New Delhi

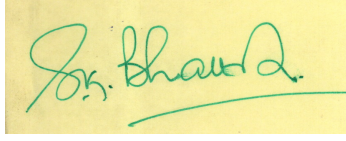
### Joint Declaration by the Head of the Institute and Nodal Officer

Dear Sir,

Herewith, myself Prof. Sriman Kumar Bhattacharyya (Head of Institute) and Mr. Manoj Kumar Tiwari (Nodal Officer) jointly declaring on behalf of our institute is that all the information submitted are true and correct to best of our knowledge.

Thank you

The Head of Institute



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Prof. Sriman Kumar Bhattacharyya  
Head of the Institution,  
Indian Institute of Technology Kharagpur,  
Kharagpur, West Bengal

Nodal officer



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Mr. Manoj Kumar Tiwari  
Nodal Officer,  
Indian Institute of Technology Kharagpur,  
Kharagpur, West Bengal