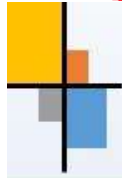




Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)
Accredited with Grade "A" by NAAC | Approved by AICTE



**INSTITUTION'S
INNOVATION
COUNCIL**
(Ministry of HRD Initiative)



SATHYABAMA - TBI
(Supported by NSTEDB-DST)



**SATHYABAMA
ENTREPRENEURSHIP
DEVELOPMENT CLUB**

In association with

MINISTRY OF MICRO, SMALL & MEDIUM ENTERPRISES

Organizes

TBI Webinar Series on

Start, Run & Sustain of MSMEs in the Covid-19 scenario



04.06.2020
11 :00



Government Schemes to MSMEs/Startups

Shri. R. Paneerselvam,
Principal Director, MSME PPDC, AGRA

04.06.2020
15 :00



**Role of Innovations for the Sustainable
Ecosystem**

Dr. V. J. Kishore Sonti
Associate Professor, SIST

05.06.2020
11 :00



Success Talk

Shri. C K. Kumaravel
CEO and Co-founder, Naturals Salon



05.06.2020
15 :00



Thinking of Starting a Startup?

Shri. Shyam Sekar S
Founder, StartupXperts



Morning Session : Meeting ID : 918 2047 6206 Pwd: 573628

Evening Session : Meeting ID : 915 3621 6404 Pwd: 989479

Participants will get an E-Certificate upon successful completion of webinar series

CONVENER

Dr. Thamilselvan R, Assoc Prof
Mr. Kishore Kumar S, Manager , TBI

Registration Link

<https://tinyurl.com/y86nzexr>

ORGANIZING SECRETARY

Dr. B. SHEELA RANI
Director (Research)



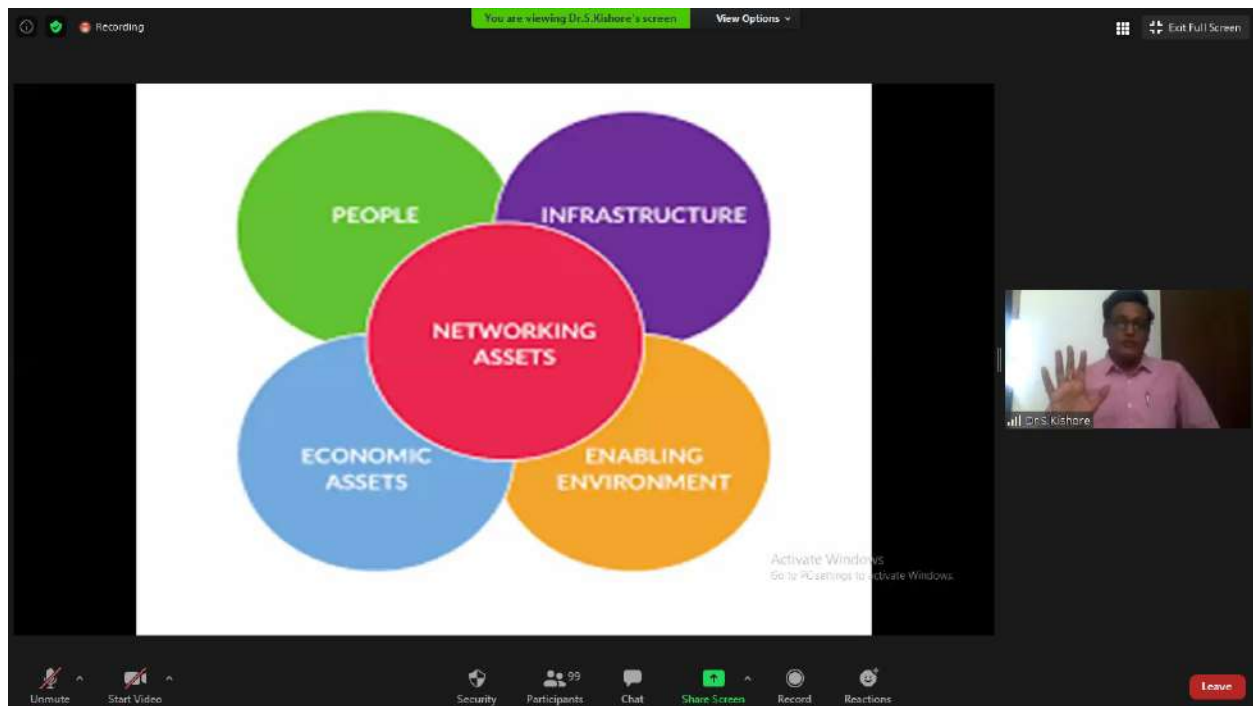
Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



About the Program:

1. Col.Dr.Jeppiaar Research park, Sathyabama-Technology Business Incubator, organised a 2 days online TBI webinar series on "Start,Run &Sustain of MSME in the Covid-19 Scenario" in association with Minsitry of Micro, Small & Medium Enterprises, IIC & Sathyabama Entrepreneurship Development Club from 4th June to 6th June 2020.
2. This webinar was designed to be thought provoking to the participants to tinker their ideas throughout current lockdown situation, and channelize it towards their entrepreneurial journey.
3. 2 sessions per day (Forenoon session by 10:00am/ Afternoon session by 3:00pm)
4. More than 800 registrations were received (through Gmail)
5. Approximately, 130 participants attended each session (through zoom).





Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Zoom Meeting

Kishore Kumar THAVILUSUNMI SHEELARANI Dr Mohan Kuma... Nukathoti santhi honor 9i

Recording

Unmute Start Video

Security Participants 132 Chat Share Screen Record Reactions

Start a search

11:23 AM 6/5/2020

Leave

Recording

You are viewing Panneerselvam Ramaswamy's screen

View Options

Exit Full Screen

Highlights of Special Package for MSME Sector

1. Rs 3 lakh crores Collateral free Automatic Loans for Business, incl MSME
2. Rs 20,000 crore Subordinate Debt for MSMEs
3. Rs 50,000 cr equity infusion through MSME Fund of Funds
4. New definition of MSMEs
5. Global tender to be disallowed upto Rs 200 crores
6. Other interventions for MSMEs
7. Rs 2500 crores EPF support for Businesses and Workers for 3 more months
8. EPF contribution reduced for Business & Workers for 3 months- Rs 6750 crores

Panneerselvam Ramaswamy

Unmute Start Video

Security Participants 146 Chat Share Screen Record Reactions

Leave



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



SATHYABAMA **INSTITUTE OF SCIENCE AND TECHNOLOGY**

DEEMED TO BE UNIVERSITY
(Established Under Section 3 of the UGC Act, 1956)
Accredited with "A" Grade by NAAC | Approved by AICTE
Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai 600119
www.sathyabama.ac.in



Sathyabama Technology Business Incubator **Centre for Ocean Research** **Sathyabama Institution's Innovation Council**



Jointly organizes **Webinar on** **Journey to Become A Startup Entrepreneur -** **Seeds to Shoots**



Dr. S. SESHADRI
Advisor, Sathyabama -TBI
RMOc, Atal Tinkering Labs

Date: 18.07.2020

Time: 10:00 AM – 11:00 AM

PATRONS

Dr. Mariazeena Johnson
Chancellor

Dr. Marie Johnson
President

Dr. T. Sasipraba
Vice-Chancellor

Conveners
Dr. L. Stanley Abraham
Scientist E
MoC, Atal Tinkering Labs
Dr. D. Inbakandan
Scientist E & Head
Centre for Ocean Research



Co - Conveners
Dr. V. Ganesh Kumar
Scientist E
Centre for Ocean Research
Mr. S. Kishore Kumar
Manager, Sathyabama TBI

Scan here to register
or



No Registration Fee ; E-certificate will be issued

For details: register.corsist@gmail.com

https://docs.google.com/forms/d/e/1FAIpQLSfvRj8yVWx68d8lISG0nJZ-gp6BVk5lQ3vrbzyfkluiHeebkA/viewform?usp=sf_link



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Report on Journey to become a Startup Entrepreneur – Seeds to Shoots

Col.Dr.Jeppiaar Research park, Sathyabama-Technology Business Incubator, Centre for Ocean Research & IIC organized a webinar on Journey to become a startup Entrepreneurs- Seeds to shoots on 18.7.2020. The webinar was handled by Dr. Seshadri, which he emphasized the importance of innovation & creativity to be an entrepreneur. Participants were interactive and raised few questions during the webinar.



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)

Accredited with "A" grade by NAAC
Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 600119, Tamilnadu, India



VIRTUAL SYMPOSIUM ON

THE RECENT TRENDS IN AQUACULTURE INDUSTRIES

[6 Days Program: 20th to 25th July 2020]

JOINTLY ORGANIZED BY

COL. DR. JEPPIAAR RESEARCH PARK

CENTRE FOR OCEAN RESEARCH (COR) &

SATHYABAMA UNIVERSITY-TECHNOLOGY BUSINESS INCUBATOR (SU-TBI)

in association with

MINISTRY OF EARTH SCIENCES - EARTH SCIENCE & TECHNOLOGY CELL (ESTC)

Recent advances in Aquaculture technologies & super intensive culture system for sustainable aquaculture Dr. FARSHAD SHISHEHCHIAN Group President & CEO Blue Aqua Group, Singapore Date: 20 th July 2020 Time: 10.00 AM		Ornamental Aquaculture Industry in India - After 2010 (latest trends and market) Mr. R. SUNDARARAJAN Proprietor, Filial Aquatics, India, Madurai District Ornamental Fish Co-Operative Society Ltd. Date: 20 th July 2020 Time 01.00 PM	
Shrimp Farming in India: What's next? Dr MANOJ M SHARMA Director Mayank Aquaculture Private Limited, India Date: 21 st July 2020 Time: 10.00 AM		Shrimp Viral Diseases Dr. AMERNENI RAVI KUMAR Director Alpha biological, India Date: 21 st July 2020 Time 01.00 PM	
Role of technology in making aquaculture ecosystem resilient - 3RPPM model Mr. RAJAMANO HAR CEO & Co-Founder Aquaconnect, India Date: 22 nd July 2020 Time: 10.00 AM		Minimizing Production Cost for Sustainable Shrimp Farming Mr. B. RAVIKUMAR Technical General Manager Growel Feeds Pvt. Ltd. in India Date: 22 nd July 2020 Time 01.00 PM	
Advanced Technologies in Aquaculture Dr. P. E. CHERAN Super Shrimps - Consultant Shrimp Hatchery Operator, India Date: 23 rd July 2020 Time: 10.00 AM		Probiotics - The way to Sustainable Aquaculture Dr. V. KATHIRAVAN Head, Technical & Marketing Artis Animal Health Care (I) Pvt Ltd, India Date: 23 rd July 2020 Time 01.00 PM	
Advances in Aquaculture Nutrition Research Dr. A. VICTOR SURESH Managing Director United Research (Singapore) Pte. Ltd. Date: 24 th July 2020 Time: 10.00 AM		Current scenario of global seaweeds: prospects of commercial seaweed cultivation with special emphasis Kappaphycus alvarezii Dr. MUTHUSWAMY JAIKUMAR Research Scientist Sea6 Energy Pvt. Ltd. , India Date: 24 th July 2020 Time 01.00 PM	
Lab to land technology: Large scale outdoor mass cultivation of microalgae for shrimp aquaculture Dr. P. SELVAKUMAR Senior Technical Scientist BMR Industries Pvt Ltd. , India Date: 25 th July 2020 Time: 10.00		Aquaculture - Career and Opportunities Dr. MARIYARAJ VIJAY Director, Best Aquastar Shrimp Hatcheries Proprietor, Arcanoe Life Sciences Date: 25 th July 2020 Time 01.00 PM	

PATRONS Dr. MARIAZEENA JOHNSON, Chancellor Dr. MARIE JOHNSON, President Dr. T. SASIPRABA, Vice Chancellor ORGANIZING SECRETARY Dr. B. SHEELA RANI, Director (Research) CONVENERS Dr. D. INBAKANDAN, Head & Scientist E, COR Dr. S. SESHADRI, Advisor, SU-TBI CO-CONVENERS Dr. L. STANLEY ABRAHAM, Scientist E, COR Dr. V. GANESH KUMAR, Scientist E, COR Dr. K. GOVINDARAJU, Scientist D, COR Mr. KISHORE KUMAR, Manager, SU-TBI	Organizers Dr. V. PARAMESWARAN, Scientist D, COR Dr. RAVI MANI, Scientist C, COR Dr. STALIN DHAS, Scientist B, COR Dr. KARTHICK VELU, Scientist B, COR Mr. C. KUMAR, Scientist B, COR Mr. THIRUGNANASAMBANDAM, Scientist B, COR Mr. J. BAALAMURUGAN, Scientist B, COR Moderators Ms. C. ANU, MoES - Research Scholar, COR Mr. VINEETH KUMAR C. M, MoES - Research Scholar, COR Registration link: https://forms.gle/AG8vv2uj6NxJ8WPUA Join Zoom Meeting https://zoom.us/j/97119297726?pwd=Ml9ZMdbOM2YrUstxeGFzcFIHa1Vvdz09 Meeting ID: 971 1929 7726 Password: 758743
---	---

Meet the Aquaculture Industrial Experts from your Home!

E-Certificate will be issued only to the registered participants!

Registration is Free!

For further details contact - Mr. Vineeth Kumar C M @ 9400670587



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Report on The Recent Trends in Aquaculture Industries

Col.Dr.Jeppiaar Research Park, Sathyabama-Technology Business Incubator, Centre for Ocean Research in association with Ministry of Earth Sciences - Earth Science & Technology Cell (ESTC) has organized the "VIRTUAL SYMPOSIUM ON THE RECENT TRENDS IN AQUACULTURE INDUSTRIES" during 20th to 25th July 2020. On the account of the 20 year of the celebration of obtaining the deemed university status, Sathyabama Institute of Science and Technology in association with the Ministry of Earth Sciences jointly organized the "VIRTUAL SYMPOSIUM ON THE RECENT TRENDS IN AQUACULTURE INDUSTRIES" from 20th to 25th July 2020. As Col. Dr. Jeppiaar Research Park, Centre for Ocean Research is recognized as the nodal cell for Marine Biotechnological Studies, Ministry established the Earth Science and Technology Cell (ESTC) at Sathyabama Campus from 2019. Through the ESTC, a 6 days virtual symposium is organized to meet the top aquaculture industrial experts from all around the world using an online platform. The symposium was inaugurated by Dr. Gopal Iyengar, Scientist-G, Head - ESTC Program, Ministry of Earth Sciences, Government of India and by Prof. Dr. T. Balasubramanian, Vice-Chancellor, Chettinad Academy of Research & Education in the gracious presence of Vice-Chancellor, Dr. T. Sasipraba and Director (Research), Dr. B. Sheela Rani, Sathyabama Institute of Science and Technology. Dr. Gopal Iyengar, MoES appreciated the progress of Sathyabama-ESTC, as this virtual symposium is organized based on the objectives of NITI Aayog and Make in India policies. He also coined that this virtual program was a bridge for young entrepreneurs to meet the field level global aquaculture industrial experts from their home. MoES also advises Centre for Ocean Research to conduct such industrial linkage programmes jointly with Sathyabama - Technology Business Incubator in future. Around 2131 registered participants from 25 different countries around the world were benefited from this virtual symposium.



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology

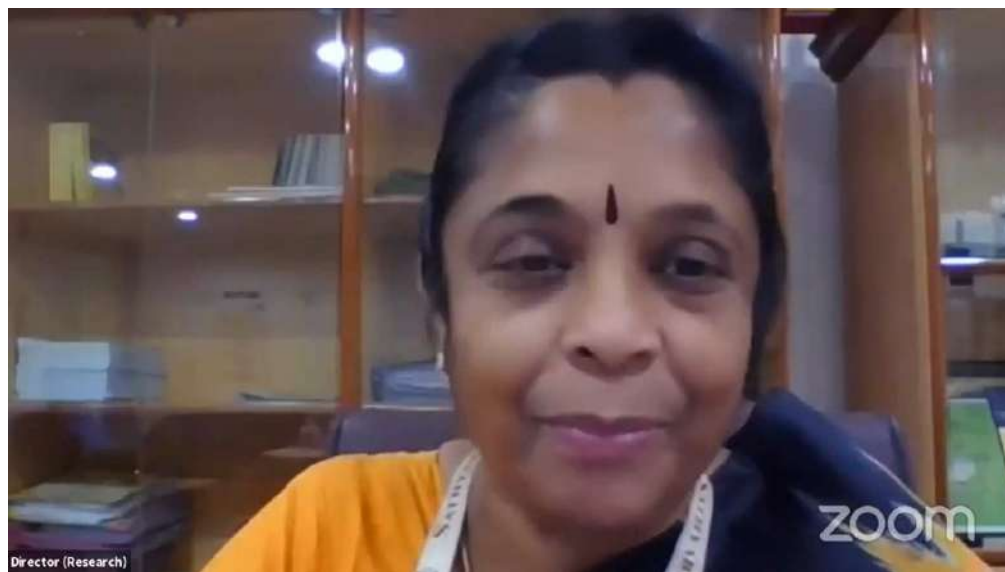


INAUGURAL SESSION

Welcome Note

Dr. B. SHEELA RANI- Director (Research)

Sathyabama Institute of Science and Technology



Director (Research) - Dr. B. Sheela Rani was invited to deliver the welcome address. In presence of Vice Chancellor and other distinguished scientists, she welcomes all the dynamic speakers and Eminent personalities who gave their valuable time for this symposium. She narrated the true moto about the program. She said one objective of Centre for Ocean Research in association with MoES-ESTC is to develop a common platform and create linkages with agencies institutes, industries on state, National and International levels for collaborative thoughts and disseminate the ideas on the augmentation of marine biological resources. The major goal of the symposium was focused towards aquaculture industries. As aquaculture and allied research is one of the focused are of Centre for Ocean Research, this virtual symposium was designed as per the objective of MoES and Centre for Ocean Research. This virtual symposium was famed for 6 days and planned for two sessions on each day- one in the morning by 10:00 am and in the noon by 1:00 pm. For the invited talks, field level and pioneer speaker in aquaculture industries were invited. She also welcomes the pioneer speakers in the field of aquaculture who accepted our invitation to deliver a talk in this virtual symposium. The guest speakers were as follows

Dr. FARSHAD SHISHEHCHIAN, Group President & CEO, Blue Aqua Group, Singapore. Mr. R. SUNDARARAJAN, Madurai District Ornamental Fish Cooperative Society Ltd., Proprietor, Filial Aquatics, India. Dr MANOJ M SHARMA, Director, Mayank Aquaculture Private Limited, India. Dr. AMERNENI RAVI KUMAR, Director, Alpha biological, India. Mr. RAJAMANOHAR CEO & Co-Founder Aquaconnect, India. Mr. B. RAVIKUMAR, Technical General Manager Growel Feeds Pvt. Ltd. in India. Dr. P. E. CHERAN, Super Shrimps - Consultant Shrimp Hatchery Operator, India. Dr. V. KATHIRAVAN, Artis Animal Health Care (I) Pvt Ltd, India. Dr. A. VICTOR SURESH, Managing Director, United Research (Singapore) Pte. Ltd. Dr. MUTHUSWAMY JAIKUMAR, Scientist, Sea6 Energy Pvt. Ltd, India. Dr. P. SELVAKUMAR, Scientist, BMR Industries Pvt. Ltd., India. Dr. MARIYARAJ VIJAY, Director, Best Aquastar Shrimp Hatcheries Proprietor, Arcanoe Life Sciences. She conveyed that for the program 950 registrations were received from several Countries such as India, Bangladesh, Oman, Qatar, Singapore, Indonesia, Malaysia, Spain, SriLanka, Republic of Maldives and UAE.

At last, she congratulated the convener and gave wishes to the participants and asked them to utilize the platform in the best way.

Presidential address

Dr. T Sasipraba- Vice Chancellor

Sathyabama Institute of Science and Technology



Vice, Chancellor, Dr. T. Sasipraba was invited to deliver the presidential address. She congratulated the team of centre for ocean research for conducting the virtual symposium on

the very important topic- Aquaculture, under the banner of MoES, Govt. of India. She said that the symposium covers all the topics of aquaculture including Shrimp viral diseases, ornamental culture, probiotics, current scenario of seaweed. An eye opening session for the Young entrepreneurs to start their ownership in the field of aquaculture. She also mentioned that demand for aquaculture is huge, but the supply to and consumption by our own countrymen is less as most of the aquaculture products are being exported. So, in the make in India concept, young entrepreneurs should utilise the experience of scientists, field experts to develop strategic plans for utilizing the new ideas and trends in aquaculture to meet the demands of the society. She also emphasized that the aquaculture industries should use probiotics for developing the shelf life of the products and make products which can be utilized by the people. While ending the note, she gave best wishes to the organisers and the participants a great success.

Dr. T. Balasubramanian- Vice-Chancellor
Chettinad Academy of Research & Education



Dr. T. Balasubramanian was invited to address the gathering. He first of all congratulated the team and said that ESTC-Sathyabama should contribute towards the growth of science in the Country. In his speech he focused mainly on blue economy. He explained that Country is looking for a blue economy and marine bio resources and is one of the buzz word as all the terrestrial resources have been exhausted and people are dependent on marine resources. He explained that Aquaculture industry is the flourishing industries in terms of seed, feed. This industry is a role model in solving the present pandemic problem,

in the way of Quarantine facility established by aqua industries. Major setback in aquaculture industries. There are lots of scope to fulfil the demands within the country. He mentioned that popularity of the rich protein resources is high and people depend on marine resources but their availability is less. So, Sathyabama should take initiative to popularise the marine seafood's resources for consumption, storage and trade.

He also mentioned that lot of possibility of augmentation developments and better growth of industries and for human kind from the blue economy could be achieved. Ocean Marine Bio resources should be focused towards conservation. Efforts towards Sea lanching of the marine resources should be contributed. The most importantly, Impact of climate change from market to tropical regions must be observed for bioconservation. Biodiversity conservation, should properly utilise the bio-resources to supply a safe and healthy seafood to the community.

Dr. Gopal Iyengar

HEAD, ESTC Program

Ministry of Earth Sciences, Government of India



Dr. Gopal Iyengar begins with congratulating the team for their effort in conducting the symposium. He starts by mentioning the statistical data which is available for aquaculture. He said that India stands 3rd in fisheries and 2nd in aquaculture productions in terms of volume and 18 million metric tons of fishes will be produced globally by 2030 to meet the growing demands. Currently 11 million tons are being produced. Aquaculture is

very big platform to bridge the gap of production and Biotechnological inventions for sustainable developments must be developed. The inventions should not harm bigger resources to meet the demand of the economy. He said Climate smart technology applications and adverse impact of climate change must be studied. Comprehensive infrastructure development in the commercialization of aqua hatcheries, health management and feed supply should be encouraged. He acknowledged and said that MoES has done good work in the field of Ocean resources in marine bio and fish cage culture and transferred products to industry through NRDC. Other sectors Indian national centre for Ocean information services which provides advisory to the potential fishing zone in the state of Gujarat and Andhra Pradesh has also been working precisely. Advisory on the harmful algal bloom is also focused by the Govt. Centre of marine living resources and ecology in Kochi works in monitoring and explosion of marine resources. He said ESTC cell is now moving to support theme based research. Appreciated the good work done by ESTC at SIST. At last he said make in India and Atmanirbhar Bharat should be considered for better society.

Dr. A.R. Thirunavakarasu

Former - Head of Division & Principal Scientist

ICAR-Central Institute of Brackishwater Aquaculture



Dr. A. R. Thirunavakarasu was invited and he explained that this symposium is very important symposium for bringing all the people expertise in trade, industry production of

aquaculture. He said that aquaculture contribution is 45% of total production and natural stocks of the Ocean are being exploited and has become non-sustainable. He also mentioned that as consumption is increasing, requirement for domestic itself will reach 16 million tons by 2025 and increasing population, leads to diminishing return of bio resources. Increase of productive through intervention is required to support the protein supplements. Fisheries sector has more links than other industries as it is involved in many socially and economically important entrepreneurship. Fresh water aquaculture system is most supportive whereas marine aquaculture system is lacking as the focus were different. The products should be available to the mass of people by increasing the productivity and maintaining the quality. Focus on all species of aquaculture system and diversify the products, new hatcheries and new species in blue economy.

Prof. Dr. DILEEP N. DEOBAGKAR

Former Vice Chancellor Goa University



Dr. Dileep was invited to address the gathering and he began by wishing the team and said that the Symposium accounts the important issue of National importance. He explains that Ocean surrounding is the strength of our country and the problems associated must be addressed. Blue revolution should be taken into consideration and expansion of expertise in the field of marine science is required. New ideas and new thoughts to be involved under the Atmanirbhar Bharat scheme.

Dr. Jagavir Singh

Scientist-F, Ministry of Earth Sciences

Government of India



Dr. Jagavir Singh was invited to share a few words and he expressed his heartfelt thanks to the committee members and other scientists. He said that from Samudra manthan to scientific manthan, this seminar will result in practical scientific outcome which will be of great benefit to the society across the globe. He congratulated the team for a huge success and gave his best wishes.

Dr. Kirubakaran

Former Scientist G & Head, MBT, NIOT



Dr. Kirubakaran was invited and he said he is very happy to be a part of this program and expressed his thanks to the organisers for inviting him to this virtual symposium. He said that aquaculture problem is associated with three major issues: Seed production, Fish

formulation and Disease management. A lot of issues associated with aquaculture should be discussed in the seminar and a solution for improving the economy should be addressed. He said that the Stalwarts of various industries involved in aquaculture, Institute and industries should be in involved together to address the issues in aquaculture system. New Technology should be developed towards native species so that other countries could not compete and solve problems associated with aquaculture and our Country.

Dr. Lokabharathi

Former Emeritus Scientist, NIO, CSIR



Dr. Lokabharathi was invited to share her thoughts and ideas. She said that Interaction between academicians and entrepreneurs should be stronger to understand the problems in aqua industries. Environment should be considered for zero pollution to the water body and the same water can be recirculated for the Mariculture. Aquaculture disease must be addressed and efforts to minimize the outbreaks should be discussed. Algal blooms-eutrophication should be avoided and addressed. Make use of technologies to turn Vain into boon. Make use of this disease forming algae to develop some good aspects to stop pollution.

Dr. G.V.M. GUPTA

Scientist F, CMLRE



Dr. G. V.M Gupta was invited and he begins by greeting all the scientists and expressing his gratitude towards the organizers of the program. He said that experts and his colleagues have already mentioned about the problems associated with aquaculture industries. So, the issues must be addressed to overcome the problems. Best wishes to all for the great initiative.

Dr. SUNDARAM SESHADRI

Coordinator, Technology Business Incubator



Dr. Sundaram Seshadri was invited. He explained that how technology business incubator at Sathyabama is supporting the young minds to turn their ideas into valuable product and make it market ready. He said that TBI is Supporting Aquaculture ideas for entrepreneurship development. He said that speakers from industries in this program are available to help scientist to promote entrepreneurship in aquaculture and solve the issues faced by them. He focused on saying that Young entrepreneurs have huge opportunity to utilise the platform in best way.

VOTE OF THANKS

Dr. D. Inbakandan

Head & Scientist-E, Centre for Ocean Research

Sathyabama Institute of Science and Technology

Dr. Inbakandan ended the inauguration by thanking management of Sathyabama, Chancellor, President and Vice-chancellor for their constant support and encouragement. He thanked Dr. B. Sheela Rani, Director research for her enthusiastic participation and guidance in all the activities. He gave a heartfelt thanks to the distinguished personalities Dr. T. Balasubramanian, Dr. Gopal Iyengar, Dr. A. R. Arasu and Dr. Dileep for their support and guidance. He also acknowledged all the scientific committee member of earth science and technology cell, Dr. Jagvir Singh, Dr. Kirubakaran. Dr. Lokabharathi, Dr. G. V. M. Gupta for taking out their valuable time for this special occasion. He also acknowledged Dr. Seshadri and accepting the invitation for giving a talk during the symposium. He acknowledged all the participants who are the major backbone for the success of the program.

TECHNICAL TALKS

Recent advances in Aquaculture technologies & super intensive system sustainable aquaculture

Dr. FARSHAD SHISHEHCHIAN

Group President & CEO

Blue Aqua Group, Singapore

<https://youtu.be/EXIGPP54Vg0>



- The first session immediately after the inaugural function is carried out by Dr. Farshad Shisheshchian on the topic Recent advances in Aquaculture technologies & super intensive system sustainable aquaculture.
- Dr. Sundaram Sheshadri, Advisor Sathyabam Technology Business incubator had introduced the speaker who is the Group president and CEO of Blue Aqua group, Singapore and handed over the session to him.
- Dr. Farshad had started the talk with introduction of Blue Aqua Group. The functions of the Company and the Business sectors of the same. With the anticipation of Food crisis due to Covid -19 Pandemic he had started the lecture, where the Aquaculture sector can provide help. The focus of the talk was mainly on Shrimp farming.
- The Shrimp culture system can be directly substituted to any of the fish systems. The major aspect which should be considered by any farmers is Carrying Capacity, he stated. The Main focus by him is the same.
- Dr. Farshad had given Insights for increasing the carrying capacity of aquaculture farming. The following part of the lecture had discussed culture systems, managing process in aquaculture systems, and a multispecies super

intensive Zero waste smart farm which is filed for patent by him.

- Zero waste smart farm is a smart aquaculture method which considers the optimal environmental conditions such as pH, C:N, N:P, and Oxidation reduction potential. This method uses beneficial bacteria for bioremediation and pathogen removal. The microalgae bloom and stabilization for better water quality.
- Blue Aqua smart farm – Artificial intelligence and Automation – The Smart system will analyse the water parameters and record automatically
- Quality of shrimp (Post larvae) is an important factor for the success of a farm
- The productivity can be increased by maintain the Nitrogen Cycle effectively
- Mixotrophic system is a culture system developed for the management of super-intensive and intensive culture of shrimp and fish in outdoor environment.
- *Functional feeds* development as foods with dietary ingredients that provide growth, health, environmental and economic benefits beyond traditional.
- The Speaker has summarised the talk as “In Aquaculture Intensification is the only answer to meet the future needs”
- During the Question Answer session Dr. Farshad Shisheshchian and his company ready to offer Internship in the post Covid Scenario.

Shrimp Farming in India: What's next?

Dr MANOJ M SHARMA

Director

Mayank Aquaculture Private Limited, India

<https://youtu.be/VgKBU2GxxY4>



- The meeting begins with the brief introduction about the speaker, Dr MANOJ M SHARMA.
- Founder of Mayank aquaculture Pvt. Ltd is one of the First & fastest growing aquaculture companies in Gujarat, India.
- Dr MANOJ M SHARMA, shares his experience and his journey about how he entered the field of aquaculture.
- He graduated in B.Sc. in fisheries science from NES science college Nanded. He further completed his masters in Fisheries management from CIFE (Central

Institute of Fisheries education), Mumbai. He is the first to start the concept of satellite shrimp farming with complete traceability protocol in Gujarat to get the final products from the shrimp farmers.

- Lecture begins with explaining the evolution of shrimp farming, started its origin by crops of wild shrimp inside tidal fish ponds in Southeast Asia.
- However, scientific shrimp farming was born in the 1930s after the successful spawning of kuruma shrimp, *Marsupenaeus japonicas* by *Motosaku Fujinaga*.
- In India shrimp farming was traditionally practiced as an age –old in brackish water areas like bheries in West Bengal and Pokali fields in Kerala.
- Later on studies on commercial aspects of shrimp aquaculture were initiated by the CMFRI in early 1970s.
- Followed by MPEDA catalysed the development by establishing OSSARC in Orissa and TASSPARC in Andhra Pradesh with American technologies during 1988.



- Shrimp farming activity gained pace in between year 1990- 1994 with increase.
- The major cultured species was *Penaeus monodon*.
- This boomed agro sector was initially affected by outbreak of WSSV in year 1995 and production was drastically reduced in the late 1990s.
- The downfall of this sector was also catalysed by the Supreme Court judgment in year 1996, which prohibited the shrimp culture activities inside CRZ and followed by antidumping crisis in early 2000s.
- Despite with the viral out-break, this shrimp industry started reviving by serious approach toward its sustainability.
- Then *L. vannamei* was introduced in India on trial basis in year 2003 and ater cohabitation studies made officially in the year 2009.
- This exotic species has attracted to existing farmers in India for species

diversification from BT.

- Main Institutions involved for research and education in India are CIBA, CMFRI, CIFE, College of fisheries science.
- Other organizations that support and conduct R & D for shrimp aquaculture in India are DST, DBT, UGC, NGO and private industry.
- Other main public sectors involved in development of shrimp aquaculture in India are brackish water fishfarmer's development agency, extension departments of ICAR, MPEDA, NFDB, state fisheries departments, NABARD.
- Evolution in culture practices was explained in detail.
- *P. monodon* was the main stay of shrimp farming and it remained top favorite among all shrimp farmers of the country.
- Late 90s down fall started with onset of WSSV and production became stagnant due to repeated disease outbreaks.
- *L. vannamei* showed immense attraction to shrimp farmers in India aggressively and the lead attraction of this species was SPF/SPR/HI seed as well as high production capacity.
- Shrimp and shrimp farming scenario in 2019 was widely explained.
- Challenges faced by Indian shrimp farming industries were production cost, diseases, food safety, and environmental concerns as well as changes managements.
- Major responsible factors discussed were pond production verse pond carrying capacity and production area verse water sources carrying capacity.
- Shrimp industries in covid 19 scenario facing severe challenges to sustain all segments of shrimp industries.
- Finance and liquidity major challenges, majorly affected shrimp production and exports were elaborately explained.
- Bio-floc shrimp farming and their importance were described including sensitivity of animal, bacterial system, feeder species, management of water quality, capital investment, cost of production, success rate were discussed.
- The nursery phase system and crop managed in shrimp farming was explained.
- Encourage jointly with state govt/NFDB fish food festivals and should volunteer as well as sponsor food court at important public points, expos.
- The session ends with the summary of the talk.

- In the Question and answer session major question on why only shrimp is concentrated on aquaculture and why not other species, entrepreneurs development in shrimp farming, problems faced in vannamei, domestic market difficulties, seed quality, small scale cultivation system , how to become successful in shrimp farming, Organic shrimp farming and the role of cage culture in shrimp farming were discussed.

Role of technology in making aquaculture ecosystem

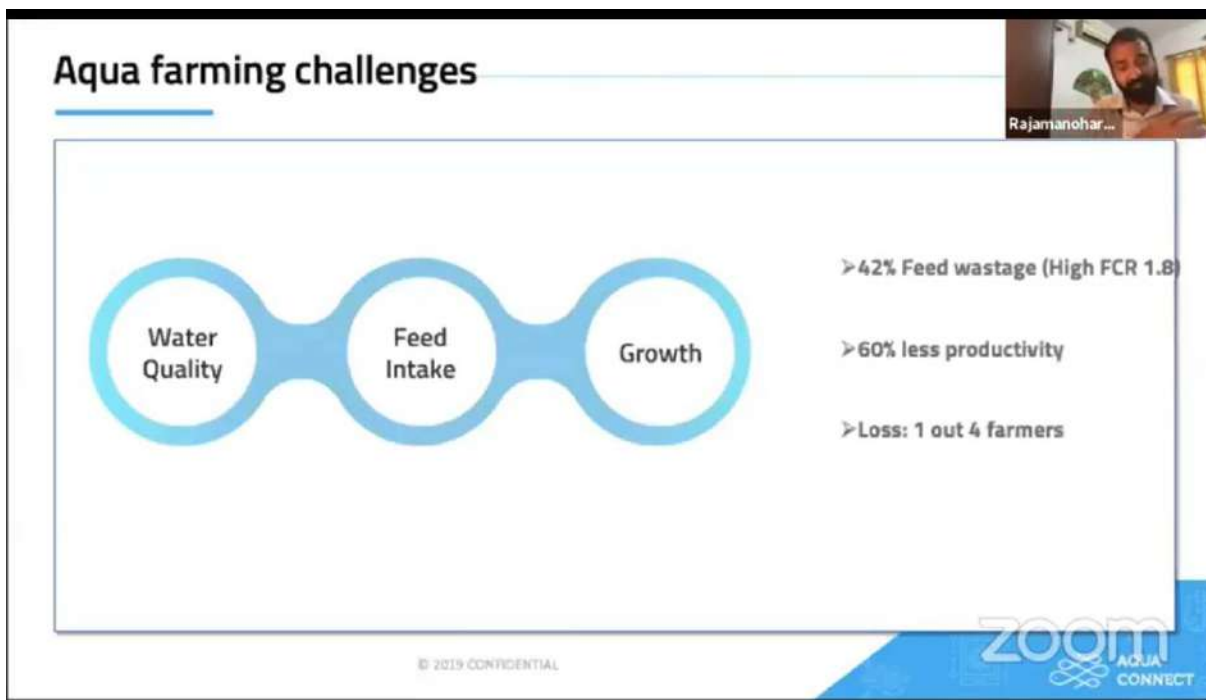
resilient - 3RPPM model

Mr. RAJAMANO HAR

CEO & Co-Founder

Aquaconnect, India

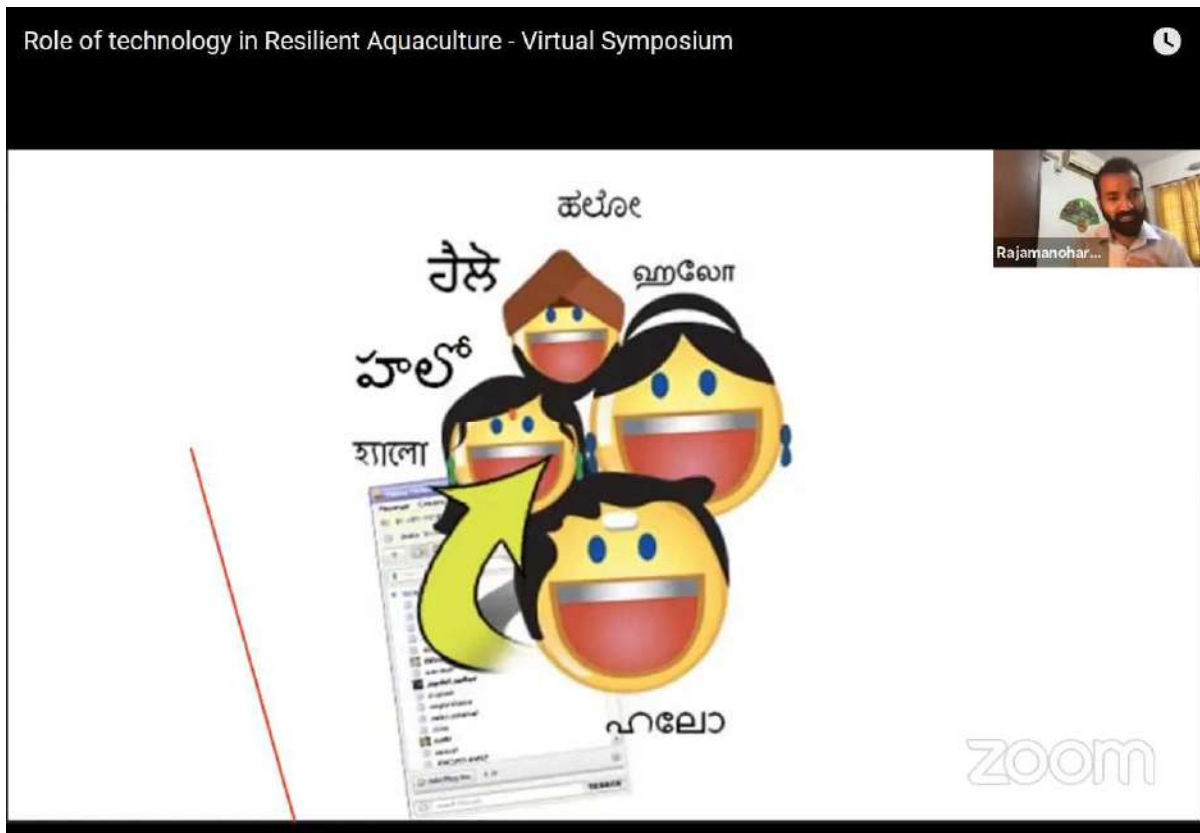
<https://youtu.be/5HZtb0qVMfY>



- The first session on the 3rd day (22nd July) has started with technology in aquaculture which is the major change that is happening nowadays. The Speaker of the session was Mr. Rajamano har , CEO and Co founder of Aquaconnect, India.
- Moderator of the session was Ms. Anu C , JRF, Centre for Ocean Research , Sathyabama Institute of Science and technology.
- The Speaker had started with the introduction of the Company Aquaconnect.

Aquaconnect is a farm advisor mobile app for Shrimp farmers to improve the farm productivity and traceability. This tool helps them to manage the Pond water quality, Feeding information, Growth rate in one place rather than keeping them in multiple farm ledgers Aquaconnect uses machine learning technology to provide insights to the farmers and suggests appropriate advice for better productivity and disease predictability.

- The major challenges of the aquaculture industry are Water quality, Feed intake, and Growth
- The traditional farming Impacts are reduced production, wider disease, economic loss, and Supply chain disruption



- The 3R PPM of Indian Aquaculture are, Resilient Production, Resilient Procedures and Resilient Markets.
- Resilient Production – Technology Inclusion, Foundation for Smart Farming, Sensing capabilities and real time monitoring and Remote Management.
- Resilient Procedures – Empowering farming community through data, Sharing technologies /Crowd Sourcing, Access to finance and Insurance
- Resilient Markets - Transition /Value Addition, Rebuilding value chain, Go Online

Market, Boost domestic Consumption and Traceability.

- The Technology can be enabled in aquaculture easily by connecting Hatcheries, equipment manufacturers, processors, Financial institutions and Certification bodies
- The Challenges which we will face during implementing Technology in Aquaculture are Steep learning curve, Low Awareness and high capital Investment
- Dr.SundaramSheshadri , Advisor Sathyabama Technology Business incubator had had started the question answer session by suggesting make a consortium of aquaculture farmers to help them to get the better benefits.
- Dr MANOJ M SHARMA, Director, Mayank Aquaculture Private Limited, India Had commented on the possibilities of aqua connect and other technologies in the near future.

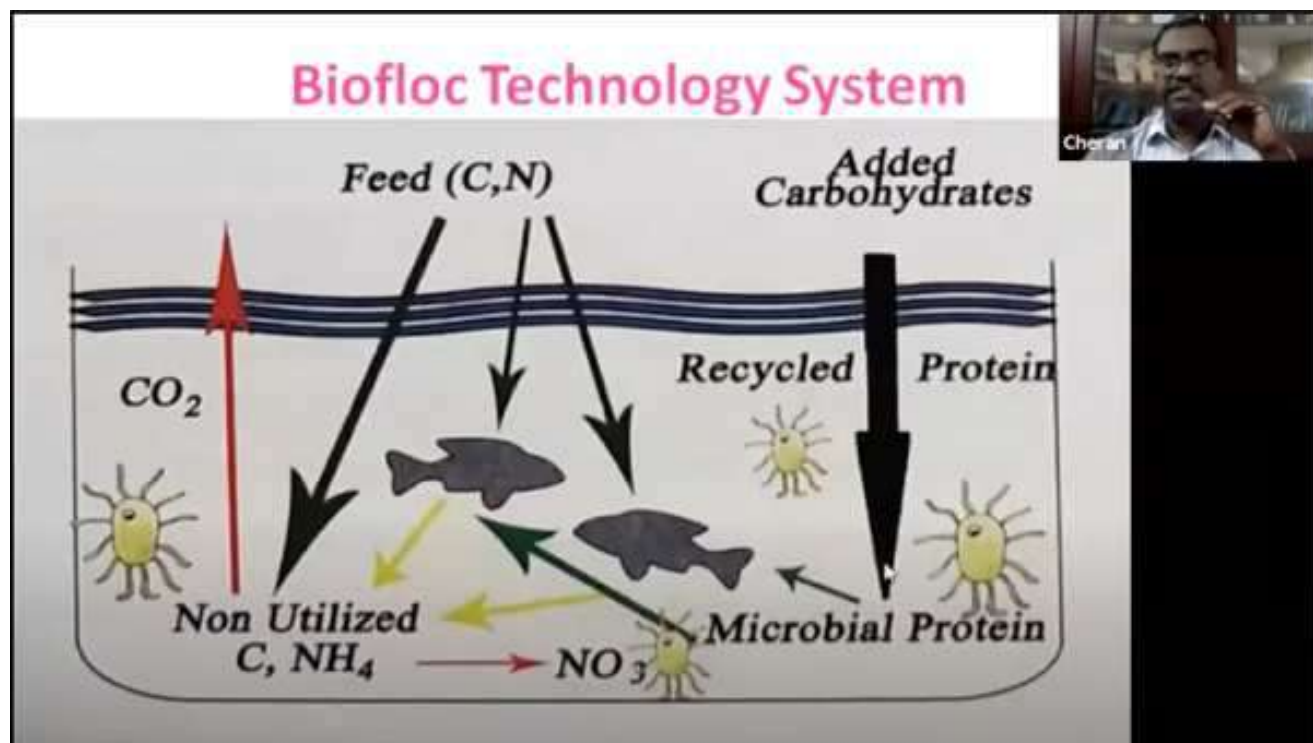
Advanced Technologies in Aquaculture

Dr. P. E. CHERAN

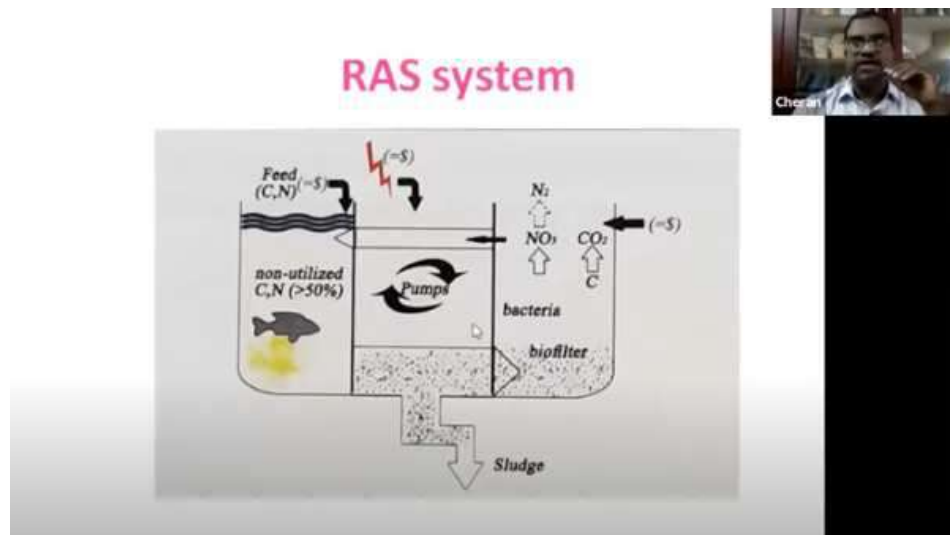
Super Shrimps - Consultant

Shrimp Hatchery Operator, India

<https://youtu.be/0XpdRp7ZDWk>



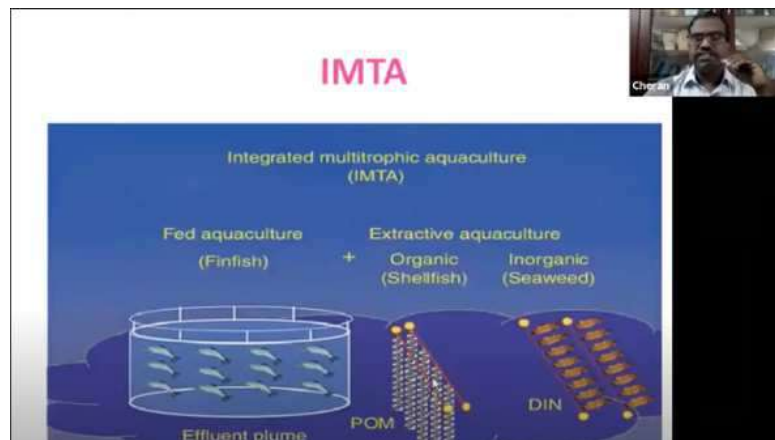
- Aquaculture is playing significant role to meet fisheries demands amidst of declining wild stocks, overfishing and reduction in landing of sea catches,
- The present aquaculture system are producing less unit per hectare,
- Major issues which are existing in this field are diseases, inferior quality of brood stocks, International market pressures, less domestic consumption and now the pandemic lock down crisis.
- The introduction of advanced technologies in the aquaculture can improve production systems, increase production efficiency, minimise the risk factors involved, reduce culture days, improve Feed Conversion Rate(FCR) and reduce production cost, improve food quality for consumers, help in sustainable farming practices, improves traceability requirement and certification process.



- The innovative development happened to our aquaculture sector are:
Reproductive innovations- GIFT tilapia, Monosex tilapia, all male scampi, Neofemale, Jayanti Rohu etc and Shrimp Specific Pathogen free(SPF), Specific Pathogen resistant (SPR), Specific Pathogen Tolerant(SPT).
Disease Management- DNA probes,PCR, RT PCR, Molecular technologies, Functional feeds, Medicated feeds.
Farming Innovations- Nurseries, Biofloc, Recirculatory Aquaculture Systems(RAS), Cages, Fish hatcheries and Integrated multi-trophic aquaculture (IMTA).
- Advantages of nurseries are healthy post larvae/fry/fingerlings/crablets, improving biosecurity, minimise risk factors. Improve production efficiency, reduce culture days, improves FCR and production cost.

- Objectives of nursery are to produce healthy and uniform juveniles, produce strong and disease free juveniles, maintain good survival and water quality, optimise and improve feeding efficiency, reduce input farming cost and to take advantage of compensatory growth.
- Structure of nursery would include reservoirs, treatment systems, Filtration system, cartridge, filter bags, Disinfection, ozone, aeration, blower, sprinklers, paddle, special feeds and probiotics, Water quality monitoring systems and trained manpower.
- The nursery can be lined ponds, cement tanks, plastic greenhouses, portable tanks etc. The shape of the nursery can be rectangular, square or round. The average water depth can be from 100cm to 110cm. The stocking density can range from 500 to 10,000 PLs/m³/ton. The harvest size depending on density can be from 3 gm to 0.3 gm. The harvest biomass can be 1kg to 3 kg per meter cube.
- The ideal location for nursery should be having close proximity to grow out, access to high quality water, appropriate infrastructure, elevated with high drainage canal, away from flood water and natural calamity, access to proper farm and tar roads.
- Provided an example for nursery where three young graduates from Udupi leased land for sea bass tank based nursery. They used eight tanks made of HDPE and sheeted with GI pipes. Out of that four tanks were used for rearing and other four for storage. CIBA supplied sea bass fry of 0.5-0.8 cm (20 days) at 2.5 Rs per fry. They stocked 3000 and reared to 7.5-10cm in 12 ton water tank. They got 60% survival rate with formulated feed. The fingerlings were sold at Rs 45 per fish. The establishment cost was 15 lakhs. They gained a profit of Rs 6.45 lakhs for 3 cycles
- Biofloc – aggregate of suspended particles of beneficial bacteria, algae and fungus together with detritus and dead organic particles. It is technology maximising the potential of microbial processes. Biofloc takes care of ammonia and nitrogen in system. The advantage of Biofloc is that it is eco-friendly, improves land and water usage efficiency, gives higher productivity, biosecurity, reduces the utilisation of protein rich feed, improves larval growth performance.
- Biofloc has to be maintained 15cm imhoff. Rice bran milk, probiotics and jaggery can be used. pH should be maintained with lime. Three week time is required for rearing to 1 gram size.

- The preparation of Biofloc involves stocking of organic matters, adding of inoculums. The development takes few weeks. First algae develops, transition, form formation and turns to brown colour. The transition is faster with fish but slow with shrimp. Sufficient and continuous aeration is required to keep the floc in suspension.
- Biofloc has to be managed with few measures like adding carbon if TAN is above 2 mg/L, Doing more water exchange if nitrate is more than 5 mg/L. Maintain DO above 5 mg/L, pH 6.8-8.0, Temperature of 28 to 30°C. The alkalinity maintained above 100 ppm. TAN above 1 mg/L, Nitrite above 1 mg/L, TSS more than 500mg/L. Salinity according to species.
- RAS technology- closed circuit operation where culture water is purified and reused. Cost 7 lakhs for 100 meter square. Used for Seabass, Murrel, Pangasius, Tilapia and shrimps.
- The advantages of RAS are low water use, efficient energy and land use, optimal feeding strategy, full disease control etc.
- The components of RAS are culture tank, Mechanical filter, biological filter, pump tank, pump and other items like aerators, feeders etc.



- Integrated Multi Trophic Aquaculture (IMTA)- multiple aquatic species are farmed in integrated fashion to improve efficiency, reduced waste.
- Cage farming is low cost and highly sustainable methods employed in water body. It is easy and can gain higher profits. Cage can be framed and floated with empty barrels. The size can be $4 \times 4 \times 2 = 32 \text{ m}^3$.
- Fresh water shrimp farming are done in different locations of Tamil Nadu and Andhra Pradesh
- Shrimp Pond Drain water (SPDW) pumped into agricultural field enhances the productivity.

Advances in Aquaculture Nutrition Research

Dr. A. VICTOR SURESH

Managing Director

United Research (Singapore) Pte. Ltd.

<https://youtu.be/R4R3q1JvPF8>



- The session was started by the zoom moderator Ms. Anu C, Junior Research Fellow, with an Introduction about the Speaker, Dr. A. Victor Suresh, Managing Director, United Research (Singapore) Pte. Ltd.
- The speaker introduced about the programme called Aqua India, a marquee aquaculture event in India which will be conducted every two years and also there was new opportunity available from 2020 for the students to join as a member in Society of Aquaculture Professionals.
- He described about the five important subjects in Aquaculture Nutrients- Nutrient Requirements, Raw materials, Feed processing technology, Additives and Dietary effects.
- He talked about the current trends in nutrient research, which was divided into two types- Public research and Private research.
- He said public research was conducted by Universities and Research Institutions which would be supported by public funds and the findings were shared openly

whereas Private research would be funded by private enterprises, which was a collaborative research between manufacturers and customers.

- He shared a survey of papers published in Aquaculture Nutrition which described the species of fish on which the research has been conducted namely Carps, Tilapia, Catfish, Shrimp, Salmonids and Others.



- The places where Aquaculture Nutrition research was majorly done were China, Europe, USA, and Canada and very less in Australia and the middle east countries.
- He talked about the top two concerns the global shrimp culture industry faced were Disease and Feed costs.
- He talked about the priority areas of aquaculture nutrition research in which he suggested the replacement of fish meal with other sources.
- He shared a comparative chart of peptides in proteins present in different products- Poultry by-products, feather meal, blood meal, fish meal and others.
- And another comparative chart titled nucleotides in proteins,
- The second point on the priority areas was about the improvement of aquatic animal health using dietary factors in which he gave an explanation about using prebiotics, probiotics, and other acidifiers to maintain the gut health of the organisms.
- Addition of nutrients helps in improving the immunity of the organisms.
- His final part of the presentation was on how one could convert their ideas to a product.
- He talked about the lab screening trials, field screening trials and field performance

testing.

- He shared a picture of his research centre to the participants.
- He showed the pictures of the instruments which their team used to produce feeds.
- The two units- clear water system and green water system, used for animal rearing were shown.
- The clean water system was placed inside whereas the green water system was placed as an outside unit.
- In future, the research institute might have typical controlled pathogen challenge trials to check for marine pathogens.
- The pond with white feces problem before and after treatment with one of their test products showed good result.
- Take home point of his presentation- In house R&D is a requirement for aqua feed manufacturers and suppliers, Collaborative work between suppliers and customers, Universities and Research Institutes bring out solutions.
- The session was very lively and interactive during the question and answer session where the speaker actively answered all the questions raised from the participants.
- The overall session was very informative and useful as the participants were able to gain knowledge about the aquaculture nutrition research given by the speaker.

**Lab to land technology: Large scale outdoor mass cultivation of
microalgae for shrimp aquaculture**

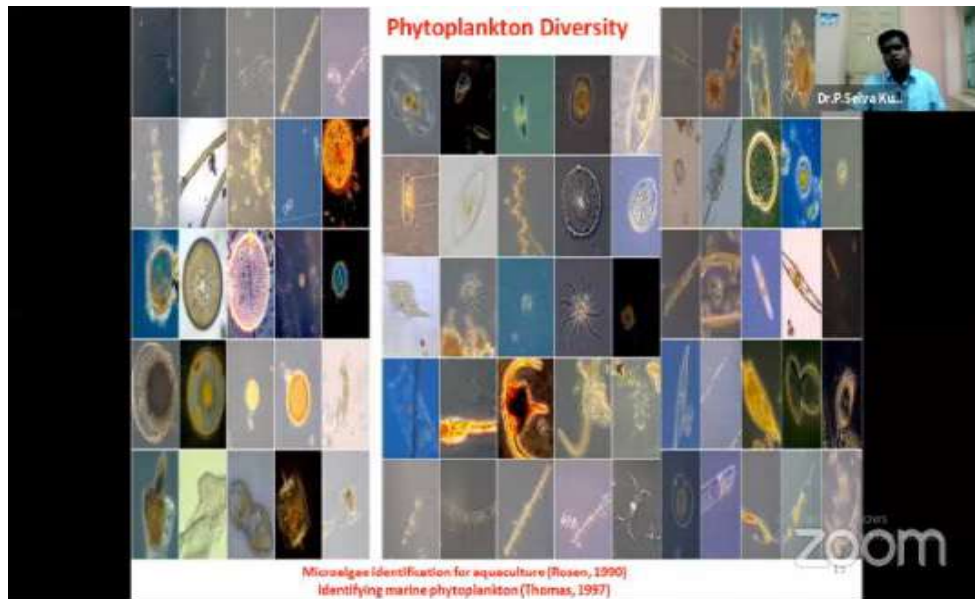
Dr. P. SELVAKUMAR

Scientist, BMR Industries Pvt. Ltd. , India

<https://youtu.be/3D0Yft9Oz5Q>



- India's aquaculture industry is growing protein producing industry.
- The shrimp production chain in India includes various segments like hatcheries, shrimp farms, feed production and exports.
- Shrimp farming area covers 1,76,000 hectares of which *Litopenaeus vannamei* covers 1,60,000 hectares, *Penaeus monodon* covers 14,080 and *Macrobrachium rosenbergii* covers 1,760 hectares.
- Shrimp production increased by 31%.



- In 2019, shrimp reports generated revenue 5\$ billion- information by Ministry of India.
- India's shrimp culture hub is "Andhra Pradesh". Vishakapatnam, East coast, Bay of Bengal is rich in algal source.
- Phytoplankton (Phyto-plant, Plankton-drifting organisms). They are the base of marine food chain, responsible for the biological carbon pump, produce nearly 50% of atmospheric free oxygen.
- Various phytoplankton includes Diatoms, Coccolithophorids, Dinoflagellates, Cyanobacteria, *Prochloro-coccus*.
- Energy source of microalgae-Sunlight and chemicals and carbon source- autotroph, heterotroph (Photo and chemo).
- His PhD work on board collection of microalgae (14 sites-water samples)- checked water quality and phytoplankton diversity.
- Results-112 samples (seasonal mean) and 336 (annual mean) reported. Nitrate, Silicate and Phosphate are very important for microalgal growth both in lab condition and shallow tanks.
- They did isolation process, cultured in Walne's medium, BG 11 medium and F/2 medium and scaled up.
- These isolated organisms were undergone molecular taxonomy (23S rRna sequence), Bio-Informatic analysis –Sequence similarities serve as evidence for structural and functional conservation, represent the evolutionary relationships between the sequences.



- 8 Sequences were deposited in NCBI.
- Screening of marine microalgae under specified conditions (200L tank)-Indoor to outdoor scale-up.
- Pilot scale setup: in open air pond-with specific conditions (Temp-30°C, surface area-196 m²)
- Large scale biomass production- Exponential phase cultures, Nutrient rich medium added, Isolated *C. vulgaris*
- Biomass production in hatcheries-Cemented tanks and harvested biomass
- Nitrate concentration vary fatty acid profile of microalgae *T.gracilis*.
- Growth kinetics studied
- Multi-population microalgae (*Gyrosigma* sp, *Syneocystis* sp, *Nitzschia* sp, *Skeletonema* sp, *Pleurosigma* sp, *Oscillatoria* sp)
- Mixed algal population in initial day contains diatoms, Blue green algae, Dinoflagellates
- Raceway tank continuous culture (Automated nutrient feeding dosage pumps, digital timer, high sensitive sensor with transmitter, Mass flow controller with PID controller)
- Standard operational procedures followed and optimum conditions maintained (salinity-32-34 ppt, pH 8.5-9.5, CO₂, DO-6-25 ppm) for microalgal growth (Shallow tank, cement tank etc)
- First trial with natural phytoplankton scale-up done (5th day-colour seen, 8th

day-good colour seen- *N. closterium*, 12th day-*Navicula* and *Nitzschiasp*, 14th day-*Amphoras*p, 20th day-very thick culture seen, 30th day-auto settled consortium) without contamination

- Mixed mass culture-*Isochrysis*, *Chaetoceros*, *Nannochloropiss*p (Till 60th day-noted)-Species composition changes-Fatty acid profile studied.
- Conclusion-Developed PUFA rich microalgae in continuous mode culture maintained for a longer period of time in raceway tank. This technology worked well to produce high lipid content micro-algal biomass which supports as a live feed and enriched nutritional values in shellfishes.

Ornamental Aquaculture Industry in India - After 2010 (latest trends and market)

Mr. R. SUNDARARAJAN

Madurai District Ornamental Fish Cooperative Society Ltd.,
Proprietor, Filial Aquatics, India

<https://youtu.be/ebkkvn0dMLY>



- First day afternoon session of the recent trends in Aquaculture Virtual symposium was carried out by our Guest speaker Mr. R. Sundararajan.
- He has delivered the lecture on the topic 'Ornamental Aquaculture Industry in India after 2010 (Latest trends in the market)'.
- In the introduction section he was dealing with the overview of ornamental

industry globally. He stated that approximately 2 billion ornamental fish species are traded generating a revenue of about 15 billion U.S. dollars in the year 2015.

- Ornamental fish species are richly diversified in India accounting about 250 species from north-eastern parts, 100 plus species from Western Ghats and 150 from Tamilnadu (14 endemic). Around 85% ornamental fish trade were carried out in north eastern states of India. Still new species are being identified in the state of Karnataka and Kerala by the speaker.
- As rightly pointed out by the speaker, India started ornamental fish exports in 1969 but gained high market share of 1.16% only in the year of 2007 (U.S. 1.06 million dollars).
- There are 35 authorized MPEDA ornamental fish exporters and 212 MPEDA authorized breeding centers are present in India.
- Around 200 species are bred in India in which 90% exporting is done in Kolkata, 8% from Mumbai, 2% Chennai.
- He also stated that Import value of fish is more than export value in India, thereby making the country to be 66th position in the world ornamental fish importing countries. Mostly fishes are imported from South Asian countries and fishes like Flowerhorn, Cichilids, Central and South American species were predominant in trade.



- Speaker gives the credit to social media, government initiatives and organization for the drastic evolution in this industry after 2006. Especially the knowledge sharing of farming techniques, virtual platform for learning the pre requisites

required for this field.

- He also briefs about the opportunities like concept based selling, natural aquarium, Biotope, Plaudarium, and Terrarium etc. He also discuss about the National and International workshops for knowledge sharing, also competitions like Aqua Scaping to display the skills of one individual in this field.
- He claims that India is a sleeping giant in this industry and lots of foreign brands from China, Japan, Singapore, Hong-kongetc are coming to India to sell their goods.
- Followed by opportunity, he points out the threats in India which includes, invasion of Alien species, ecosystem imbalance, Lack of knowledge among Entrepreneur and farmers, lack of interest among students in fisheries and elated studies.
- He points out the change in traditional aquarium practice and the new trend in practice called concept based selling.
- Concept based selling means the tanks ae very neatly cleaned and decorated at the same time fishes are not overcrowded, few fishes are available for sample.
- He gives example of concept based selling in India that includes Aquaria living, Zen Aqua, and Green dice Studio etc.
- Finally, he concludes by comparing the stability of our families with the wild life stability. He stresses upon the responsibility for conserving nature and maintaining sustainable ecosystem in nature.
- At last participants complimented the presentation and asked their queries directly to the speaker.

Shrimp Viral Diseases

Dr. AMERNENI RAVI KUMAR

Director

Alpha biological, India

<https://youtu.be/xPTyVpkfP4g>



- Dr. Amerneni Ravikumar did a very basic yet effective presentation with points aligned in a proper sequential order, considering participants of different levels from academia to entrepreneurship.
- He started with the OIE definition of a disease as “Any adverse alteration in the health or culture performance of individuals or populations of shrimp”, followed by the common signs and symptoms observed in shrimp like anorexia, blood clots, lesions, change in colour, shape etc,

- He briefly gave types and examples of shrimp diseases and went on detail into the viral diseases.

1) WSSV (White Spot Syndrome Virus)

- WSSV belongs to the genus *Whispovirus* and family *Nimaviridae*.
- Gross signs of the disease include Anorexia, redness of body, Antennae cut, Oedema, Cannibalism, post and premoult mortality etc.,
- Since these symptoms are not specific, a confirmatory test is recommended for WSSV.
- Morphology of the infected organism confines to bigger white spots with central halo and radiating lines.
- Morphology of white spots caused by WSSV in *Penaeus monodon* (with dense black spots) is different from *Litopenaeus vannamei*.
- Hypertrophied nuclei are a typical lesion of WSSV.
- Diagnostic techniques for WSSV include microscopic observation that starts with morphological observation of white spots followed by observation of cell and nucleus of a gill filament under 40x and 100x.
- A positive result with nested PCR or real-time PCR depicts a suspected positive case of WSSV.
- Confirmatory diagnosis of WSSV can be done by techniques like Histopathology (Davidson's fixative and H&E staining), Rapid gill staining, Rapid dot test (Developed by Mangalore fisheries college) - Immunodiagnostic kit based on dot-ELISA, Lateral flow strip, In situ hybridization positive result in target tissues, One-step or nested PCR (followed by sequencing), or real-time PCR with positive results for WSSV.
- Treatment or control of WSSV is generally done by the application of chemical compounds like Ozone (0.5 µg ml for 10 minutes), Sodium hypochlorite (Total free chlorine concentration of 100ppm for 10 minutes), Benzalkonium chloride (100ppm for 10 minutes), Iodophore (Total free Iodine concentration of 100ppm for 10 minutes).

2) IHNV (Infectious Haematopoietic Necrosis Virus)

- IHNV belongs to the genus *Penstyldensovirus* and family *Parvoviridae*.
- It causes a particular disease condition known as Runt deformity syndrome (RDS) in *Litopenaeus vannamei* that results in poor growth of shrimp with severe

deformities especially with bent rostrum.

- All the enteric deformities (Mid gut and Hepatopancreas) are negative to IHHNV, as a tissue originated from endoderm is not a target for this virus.
- Confirmatory diagnosis of IHHNV is done by PCR and Histopathology.

3) IMNV (Infectious Myonecrotic virus)

- IMNV was first reported in Brazil in 2002 and its distribution in India extends from West Bengal (2006) to Andhra Pradesh, Tamil Nadu and recently in Gujarat.
- This disease spreads relatively slow and although the acute form of the disease produces gross signs and elevated mortalities, it progresses to a chronic phase with persistent low-level mortalities.
- Pathological signs include lymphoid organs increased to 3 to 4 times normal size, necrotic and reddened tail fan, coagulative necrosis of skeletal muscle by haemolytic infiltration and fibrosis, etc.,

4) TSV (Taura Syndrome Virus)

- It is an RNA virus that is Icosahedral in shape, causing serious disease in *Litopenaeus vannamei*
- TSV is not reported in India.
- Clinical signs and symptoms are redness, epithelial necrosis, MCL (melanized cuticular lesions), etc., and an important feature of this disease is that in infected species, moulting leads to mortality.

5) YHV (Yellow head virus)

- YHV was reported first from Thailand in 1990 and is very rare in India.
 - The cephalothorax of infected shrimp turns yellow after a period of unusually high feeding activity ending abruptly, and the then moribund shrimps congregate near the surface of their pond before dying.
 - Confirmatory Diagnosis includes Histology, Rapid gill staining (Presence of pycnotic and karyorhectic nuclei).
 - A rapid test kit is currently available to test both YHV and WSSV.
- Dr. Amerneni Ravikumar concluded by depicting the fact that there is no treatment available for viral diseases at present and in India we adopt the method of preventive management of viral diseases by focusing on available SPF and SPR broodstock and following stringent measures of biosecurity to ensure safety and

better production.

- The interactive discussion was started by Dr. SundaramSeshadri, who wanted to get an idea about the natural methods for the control of shrimp viruses, which made the speaker to explain about the herb *Tinosporacordifolia*, that can improve the non-specific immunity of shrimp and in turn the discussion pointed on the immediate need to apply the knowledge on nature and Ayurveda on aquaculture.
- The session was also blissed by the warm words of appreciation by Dr. Manoj M Sharma.
- Many participants complemented the presentation as well as put forward many questions.
- The interactive session shed light on steps to prevent and treat diseases by objectives of the biosecurity program, pros and cons of open pond, immunostimulants, immunology mechanisms of the shrimp, parameters of diagnosis and confirmatory tests for diseases and also gave an overview of the newly discovered virus SHIV (Shrimp Hemocyte Iridescent Virus).
- The speaker also gave information about the role of bacterial load in causing viral infection and the involvement of government in meeting the growing demand and interest of shrimp aquaculture in India, as per the queries of Dr. Inbakandan.
- The speaker succeeded in making the session lively and interactive and quoted many examples and methods of trouble shooting from his experience by which participants can relate to as well as obtain a clear picture about the scenario.
- The overall session was very informative and turned out to be a grand success.



Minimizing Production Cost for Sustainable Shrimp Farming

Mr. B. RAVIKUMAR

Technical General Manager

Growel Feeds Pvt. Ltd. in India

<https://youtu.be/yGQocv8gj7M>



- The session started with a welcome note followed by a brief introduction about the speaker.
- The key speaker Dr. B Ravikumar is the Technical General Manager, Growel Feeds Private Limited, India. He has worked as aquaculture specialist in many national and international projects.
- Dr. Ravikumar started with the key note that minimizing production cost is an important parameter in undertaking profitable shrimp farming and shared the statistics of typical production cost assessment for shrimp farming across India.
- Diseases are one of the major issues influencing profitability and the speaker focused on Vibriosis and White gut disease.
- Parameters to take care of to minimize profitability are PL selection, Biosecurity, Nursery system, efficient feed management, Bioremediation and disease management.
- The screening for diseases should start with Vibrio test followed by a techniques of PCR test for viruses, PL microscopy and stress test in order.
- Nursery phase is operated in earthen ponds/lined ponds with good biosecurity

including water treatment and application of probiotics.

- Feed management is an important factor where functional feed/high quality feed is recommended, which accounts for 50-60% of production cost.
- Best practices of feed efficiency start at stocking.
- High protein feeds generally perform better than lower protein feeds due to the key ingredients of highly digestible components, amino acids and key nutrients in well balanced manner.
- Stringent feed management is essential when high protein feeds are used for economical feed conversion.



- A table containing the composition and required quantities of feed was provided in the slides, which gave clarity on the right amount of feed to be provided.
- Feeding rates should be adjusted based on the gut capacity of the organism as well as environmental conditions.
- An ideal feed management is a combination of 3 parameters – Feed table, Check tray and Intestine color check.
- Feeding can be done either manually or by automated manner, although farmers in future have to depend on automation as feeding is a part of Biosecurity.
- Internet of Things (IoT) and Artificial Intelligence (AI) is the way forward.
- Water quality management involves probiotic management that encourage probiotics to utilize organic matters.
- EHP (Enterocytozoonhepatopenaei) is an emerging pathogen affecting culture shrimp in South East Asian countries, causing slow growth and growth retardation

affecting the farm production and profitability.

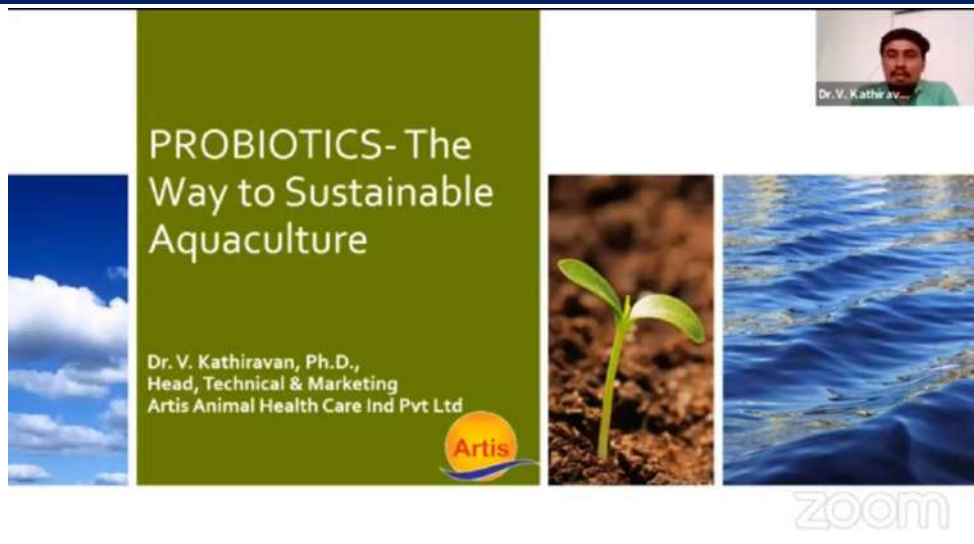
- The speaker shared the results of their research and development in biosecurity and farm management techniques and shared take home messages regarding the profitable management practices.
- Dr. Inbakandan started the query session with a question on the role of Vibrio load on causing the disease which was clarified by the speaker by denoting the exact amount of vibrio load for causing infection and the combined effects of EHP and Vibrio.
- Many participants complemented the presentation and extended their queries which was clarified by the speaker regarding waste management, probiotics and species specificity of probiotics, feed quality and quantity, stocking density.
- The speaker also shared the details of his R&D farm and the training programs offered by the organization for interested participants to approach and undertake.
- The session was very informative and lively and turned out to be a grand success.

Probiotics - The way to Sustainable Aquaculture

Dr. V. KATHIRAVAN

Artis Animal Health Care (I) Pvt Ltd, India

<https://youtu.be/Ll3POJIW2uQ>



- The meeting begins with the brief introduction about the speaker, Dr. V Kathiravan, Head, Technical & Marketing, Artis Animal Health Care IndPvt. Ltd.
- Dr. V Kathiravan, shares his experience and his journey about how he entered the field of aquaculture.
- Lecture begins with explaining the evolution of Blue revolution, the term blue

revolution refers to the remarkable emergence of aquaculture as an important and highly productive agricultural activity.

- The banned list of antibiotics was discussed and the involvement of probiotics, its involvement was shared.
- Probiotics are live microorganisms promoted with claims that they provide health benefits when consumed, generally by improving or restoring the gut flora.
- Probiotics are considered generally safe to consume, but may cause bacteria-host interactions and unwanted side effects in rare cases.
- The original modern hypothesis of the positive role played by certain bacteria was first introduced by Russian scientist and Nobel laureate Élie Metchnikoff, who in 1907 suggested that it would be possible to modify the gut microbiota and to replace harmful microbes with useful microbes.
- The term "probiotika" was first used in 1965, by Lilly and Stillwell, to describe substances secreted by one organism which stimulate the growth of another.
- The term probiotics was taken up by Parker, who defined the concept as, "Organisms and substances that have a beneficial effect on the host animal by contributing to its intestinal microbial balance."

What Industry expecting

• Research – Commercialization (Product Development)

Dr. V. Kathirav...



30 11/23/2020 Add a footer

- The principle of probiotics, Competitive exclusion (CE) is a specific type of probiotic strategy that involves the addition of a (non-pathogenic) bacterial culture to the intestinal tract of food animals in order to reduce colonization or decrease populations of pathogenic bacteria in the gastrointestinal tract.
- Probiotics are nonpathogenic microorganisms mostly of human origin which, when administered in adequate amounts, confer a health benefit on the host and enable to prevent or improve some diseases.

- Probiotics may be a natural temporary constituent of the resident intestinal microflora, but their concentration is not sufficient for therapeutic purposes.
- The microbiota, the intestinal epithelium, and the mucosal immune system constitute the gastrointestinal ecosystem.
- All three components are essential for complete functional and developmental maturity of the system. Probiotics are defined as live microbial food ingredients that have a beneficial effect on human health.
- The use of antibiotics, immunosuppressive therapy, and irradiation, among other means of treatment, may cause alterations in the composition and have an effect on the gastrointestinal tract flora. Therefore, the introduction of beneficial bacterial species to GI tract may be a very attractive option to re-establish the microbial equilibrium and prevent disease.
- Nitrogen cycle-functional genes, *In vitro* assessment, *In vivo* assessment, Characteristics of probiotics, Commercial preparation and certification, are the processing factors of probiotics.
- Comparison between pond interaction with and without the addition of beneficial bacteria, will cause the effect on feed waste, faeces and organic matter, gases, eutrophication, diseases were discussed.
- Prebiotics are compounds in food that induce the growth or activity of beneficial microorganisms such as bacteria and fungi.
- The most common example is in the gastrointestinal tract, where prebiotics can alter the composition of organisms in the gut microbiome.
- Disadvantages of probiotics are listed out, culturing the beneficiary bacteria and contamination of pathogenic microbes.
- Global Economical forecast of probiotic in animal feed market by livestock shows that USD 4.6 billion in 2019 and growth rate of 7.4% and expected growth is 7 Billion USD by 2025.
- Future aspects and what the industry expects and what issues are concerned to make probiotics and prebiotics to excel was shared and the session ends with the summary of the whole talk.
- Dr.Inbakandan asks to share the product produced in the laboratory which was immediately shared by the speaker
- Dr.Seshadri wanted to ask about the validation of the product and how to help

farmers to identify the best of probiotics, where the speaker define the regulation that was followed in their laboratory and discussion about the cost and economical validation was analysed and policies and regulation were shared.

- Dr.Logabharathy places question on compatibility of the probiotics, choice of selecting the microorganism, sustainability of the organism, interaction of the microbes with water, which the speaker elaborates the process and defines every process in details.
- The question and answer session with the participants begin the question from Mr. Rakesh, how to maintain the bio-floc?
- Second question was placed by Mr. Mohamed Idris regarding, Mass production where the methodologies were discussed.
- Third question was placed by Mr. Naveen, Salinity for cultivating bacteria and choice of organism with enriched protein production.
- Fourth question was placed by Mr. Sikantaguria, is there any evidence that probiotic, microbes, chemicals which used will cause human health effect.
- The question in the chat box like, Probiotics for shrimp production, Species specific and potency for IMC, was discussed.

Current scenario of global seaweeds: prospects of commercial seaweed cultivation

Dr. MUTHUSWAMY JAIKUMAR
Scientist, Sea6 Energy Pvt. Ltd. , India
https://youtu.be/4v4qVp_rMuQ



- It was the 11-day session of the virtual symposium on the recent trends in aquaculture industries.
- The speaker started his lecture with an introduction about his company, sea 6. He said that Sea 6 is a company that was founded on the campus of IIT Madras 2010. The company is currently headquartered in Bangalore.
- He explained briefly about the company mainly about the technologies involved to convert seaweed biomass into biofuel, plant growth stimulants, plant defense products, animal feed ingredients, and other bio-renewable products to replace chemicals and plastics. He also gave an overview of the global seaweed production as a massive marine resource potential.

Net bag deployed at Arokyapuram site



Harvesting at Leepuram



- He also explained the seaweed components- Thallus, Blade, Pneumatocysts, Stipe, Holdfast, and the three main important seaweed, which play an essential role- Chlorophyta, Rhodophyta, Phaeophyta.
- He also told about the global seaweed production and also the marketing of seaweed of 2018 and 2023 (expected)
- In the global seaweed production, he explained that about 50 percent was laminaria and sargassum about 1%. In that 75% used for food, 13% for hydrocolloids, 12% for other applications.
- He also explained the importance of seaweed in the environment like-Short crop cycle, Removes toxins from the ocean. They mitigate methane emission, Acts as a natural carbon sink.
- Also, he gave insights on the economic importance of seaweed -no diversification of

resources, creates employment

- About how the seaweed farming and climate change and the ecological impacts reduce damage to the corals by decreasing exposure to high temperature and high UV light intensities.
- He also explained about *Kappaphycus* advantages of cultivation-autotrophic plants, Grow anywhere in the environment, grow faster, eco-friendly, vegetative propagation, Enhance biodiversity.
- He also talked about the seaweed production in different places of Tamil Nadu.
- Also told about the seeding practices for the raft method of cultural practice in mandapam.
- Also, the need for seed banks in Indian coastal waters. With the help of seed bank-help seaweed in harsh weather to keep seaweed in live condition, Helps to supply the healthy seed to the cultivation and also seaweed multiplication
- In India, particularly in Tamil Nadu, *Kappaphycus* culture is extensively culturing in Pudukottai, Ramanathapuram, Tuticorin, and Kanyakumari districts.
- He also talked about the cleaning of epiphyte micro bivalve from tube nets
- Also about the nutritional value and main beneficial properties of seaweed-we can use as seaweed soup, salads
- Uses of seaweed hydrocolloids-agar, agarose, carrageen, alginates
- Used for the development of sustainable fashion, fabric dyeing with algae
- He also explained the merits of Land-based seaweed cultivation and the importance of the continuous supply of healthy seaweed to the factory. It engages less workforce in farm and is free from predators attack, can-do culture ten months in the year with constant yield. The only demerit is about the cost expenses.
- Land based seaweed aquaculture and its cultivable species easily-*Laminaria*, *Gracilaria*, *Ulva*
- Large scale seaweed land-based cultivation.
- Thrust areas for research-Seaweed farming and seaweed processing industry
- Also about *Kappaphycus alvarezii* cultivation and harvesting technology introduced by Sea 6
- The speaker gave a conclusion as -*Kappaphycus* importance in food and cosmetic products as it has a high market value.
- Preservation of healthy seeds in seed banks will pay the way to culture extensively in

our Indian coastal waters.

- Also about the funding bodies involved in seaweed cultivation-NFDB, IFAD, Tamil Nadu Fisheries.
- He also explained that “Sea 6” is also attempting multispecies cultivation in Tamil Nadu to improve the fisherfolk communities' socio-economic status and would be an alternative way to safeguard the wild species biomass.
- Dr.Inbakandan, sir, has added points that the Centre for ocean research has a Field research facility at Muttom. In that area, we have helped in seaweed harvesting and patented the sap extracted for biofertilizer producer by Dr. Stanley Abraham.
- Dr.Seshadri sir also added points to the cultivation of seaweed. Also, whether we can extend to a large scale level and use the backwaters also for seaweed cultivation.

Aquaculture - Career and Opportunities

Dr. MARIYARAJ VIJAY

Director, Best Aquastar Shrimp Hatcheries

Proprietor, Arcanoe Life Sciences

https://youtu.be/a4zxCYQs_OA



- Aquaculture potential in India-Total estuarine area-3.9m ha, coastal mangrove areas-0.58m ha, Freshwater earthen ponds-2.25 m ha, Lakes and Reservoirs-2.09 m ha, Major potential areas are in W.Bengal and Gujarat, Paddy field for fish culture- 2.3 m ha
- Potential Vs Shrimp culture status-statewise-35% increase in 2018 when compared with 2013
- Contribution of agriculture to GDP-5.23%, marine fisheries-1.07%, Aquaculture-

1.62%, Employment more than 14 million, 90% shrimp farms-<2 ha and 5% are 2-5 ha, 95% production from small scale

- Production and export: 83% Total shrimp production in 2019
- Why does aquaculture matter?
- 14% rise in global captures fisheries production from 1990-2018
- 527% rise in global aquaculture production from 1990-2018
- 122% rise in total food fish consumption from 1990-2018
- Overall, highest numbers of fisheries and aquaculture workers are in Asia, taking 85%
- Fish production should reach 196 million tons by 2025- to overcome demand on animal protein.
- Ways to start? Shrimp culture, Fin fish culture, sea weed culture, crab, oyster, peral, polychete, artemia, ornamental fish, shrimp cultures, Fish and shrimp hatcheries, Fish and shrimp feed and meal industries, sea food logistics, value added products.
- Cultivable biological resources: Take as business
- Fin fishes-India-*Latescalcarifer*, *Lethrinussp*, *Mugilcephalus*etc,
- Crab-*Scylla serrata* and *Scylla tranquebarica*- crab fattening and marketed,
- Shrimps-shrimp farming area- 1,70,000 ha,
- Seaweeds- Green, brown and red algae , seaweed beds, Gulf of mannar-14 coastal villages and palk bay 24 villages are known to harvest seaweeds-No investment-used for production of agar, carrageenan, alginates- *Kappaphycusalvarezii* used in products like tooth paste, cosmetics, icecream, pet foods, beverages, pharmaceuticals, personal care and dairy products- CSIR-CSMCRI-Technology transfer-Cultivation technology –Biofertilizers and bio-stimulants-*Ulva*, *Kappaphycus*, *Gelidium* for biofuel-460 million tons of seaweed- could generate-6.66 billions of bioethanol.
- Pearl oyster-CMFRI, Tuticorin-1973 and 1981, Mr.Mathachan, Kasargod, Kerala- Produces 50 buckets of pearls-1.5 lakhs investment-3 lakhs profit, Culturing fresh water pearl oyster and harvested
- Women in Indian Aquaculture and Fisheries- Women participation is important in all industries-14% women involved in fisheries and aquaculture-plays unstable roles, poorly paid or unpaid position
- Status of women in aquaculture and fisheries sector in various countries-Bangladesh, Belize, Cuba, Jamaica, Malaysia, Panama, Sri Lanka, Israel-Involved in harvesting

and post harvesting techniques-Women in aquaculture farming and ancillary activities-Barriers to women's participation and leadership

- Uplifting aquaculture and fisheries sector- Creation of fisheries and Aquaculture department, development of fund, Blue revolution and NFDB scheme-3000 Crores budget has been sanctioned-FIDP
- Funding patterns-Total admissible government subsidy-40% (Central+ state), Notable contributions by government were narrated by him.

Valedictory Function and Feedback

<https://youtu.be/yF-KxUq3oV0>

- Dr. Inbakandan, Head, COR, Addressed the gathering and briefed the 6 days Virtual Symposium On The Recent Trends In Aquaculture Industries, and the shared the information about centre facilities and funding agency, About Technology Business Incubator. About 2131 registration was registered from 25 different countries. A gratitude was given to the field expertise of this virtual symposium.



- Director Research Dr. Sheela Rani, was invited for the valedictory address and she appreciated the conveynor and co-convenors for their tiring effort. She shared the details regarding the online programmes that are being conducted by Sathyabama Institute of Science and Technology. She invited the students and deligates to visit the insitutes and utilize the facilities. She shared her views on the virtual Symposium and encouraged the students to participate in the one year PG diploma course and advised them to become a good entrepruner. A special thanks for Blue Aqua Group, Singapore,

Madurai District Ornamental Fish Cooperative Society Ltd., Proprietor, Filial Aquatics, Mayank Aquaculture Private Limited, Alpha biological, Aquaconnect, Growel Feeds Pvt. Ltd., Shrimp Hatchery Operator, Artis Animal Health Care (I) Pvt Ltd, United Research (Singapore) Pte. Ltd, Sea6 Energy Pvt. Ltd., BMR Industries Pvt. Ltd., Best Aquastar Shrimp Hatcheries Proprietor for their wonderful session. Appreciation was given for the conveynor and all the scientist for their wonderful work. Appreciation was given to the participant for making the event more effective and successful.

- Dr. Inbakandan invited Dr. Manoj Sharma to the address gathering.



- Dr. Manoj Sharma , congratulated the team for conducting the virtual symposium and selection of topic by the speakers. Placed his wishes to future endeavances.
- Dr. Inbakandan invited Dr. Kathiravan to address gathering.
- Dr. Kathiravan, congratulated the team for conducting the virtual symposium and for covering the wide range of topic.
- Dr. Inbakandan invited Dr. Vijay to address gathering.
- Dr. Vijay, congratulated the team for conducting the virtual symposium and said that this program will place the seed in the young mind. Appreciated the team for their tiring effort. Appreciated the participation of Industrial specialist.
- Dr. Inbakandan invited Dr. Seshadri to address gathering.
- Dr. Seshadri, Appreciated the topics, speakers and participants. The virtual program will help the younger generation to stand on their own. Advised the participant to involve much in business and become a successful entrepruner.



- Dr. Inbakandan invited Dr. Selva to address gathering.
- Dr. Selva, congratulated the team for conducting the virtual symposium and appreciated the interaction session and participants for their participation.

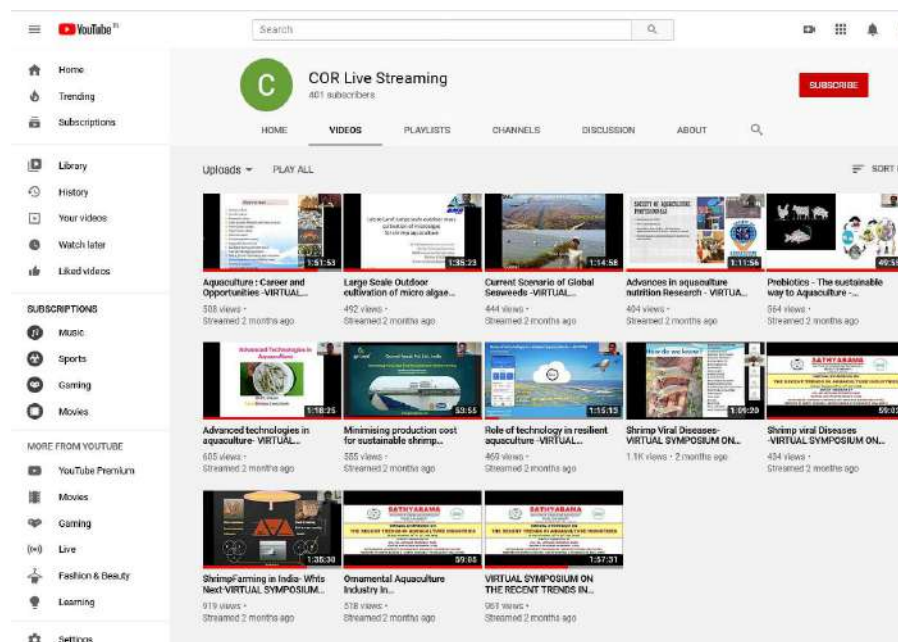


- Dr. Inbakandan invited the participant for providing the feed back
- Mr. Praveen shares his feed back by appreciating the event coordinators and requested to share the presentation to their personal mail id.
- Mr. Rakesh Jenamani, shared his feedback appreciating the event coordinators and shared his vies on the virtual symposium and its positive effect towards their own.
- Another Participant shared his views on virtual symposium, and his experience on fish farming. Conveyed his wishes for providing a wonderful paltform enriching his knowledge.
- Another Participant shared his views on virtual symposium, and his experience on sea weed, and conveyed his appreciation for the platform.

- Dr. Inbakandan invited Dr. Cheran to address gathering.
- Dr. Cheran appreciated the events and conveynor for their efforts and requested the conveynor to invite the dignitaries of inaugural function to valedictory function



- Dr. V.S.Chandrasekaran, Shared his appreciation on the virtual symposium and speakers, for sharing the information. Wished for future endeavours
- Feedback link was shared among the participants.



LINKS FOR THE VIRTUAL SYMPOSIUM ON THE RECENT TRENDS IN AQUACULTURE INDUSTRIES

[6 Days Program: 20th to 25th July 2020]



JOINTLY ORGANIZED BY
COL. DR. JEPPIAAR RESEARCH PARK
CENTRE FOR OCEAN RESEARCH (COR) &
SATHYABAMA UNIVERSITY-TECHNOLOGY BUSINESS INCUBATOR (SU-TBI)
in association with
MINISTRY OF EARTH SCIENCES - EARTH SCIENCE & TECHNOLOGY CELL
(ESTC)



Recent advances in Aquaculture technologies & super intensive system sustainable aquaculture Dr. FARSHAD SHISHEHCHIAN Group President & CEO Blue Aqua Group, Singapore https://youtu.be/EXIGPP54Vg0		Ornamental Aquaculture Industry in India - After 2010 (latest trends and market) Mr. R. SUNDARARAJAN Madurai District Ornamental Fish Cooperative Society Ltd., Proprietor, Filial Aquatics, India https://youtu.be/ebkkvn0dMLY	
Shrimp Farming in India: What's next? Dr MANOJ M SHARMA Director Mayank Aquaculture Private Limited, India https://youtu.be/VgKBU2GxxY4		Shrimp Viral Diseases Dr. AMERNENI RAVI KUMAR Director Alpha biological, India https://youtu.be/xPTyVpkfP4g	
Role of technology in making aquaculture ecosystem resilient - 3RPPM model Mr. RAJAMANO HAR CEO & Co-Founder Aquaconnect, India https://youtu.be/5HZtb0qVMfY		Minimizing Production Cost for Sustainable Shrimp Farming Mr. B. RAVIKUMAR Technical General Manager Growel Feeds Pvt. Ltd. in India https://youtu.be/yGQocv8gj7M	
Advanced Technologies in Aquaculture Dr. P. E. CHERAN Super Shrimps - Consultant Shrimp Hatchery Operator, India https://youtu.be/0XpdRp7ZDWk		Probiotics - The way to Sustainable Aquaculture Dr. V. KATHIRAVAN Artis Animal Health Care (I) Pvt Ltd, India https://youtu.be/LI3POJIW2uQ	
Advances in Aquaculture Nutrition Research Dr. A. VICTOR SURESH Managing Director United Research (Singapore) Pte. Ltd. https://youtu.be/R4R3q1JvPF8		Current scenario of global seaweeds: prospects of commercial seaweed cultivation Dr. MUTHUSWAMY JAIKUMAR Scientist, Sea6 Energy Pvt. Ltd. , India https://youtu.be/4v4qVp_rMuQ	
Lab to land technology: Large scale outdoor mass cultivation of microalgae for shrimp aquaculture Dr. P. SELVAKUMAR Scientist, BMR Industries Pvt. Ltd. , India https://youtu.be/3D0Yft90z5Q		Aquaculture - Career and Opportunities Dr. MARIYARAJ VIJAY Director, Best Aquastar Shrimp Hatcheries Proprietor, Arcanoe Life Sciences https://youtu.be/a4zxCYQs_OA	

Listen to the Aquaculture Industrial Experts from your Home!

INAUGURAL SESSION

<https://youtu.be/vdLsGsFzwFs>

VALEDICTORY SESSION

<https://youtu.be/yF-KxUq3oV0>

www.centreforocceanresearch.in



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)

Sathyabama Institute of Science and Technology




SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)
Accredited with Grade 'B' by NAAC / Approved by AICTE

Col. Dr. Jeppiaar Research Park



SATHYABAMA – TBI
(Supported by NSTEDB-DST)



Jointly with
SCHOOL OF MANAGEMENT STUDIES



Six week Certificate course on
"Innovation, Entrepreneurship and Employability"
Starts from 22nd June 2020

AIM AND SCOPE OF THE COURSE

As each of us navigates the impact of COVID-19 on our lives, we hope that you can find comfort in the strength of Sathyabama Institute of Science and Technology. During this time we remain as passionate as ever about helping you learn, grow and connect with learners. Sathyabama- TBI, Sathyabama Institute of Science and Technology proposes to offer 6 week certificate program on "Innovation, Entrepreneurship & Employability"

Startups the need of the hour. Entrepreneurship is very important for a growing economy like India since we need more jobs and more businesses to reach our dream of five trillion economy in 2024 so as to reach the world's highest economy. In this drive, we cannot deny the importance of startup, a good startup ecosystem is very much needed for a growing economy like India.

The goal of this program is to provide a broader understanding for both self-discovery and opportunity discovery. You will discover your strengths in terms of an entrepreneur and learn the basics on Innovation, Entrepreneurship, value proposition, prototyping, competition analysis, early customer insights and financing the start-ups. By the end of this course, you'll be able to work out a strategy to start your journey as an Entrepreneur.

COURSE CONTENT

Module 1 : Self Discovery & Value Systems

Identify personal strengths and value systems: safe work habits, achievement motivation, time management, anger management, stress management; SWOT analysis; Effectuation

Module 2 : Entrepreneurship Basics & Opportunity

Concept Introduction (Characteristic of an Entrepreneur); Leadership and teamwork, Problem Solving & Negotiation Skills: Startups, Business Opportunities Identification, Communication skills; Risk taking, Entrepreneurship support systems, Successes and Failures in Entrepreneurship.

Module 3 : Problems, Ideas & Solutions

Discovering Ideas: Mind Mapping; Creative Thinking; Invention, Innovation pipeline, Idea Evaluation; Design Thinking; Problem Solution Fit

Module 4 : Prototyping & Knowledge Protection

Prototyping, MVP, Product Market fit, Channel Product Fit; Intellectual property right for Startups

Module 5 : Operations & Market Study

Business Plans, BMC, Goal setting, Financing your Business, Enterprise management, Market Research, 4Ps of marketing, Segmentation & Target, Niche Marketing, CRM, Compliances, Taxes and Legal Issues

TARGET PARTICIPANTS

This course is targeted for those who are interested to explore Entrepreneurship. Both the working professionals, Students and Faculties of any college/University can apply for the course.

ELIGIBILITY

This is a specially structured course for professionals and academicians who want to explore Entrepreneurship. This program is intended for UG,PG, Ph.D Students and faculty members of any University/Research Centres. The fully online course starts from 22nd June 2020. Certificate will be issued upon successful completion of the course with all formalities and requirements.

ABOUT SATHYABAMA-TBI

Sathyabama-TBI was established during the year 2013 with the support of National Science & Technology Entrepreneurship Development Board, Department of Science & Technology (NSTEDB-DST). The vital reason of establishing TBI at Sathyabama Institute of Science and Technology is on the basis of its accessible potential resources. We are strong in Research and Development, Technology-Innovation, up gradation of findings and their subsequent relocation to the respective domains in the thrust area.

No matter, what sector your innovation represents, we nurture them with funding opportunities through various Govt schemes for every stage of the idea; by providing mentorship, by helping with networking; by supporting with physical space, IP support and enabling other support services & intern resources thereby hand-holding till you are ready to fly.

COURSE FEE

Fees : Rs. 1000/-

Payment through online banking

(Limited Seats, Registered participants will be intimated through E-mail)

IMPORTANT DATES

Last Date to Apply – June 20th, 2020

Start Date – June 22nd, 2020

PROGRAM ADVISORS

Dr. S. Seshadri

Advisor, Sathyabama TBI

Dr. G. Bhuvaneswari

Dean & Professor, School of Mgmt Studies

Dr. D. Inbakandan

Head & Scientist-E, COR. SIST

Dr. L. Stanley Abraham

Scientist-E, Assoc Prof COR. SIST

HOW TO APPLY

Fill the application in the given online application form link to register for the certificate course

<https://tinyurl.com/ya7desf9>



For more information and Further clarification contact



ORGANIZING SECRETARY

Dr. B. Sheela Rani

Director (Research)

Sathyabama Institute of Science and Technology

Deemed to be University

Email: directorresearch@sathyabama.ac.in

CONVENER

Mr. Kishore Kumar S

Manager, Sathyabama TBI

Sathyabama Institute of Science and Technology

Deemed to be University

Email: sathyabamatbi@gmail.com

CO-CONVENER

Dr. V. Ganesh Kumar

Scientist - E & Associate Professor

Centre for Ocean Research

Sathyabama Institute of Science and Technology

Deemed to be University

Email: ganeshkumar@sathyabama.ac.in



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Report on Online Certificate Course On Innovation, Entrepreneurship & Employability”

1. Col.Dr.Jeppiaar Research park, Sathyabama-Technology Business Incubator, Jointly with School of Management Studies, organized this 6 week online certificate course in “Innovation, Entrepreneurship & Employability” in association with NSTEDB.
2. This course is one of its kind, since it was aligned with the MHRD NISP (National Innovation and Startup Policy 2019 for Students and Faculty)
3. The goal of this program is to provide a broader understanding for both self-discovery and opportunity discovery. You will discover your strengths in terms of an entrepreneur and learn the basics on Innovation, Entrepreneurship, value proposition, prototyping, competition analysis, early customer insights and financing the start-ups. By the end of this course, you’ll be able to work out a strategy to start your journey as an Entrepreneur.
4. The total duration of this certificate program is 35 hours, which involves 25 hours of teaching and 10 hours of assignment work
5. 19 participants have undergone this Online Course.



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



HEADSTART
Startup Saturday | தமிழ்

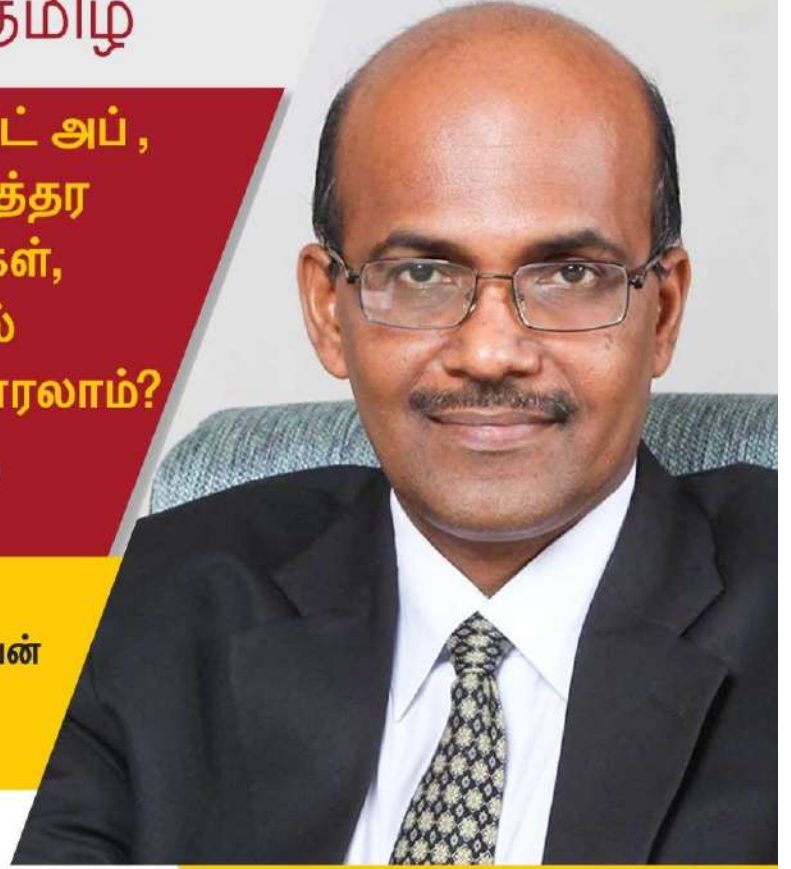
**தமிழகத்தின் ஸ்டார்ட் அப்,
குறு, சிறு மற்றும் நடுத்தர
தொழில் நிறுவனங்கள்,
சர்வதேச சந்தையில்
எவ்வாறு பெருகி வளரலாம்?**



25th July 2020
From 4 PM To 5 PM

Speaker

திரு. சேதுராமன் சாத்தப்பன்
International Trade Expert



Ecosystem Partner



REGISTRATION

https://bit.ly/sstamil_sme



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Report on How MSMEs and Startups of Tamil Nadu can Scale to the Global Market

Headstart Startup Saturday organized a webinar on How MSMEs and Startups of Tamil Nadu can Scale to the Global Market where Col.Dr.Jeppiaar Research Park has been the ecosystem partner for the event, Mr. Sethuram Sathappan was the speaker, He explained how MSMEs and startups of Tamil Nadu can scale to the global market, being an International Trade expert he was able to suggest new ideas to the existing MSMEs



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)

Accredited "A" Grade by NAAC | 12B Status by UGC | Approved by AICTE

www.sathyabama.ac.in

Tips to Ideate, Nurture & Market a Product



Rajalakshmi Srinivasan

Director-Product Management
Zoho Corporation Pvt. Ltd.



When

August 8, 2020
4:00 PM – 5:00 PM



Where

Sg Virtual Platform



Agenda

- Webinar
- Q & A

PATRONS

Dr. MARIAZEENA JOHNSON, Chancellor

Dr. MARIE JOHNSON, President

Dr.T.SASIPRABA, Vice Chancellor

CONVENER

Mr. S. Kishore Kumar
Manager, TBI

ORGANIZING SECRETARY

Dr. B. SHEELA RANI
Director (Research)



Tickets

startupgrind.com/sathyabama-institute-of-science-and-technology

startupgrind

SATHYABAMA INSTITUTE OF SCIENCE & TECHNOLOGY

PRESENTED BY

Google
for
Startups

Site24x7
ZOHO



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Report on Tips to Ideate, Nurture & Market a Product

Startup Grind Sathyabama institute of science & technology chapter in association with Sathyabama Technology Business Incubator organized a webinar on "Tips to ideate, Nurture and Market a product" on 8th August 2020.

Ms. Rajalakshmi Srinivasan, Director- Product Management, Site 24x7, Zoho Corporation Pvt Ltd. India's leading SAAS company as our speaker. Ideation is what fuels innovation. Ideation is the process of creating something out of nothing — an alchemy of the imagination. To embrace tech and Improve your Ideation workflow, It isn't easy turning a concept or an idea into something tangible. Without careful guidance and continuous nudging in the right direction. This webinar focused to enlighten budding entrepreneurs, students, etc on how to mold and nurture themselves to face the challenges of the real-time market with lot more knowledge and understanding

Lessons

- Create that shared emotional experience
- On a solid foundation of facts/reason
- And do it with conviction



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



REC

The Best Portable Saw.

Next Accident in 07:47

Why They Love it

How It Works

Pathos Ethos Logos

These brave woodworkers shared their stories. Take a moment and listen.

Professionals and hobbyists, subcontractors and educators. They all love SawStop.

The SawStop "that stops" is world famous. Learn the facts behind the technology that changed woodworking.

Free follow woodworkers stories

Find out why

Learn about the Technology

REC

https://www.sobe.com/one/startups/

MAHARASHTRA

- Zone Startups
- thinQbate
- CIBA
- JITO
- Startup India

KARNATAKA

- KBITS
- BMB-NSRCEL
- Future Group (C&D Labs)
- Sandbox Startups
- Social Alpha

NEW DELHI

- SLP
- NASSCOM
- Stirring Minds

HYDERABAD

- T-Hub
- Anthill Ventures
- ABI (ICRISAT)
- IITH
- WE Hub



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)

Accredited "A" Grade by NAAC | 12B Status by UGC | Approved by AICTE

www.sathyabama.ac.in



Bon Appetit with

**Mr. Santhosh
Muruganantham**
Co-Founder & Managing Director
Kolapasi



When

Sep 11, 2020
4:00 PM – 5:00 PM



Where

Online (Zoom)



Agenda

- Fire side Chat
- Q & A

PATRONS

Dr. MARIAZEENA JOHNSON, Chancellor

Dr. MARIE JOHNSON, President

Dr.T.SASIPRABA, Vice Chancellor

CONVENER

Mr. S. Kishore Kumar
Manager, TBI

ORGANIZING SECRETARY

Dr. B. SHEELA RANI
Director (Research)



Tickets

<https://www.startupgrind.com/e/mnyv5h/>

startupgrind

SATHYABAMA INSTITUTE OF SCIENCE & TECHNOLOGY

PRESENTED BY

Google
for
Startups

**Kola
pasi**
hungry to happy



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Report on Bon Appetit with Kolapasi Santhosh

Startup Grind Sathyabama institute of science & technology chapter in association with Sathyabama Technology Business Incubator organized a fire side chat titled “Bon Appetit with Kolapasi Santhosh” on 11th Sep 2020. Mr. Santhosh Muruganantham, Co-founder & Managing Director of Kolapasi was the speaker of this event.

The Fire side chat focused on the aspects of entrepreneurship, the key ingredients for a business startup and how to develop a mind-set to take up entrepreneurship as a challenging career instead of only trying to get jobs in government sectors and private sectors.

The industry is growing and changing at a pace that's faster than ever before, with opportunities for innovative thinkers. The Event focus on operating and scaling up food businesses with the experience sharing from owning the food business.



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY
(Deemed to be University)
Accredited 'U' Grade by NAAC | UIR Status by UGC | Approved by AICTE

PATRONS
Dr. Mariazeena Johnson, Chancellor
Dr. Marie Johnson, President
Dr. T. Sasipraba, Vice Chancellor

ORGANIZING SECRETARY
Dr. B. Sheela Rani, Director – Research

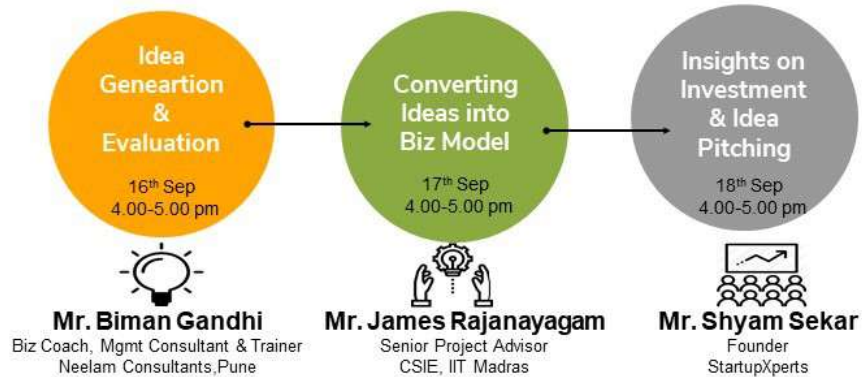
CONVENERS
Mr. S. Kishore Kumar, Manager- TBI
Dr. V. Ganesh Kumar, Scientist - E

E-certificate will be provided.

SATHYABAMA – TECHNOLOGY BUSINESS INCUBATOR

(supported by NSTEDB- DST, Govt of India)
organizes

STARTUP PRE SUMMIT



WIN free incubation, Mentoring & Startup Grant to build prototype

Register Free : <https://tinyurl.com/y5qd3q52>



20

Report on 3- days Startup Pre-Summit Program

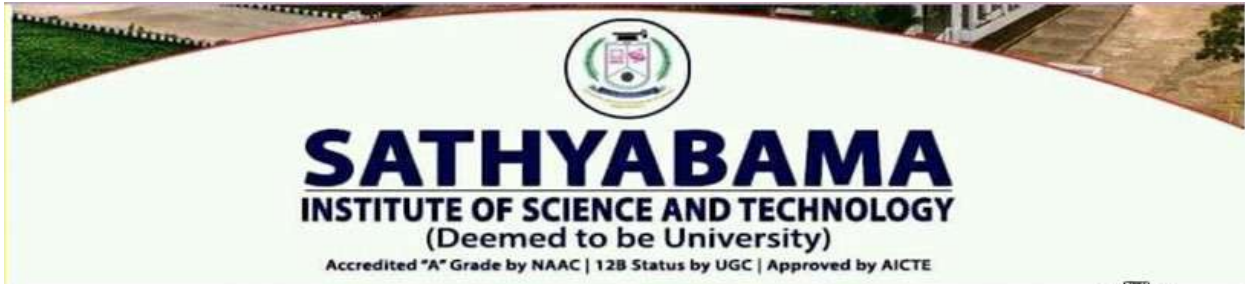
Col.Dr. Jeppiaar Research Park, Sathyabama Technology Business Incubator organized a 3- days Startup Pre-Summit Program from 16th – 18th Sep '2020.

A pre-summit meet was organized with research heads of various departments to provide a clear view about prior functions and activities of SU-TBI. The session was handled by Mr. Biman Gandhi, Mr. James Rangarajan & Mr. Shyam Sekar. The session emphasized about start-up summit pitching program and its importance for the students. The program went on in discussion with how to identify innovative ideas which can be converted into a viable product.



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Sathyabama-Technology Business Incubator

(Supported by NSTEDB-DST, Govt. of India)

Invites innovative ideas to incubate with TBI Startup Grant



Do you think differently?

PITCHFEST

What's your

BIG? IDEA

Are you the person with the next

BIG IDEA

Open call for Ideas

TBI Startup Grant of **Rs.50,000/-** to initiate

YOUR IDEA

Last Date : 21-9-2020

kindly send in your idea in the given link <https://tinyurl.com/y3cgtesa>





Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Report on Sathyabama TBI Startup Summit “Startup Pitch Fest”

Startup Summit “Startup Pitch Fest” – Pitching Program for Young Entrepreneurs” organized by Col.Dr.Jeppiaar Research Park, Sathyabama Technology Business” on 21st Sep ‘2020.

38 Innovative ideas were received from various departments and 15 ideas were shortlisted for the final presentation by the internal committee members. Each student was given 3 Minutes for the presenting their Ideas and 2 minutes for questioning during the final presentation out of which 10 ideas were screened and shortlisted for the Startup grant by the external committee member - Dr. Amarnath.



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



technology



Cordially invites you for

MVP Launch & Release of TBI book

On
Oct 5th 2020
10.30- 11.30 am



Patrons

Dr. Mariazeena Johnson
Chancellor

Dr. Marie Johnson
President

Dr. T. Sasipraba
Vice-Chancellor

Organizing Secretary
Dr. B. Sheela Rani, Director (Research)

Convener

Mr. Kishore Kumar, Manager, TBI



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Report on MVP Launch, & Release of TBI Book, Policy & Signing of MOU

Col.Dr. Jeppiaar Sathyabama Technology Business Incubator organized a MVP launch on 5th Oct 2020. Student Ideas which got funded by the TBI Startup Grant have completed their MVP – Minimum Viable Product and it got launched in the presence of our Chancellor, Dr. Mariazeena Johnson and President Dr. Marie Johnson.

On the same day TBI handbook and Policy was also released virtually. Sathyabama TBI has been recognized as the “Nodal Centre for Innovation, Creativity & Entrepreneurship” by ATAL INCUBATION CENTRE RAISE supported by ATAL INNOVATION MISSION. In continuation to this, an MoU has been signed between SATHYABAMA and ATAL INCUBATION CENTRE RAISE.



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



89



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)

Accredited "A" Grade by NAAC | 12 B Status by UGC | Approved by AICTE
Sathyabama.ac.in

Col. Dr. JEPPIAAR RESEARCH PARK



SATHYABAMA - TBI
(Supported By NSTEDB - DST)



In Association With



CENTRE FOR OCEAN RESEARCH
(DST - FIST Sponsored Centre)

DEPARTMENT OF MECHANICAL ENGINEERING

&

THE INSTITUTION OF ENGINEERS (INDIA)
Kanchipuram Local Centre



6 Days Virtual Faculty Development Programme on

Progress from Project to Patent



6th - 12th OCT 2020

Project to Patent



Dr. L. STANLEY ABRAHAM
Scientist - E & IPR Cell
Centre for Ocean Research, SIST
6.10.2020 (5 - 6.30 pm)

Patent Drafting



Ms. P. ILANANGAI
Patent Agent
7 - 9.10.2020 (3 days)
(5 - 6.30 pm)

Trademarks & Copyrights



Ms. SINDUJA
Advocate & IP Consultants,
Entrada Legal
10.10.2020 (5 - 6.30 pm)

PCT Application



Shri. R. RAJINI
Asst. Controller,
Indian Patent Office, Chennai
12.10.2020 (4 - 5.30 pm)

PATRONS :

Dr. Mariazeena Johnson, Chancellor
Dr. Marie Johnson, President
Dr. T. Sasipraba, Vice Chancellor

ORGANIZING SECRETARY :

Dr. B. Sheela Rani, Director (Research)

PROGRAMME COORDINATORS :

Dr. S. Seshadri, Advisor, TBI
Dr. S. Prakash, Dean, School of Mech. Engg
Dr. G. Arunkumar, Head, Dept. of Mech. Engg

CONVENERS :

Dr. L. Stanley Abraham, Scientist - E, COR
Mr. S. Kishore Kumar, Manager- TBI
Mr. S. Lakshmi Sankar, A.P., Dept. of Mech. Engg

CO- CONVENERS :

Dr. D. Inbakandan, Head & Scientist - E, COR
Dr. V. Ganesh Kumar, Scientist - E, COR

Registration Link : <https://tinyurl.com/y3m8996f>

Registration Fee : Rs. 500/-

Last date for Registration : 5. 10. 2020



Further Details Contact:

98841 63903

98416 58827

E- Certificate will be issued upon successful completion of the programme



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Report on 6 days - Virtual Faculty Development Programme on Progress from Project to Patent

Col.Dr. Jeppiaar Sathyabama Technology Business Incubator in association with Centre for Ocean Research organized a 6 days - Virtual Faculty Development Programme on Progress from Project to Patent from 6th -12th Oct 2020.

The FDP focused on how to convert a research project to patent, patent drafting, how to avail trademarks and copyrights and PCT application process. It was attended for 44 participants.



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Technology



SATHYABAMA



INSTITUTE OF SCIENCE AND TECHNOLOGY

Accredited "A" Grade by NAAC | 12B Status by UGC | Approved by AICTE

www.sathyabama.ac.in



SATHYABAMA INSTITUTION INNOVATION COUNCIL

Cordially invites you to join the webinar on

**"Innovation & Entrepreneurship
in Engineering"**

Date : 19-11-2020

Time : 11.00 am – 12.00 pm



Dr. W. Amarnath
Founder & Chairman
Invent2succeed, Chennai



Meeting ID: 922 7212 5576 Pwd: 507430

Organized by

Dr.B.Sheela Rani, Director Research & IIC - Vice President

Conveners

Dr.S.Seshadri, Mr.S.Kishore, Ms.S.Gayathri



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Report on Webinar on “Innovation & Entrepreneurship in Engineering”

Col.Dr. Jeppiaar Sathyabama Technology Business Incubator in association with Institute Innovation Council organized a Webinar on “Innovation & Entrepreneurship in Engineering” on 19th November 2020. Dr. W. Amarnath, founder and chairman, Invent 2 Succeed was the speaker for the webinar.

Almost 200 students were participated in this program, The webinar focused on how and Innovation & Entrepreneurship in Engineering can be achieved and the importance of being creative.



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Technology



SATHYABAMA



INSTITUTE OF SCIENCE AND TECHNOLOGY

Accredited "A" Grade by NAAC | 12B Status by UGC | Approved by AICTE

www.sathyabama.ac.in



SATHYABAMA INSTITUTION INNOVATION COUNCIL

Cordially invites you to join the webinar on

"Innovation & Entrepreneurship"

Date : 02-12-2020

Time : 11.00 am – 12.00 pm



Dr. S. Seshadri

Advisor

Technology Business Incubator

Meeting ID: 952 8856 5808 Pwd: 609494

Organized by

Dr.B.Sheela Rani, Director Research & IIC - Vice President

Conveners

Dr.S.Seshadri, Mr.S.Kishore, Ms.S.Gayathri



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Report on Webinar on “Innovation & Entrepreneurship”

Col.Dr. Jeppiaar Sathyabama Technology Business Incubator in association with Institute Innovation Council organized a Webinar on “Innovation & Entrepreneurship in Engineering” on 2nd November 2020. Dr. S.Seshadri was the speaker for the webinar.

Almost 200 students were participated in this program, The webinar focused on how and Innovation & Entrepreneurship in Engineering can be achieved and the importance of being creative.

The screenshot displays a Zoom webinar interface. The main content area shows a presentation slide titled "Industrial Revolution" illustrating the progression from Industry 1.0 to Industry 4.0:

- INDUSTRY 1.0** (1784): Mechanization, steam (looms, sewing, loom)
- INDUSTRY 2.0** (1870): Mass production, assembly line, electrical energy
- INDUSTRY 3.0** (1959): Automation, computers and electronics
- INDUSTRY 4.0** (TODAY): Cyber Physical Systems, Internet of things, networks

On the right side, a "Participants (128)" list is visible, showing the host and numerous attendees with their names and status icons. At the bottom, the Zoom control bar includes options like Unmute, Start Video, Security, Participants (128), Chat, Share Screen, Pause/Stop Recording, and End.



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Zoom Meeting

You are viewing Sundaram Seshadri's screen

View Options

Recording...

Participants (128)

Find a participant

Sathyabama TBI (Host, me)

Sundaram Seshadri

1WK9p1aKilwF9Y00_701SwKgr...

39130001-A.Aabarana Sakthitha

39130005_Abi

39130006_Abijith

39130007-M.Ajirami

39130012_AKASH.P

39130019 supraja

39130020_ANAGHA JACOB

39130021_Anandhi

39130025 Angelo

39130027_Annam santosh kumar

39130028_ANTO KENSIVA S

Unmute

Start Video

Security

Participants: 128

Chat

Share Screen

Pause/Stop Recording

More

End

Invite

Mute All

Entrepreneurship

Sundaram Seshadri



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)

Accredited "A" Grade by NAAC | 12B Status by UGC | Approved by AICTE

www.sathyabama.ac.in



Fire Side Chat with

Mr. Suresh Kumar G

CEO, MacApp Studio



When

Dec 3, 2020
4:30 PM – 5:30 PM



Where

Virtual (Bevy)



Agenda

- Fire side Chat
- Q & A

PATRONS

Dr. MARIAZEENA JOHNSON, Chancellor

Dr. MARIE JOHNSON, President

Dr.T.SASIPRABA, Vice Chancellor

CONVENER

Mr. S. Kishore Kumar
Manager, TBI

ORGANIZING SECRETARY

Dr. B. SHEELA RANI
Director (Research)



Tickets

<https://www.startupgrind.com/e/m9u9yv/>

startupgrind^U

SATHYABAMA INSTITUTE OF SCIENCE & TECHNOLOGY

PRESENTED BY

Google
for
Startups



MacAppStudio



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology

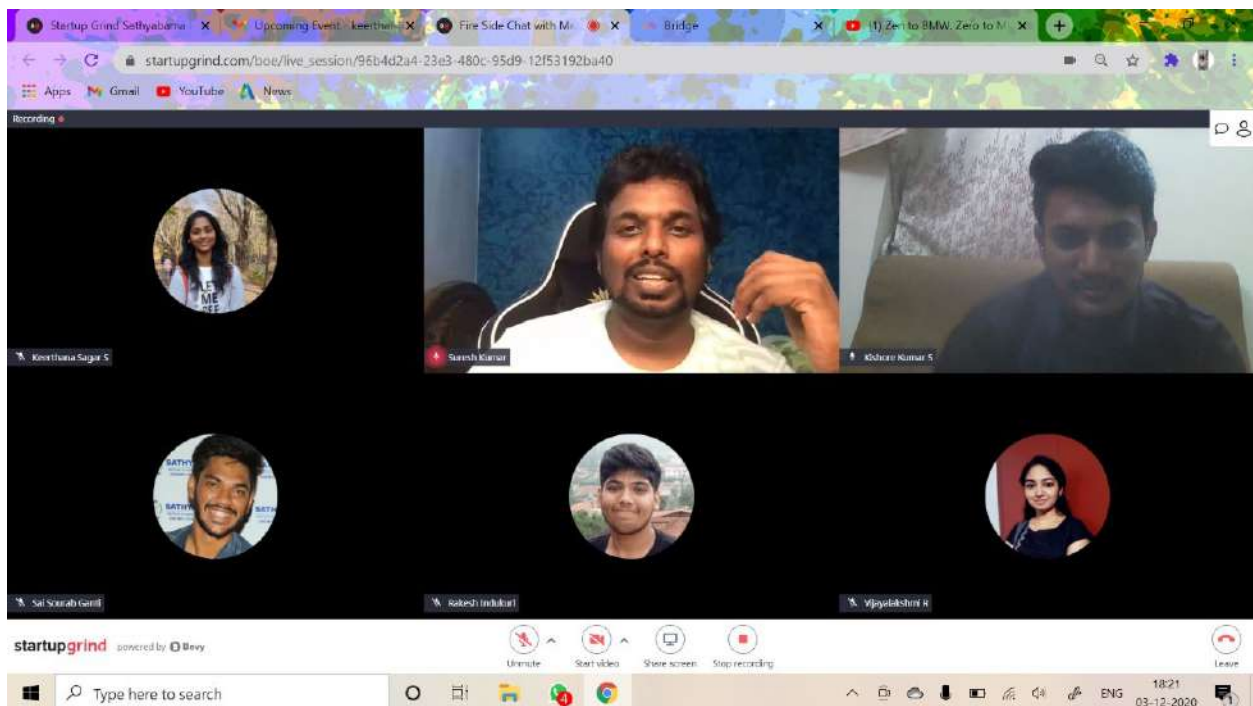


Report on Fire Side Chat with Mr. Suresh Kumar G

Startup Grind Sathyabama institute of science & technology chapter in association with Sathyabama Technology Business Incubator organized a Fire Side Chat with Mr. Suresh Kumar G on 3rd Dec 2020. Mr. Suresh Kumar, CEO of MacApp studio was the speaker for the event.

The Fire side chat focused on the aspects of entrepreneurship, the key ingredients for a business startup and how to develop a mind-set to take up entrepreneurship as a challenging career instead of only trying to get jobs in government sectors and private sectors.

The industry is growing and changing at a pace that's faster than ever before, with opportunities for innovative thinkers. The Event focus on operating and scaling up food businesses with the experience sharing from owning the food business.





Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)

Sathyabama Institute of Science and Technology



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)



TECHNOLOGY BUSINESS INCUBATOR
(SUPPORTED BY NSTEDB - DST, GOVT OF INDIA)
SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY



SCHOOL OF MANAGEMENT STUDIES



IN COLLABORATION WITH

TAMILNADU ADVANCED TECHNICAL TRAINING INSTITUTE

WEBINAR ON DECODING ENTREPRENEURSHIP

DECEMBER 7th TO 11th (6:30 pm TO 7:30 pm)

SPEAKERS

No Registration Fees,
certificate will be issued to all participants.

PATRONS

- **Dr. MARIAZEENA JOHNSON**, CHANCELLOR
- **Dr. MARIE JOHNSON**, PRESIDENT
- **Dr. T. SASIPRABA**, VICE CHANCELLOR

ORGANIZING SECRETARY

- **Dr. B. SHEELA RANI**, DIRECTOR - RESEARCH

PROGRAM ADVISORY COMMITTEE

- **Dr. S. SESHADRI**, ADVISOR, TBI
- **Dr. G. BHUVANESWARI**,
DEAN, SCHOOL OF MANAGEMENT STUDIES
- **Dr. A. PALANI**,
HEAD, SCHOOL OF MANAGEMENT



Mansoor Ali Khan,
India



Sakthivel Mahalingam,
Singapore



Shri. Zarook Sha,
India



Eva James, India



Dr. Eniyathenral, USA

CONVENERS

- **Mr. S. KISHORE KUMAR**,
MANAGER, TBI
- **Dr. TR. KALAI LAKSHMI**,
ASSOCIATE PROFESSOR,
SCHOOL OF MANAGEMENT
STUDIES

HOSTED BY



JOSHUA GERARD
COO - TATTI



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Report on 5 days webinar on “Decoding Entrepreneurship”

1. Col.Dr.Jeppiaar Research park, Technology Business Incubator & School of Management Studies of Sathyabama Institute of Science and Technology, in association with Tamilnadu Advanced Technical Training Institute (TATTI) is organising a 5 days webinar series on "Decoding Entrepreneurship" from 7th – 11th December 2020 (6.30 – 7.30 pm)
2. This webinar was designed to be thought provoking to the participants to tinker their ideas throughout current lockdown situation, and channelize it towards their entrepreneurial journey.
3. Approximately 300 participants were registered for the program.



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Department of Science & Technology
Govt. of India



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)

Accredited "A" Grade by NAAC | 12B Status by UGC | Approved by AICTE
www.sathyabama.ac.in



INSTITUTION'S
INNOVATION
COUNCIL
(Ministry of HRD Initiative)

TECHNOLOGY BUSINESS INCUBATOR

(Supported by NSTEDB-DST, Govt of India)

CENTRE FOR OCEAN RESEARCH

(DST-FIST Sponsored Centre)

celebrating

International Day of Women and Girls in Science on "Investment in Equality in Science, Technology & Innovation"



Dr. T. Jayanthi
Director
Electronics &
Instrumentation
IGCAR, Kalpakam



Dr. T.S. Chandra
Professor - Emeritus
Dept. of Biotechnology
IIT Madras



Dr. R. Ramanibai
Professor & Head (Retd)
Dept. of Zoology
University of Madras



11th February' 2021, 10.00 am -12.30 noon
Meeting ID: 992 2700 5835 Passcode: 988343

PATRONS

Dr. Mariazeena Johnson, Chancellor

Dr. Marie Johnson, President

Ms. Maria Bernadette Johnson, Vice-President

Dr. T. Sasipraba, Vice Chancellor

ORGANIZING SECRETARY

Dr. B. Sheela Rani, Director-Research

PROGRAMME COORDINATORS

Dr. S. Seshadri, Advisor, TBI

Dr. D. Inbakandan, Head & Scientist-E, COR

CONVENERS

Mr. S. Kishore Kumar, Manager- TBI

Dr. V. Ganesh Kumar, COR

Co-CONVENER

Ms. Gayathri, TBI

Kindly join us in the Registration link : tinyurl.com/5fb9lfzd





Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)

Sathyabama Institute of Science and Technology



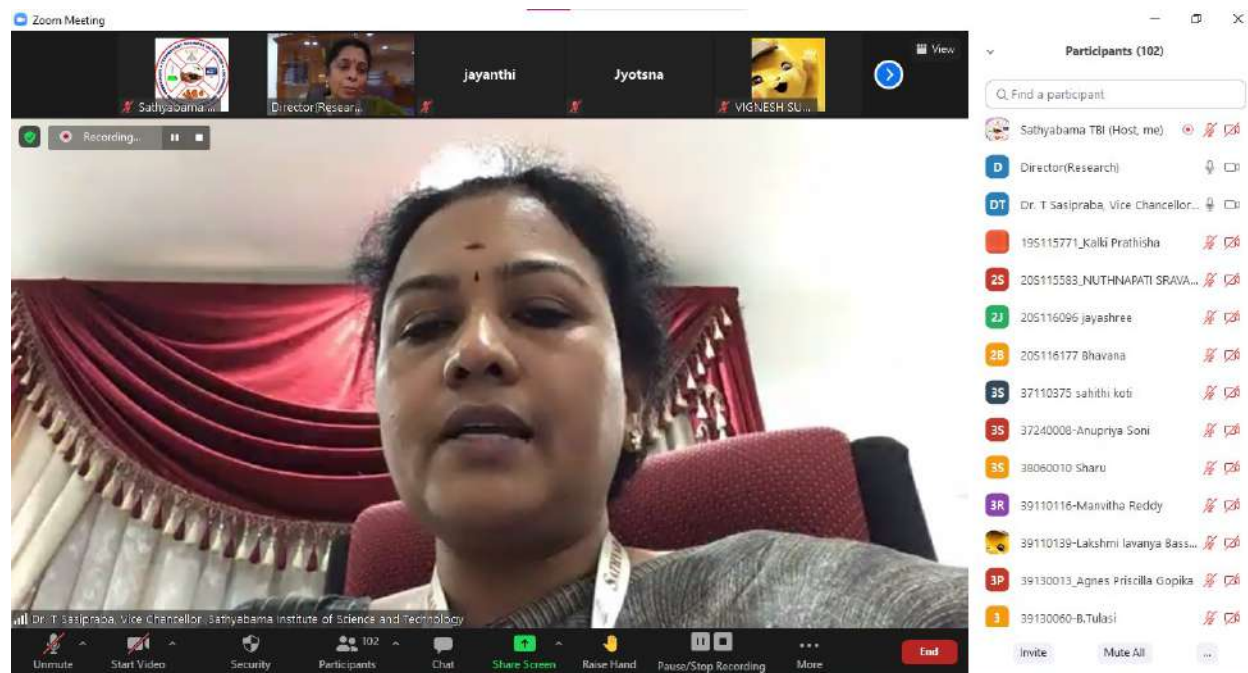
Report on “International Day for Women and Girls in Science”

Col. Dr. Jeppiaar Research Park Sathyabama TBI, Centre for Ocean Research & IIC celebrated the International Day for Women and Girls in Science on the theme “Investment in Equality in Science, Technology & Innovation” on 11th February 2021.

Dr. B. Sheela Rani, Director- Research welcomed the dignitaries and briefed about the history of International Day for Women and Girls in Science. Dr. T. Sasipraba, Vice - Chancellor stressed the critical role of women and girl in science. Dr. G. Sundari, Director Administration gave insights about innovation occurring in academia.

Dr. Ramanaibai, Head & Prof (Retd), Dept of Zoology, University of Madras, Dr.T. S. Chandra, Prof Emeritus, Dept of Biotechnology, IIT Madras & Dr. T. Jayanthi, Director, Electronics & Instrumentation, IGCAR, spoke about various Women scientist achieved in their field and their own success stories and the opportunities available for the future generations. Industry 4.0 and Education 4.0 were the hot topics discussed in the programme.

Dr. D. Inbakandan, Scientist & Head, COR gave vote of Thanks and Dr. S. Seshadri, TBI- Advisor concluded the session.





Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Department of Science & Technology
Govt. of India

Zoom Meeting

Recording...

Participants (104)

Find a participant

Sathyabama TBI (Host, me)

Director (Research)

Jyotsna

195115771_Kalki Prathisha

205115583_NUTHANPATI SRAWA...

Invite Mute All

Chat

From Dr.S.Kishore to everyone:

Thank you all for gracing the occasion. Sathyabama Institute of Science and Technology Institution Innovation Council, TBI invites your best attention throughout the event.

To: Jyotsna (Direct Message)

Type message here...

End

You are viewing Chandra Sainathan's screen

View Options



When the chairman of the Mahindra group Anand Mahindra was put in charge of babysitting his one-year-old grandson, he acknowledged the difficulties faced by women and took to social media to salute women and initiated a conversation on gender equality.

Taking to Twitter, Mahindra posted an image that featured formally dressed men and women on a race track. While for the men the track was clear, the path was filled with several domestic obstacles for women.

I salute every working woman & acknowledge that their successes have required a much greater amount of effort than their male counterparts," Mahindra captioned the image he shared.

I salute every working woman & acknowledge that their successes have required a much greater amount of effort than their male counterparts," Mahindra captioned the image he shared.

Unmute Start Video Security Participants Chat Share Screen Raise Hand Pause/Stop Recording More End

Sathyabama TBI

Chandra Sainathan

Jyotsna

Pandya Rajan



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Department of Science & Technology
Govt. of India

Zoom Meeting

Recording...



Managing Digital Transformation
Industry 4.0 → Education 4.0

T. Jayanthi, OS,
Director,
Electronics &
Instrumentation
Group,
IGCAR, Kalpakkam





Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Report on “Business Strategies for Life Science Innovations”

This programme is organized on 16th February 2021 to familiarize the BIG programme of the Department of Biotechnology, Government of India. This is done by Biotech Incubator at IIT Madras and sessions are handled by IIT Kanpur (as a BIG partner to DBT).

Col.Dr. Jeppiaar Sathyabama Technology Business Incubator joined this initiative as an Ecosystem Partner to reach to more participants.

The banner is for an online webinar titled "Business Strategies for Lifescience Innovations". It features a large "BIG" logo with a DNA helix in the letter 'I'. The text "ONLINE WEBINAR" is below the logo. The speaker is Varad Rajan Krishna, Cofounder of 100 Open startups and Managing Director at Induct AS Asia & MENA. The event is scheduled for 3:00 - 4:00 PM on 16th February via Zoom Conference. The banner includes logos for sponsors and partners at the top and bottom, such as IIT Kanpur, birac, IITM Bioincubator, Global Bio-India 2021, and SASTRA-TBI.

Business Strategies for Lifescience Innovations

Varad Rajan Krishna
Cofounder 100 Open startups, Managing Director at Induct AS Asia & MENA

3:00 - 4:00 PM | 16th February | Zoom Conference

OUTREACH PARTNERS
Association for Bio-inspired Leaders & Entrepreneurs at SASTRA-TBI

www.slicincubator.com

f @ i t i n \incubatorITK



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Pitch to perfection

• Myths :

- Albert Einstein of S-World |
- IDEA is the _____ |
- We deserve sympathy |
- Getting funding is a Right |
- We are the smartest |
- We are serving the humanity

• Principles : K-I-S-S

- 6-8 slides
- Level 1 -3 in line with Audience
- Basic – Detailed – Advanced

• The Offering :

• The Audience :

• Solve a problem: ?

• Secret sauce : Your USP |Mastery of your solutions

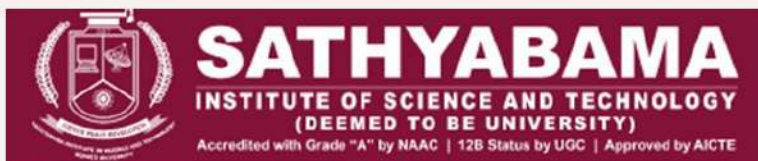
• Tips:

- Know your Investor (KYI)
- Strong Opening Statement
- Duration : 2 mts -8 mts
- Founder Agreements
- Equity Table
- Capital Raise
- Time Periods
- Valuation
- Mistakes to Avoid



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



SATHYABAMA
TECHNOLOGY BUSINESS INCUBATOR
(Supported by NSTEDB-DST, Govt of India)

CENTRE FOR INNOVATION, CREATIVITY & ENTREPRENEURSHIP

IEDC - PROGRAM SERIES

S No.	Type of Activity/ Program	Name of the Activity/ Program	Guest/ Mentor/ Facilitator	Event date (DD/MM/YYYY) (10.30 am - 11.30 am)
1	Introductory Session	Entrepreneurship as a career	AIC RAISE Team	17-Feb-2021
2	Training Session	Leadership & Management	AIC RAISE Team	3-Mar-2021
3	Training Session	Design Thinking for Innovation	AIC RAISE Team	17-Mar-2021
4	Training Session	Business Model Canvas	AIC RAISE Team	31-Mar-2021
5	Training Session	Market Research & Marketing Strategies	AIC RAISE Team	14-Apr-2021
6	Training Session	Money Matters	AIC RAISE Team	28-Apr-2021

Contact:

Mr. Ebin- AIC Raise

Mr. Kishore – Sathyabama TBI

Register free @ <https://tinyurl.com/1m0ot1p6>

E- Certificates will be given on successful completion of the program



50 Students only



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Report on “IEDC Program Series”

Col. Dr. Jeppiaar Research Park Sathyabama TBI, in association with Atal Incubation Center Raise organised a Six day “IEDC Program Series” from 17th Feb- 28th April 2021 for sathyabama students. The sessions were handled by AIC Raise.

The series covered the aspects of Entrepreneurship, Design Thinking, Business Model Canvas and Investment. The sessions were interactive and students gained more insights from this series.





Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Recording You are viewing AIC ROISE's screen View Options View



STUDENT STARTUP PROGRAMS.







Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

(DEEMED TO BE UNIVERSITY)

Accredited "A" Grade by NAAC | 12B Status by UGC | Approved by AICTE

Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai – 600 119. Tamil Nadu

Col.Dr.Jeppiaar Research Park

Centre for Ocean Research
(DST-FIST Sponsored Centre)

Technology Business Incubator
(Supported by NSTEDB-DST)



Cordially invites students, research scholars and faculty members to join the

National Science Day – Programme (Virtual Mode)

Sponsored by



**Tamil Nadu State Council for
Science and Technology,
Chennai - 25**

Date : 1- 3- 2021

Science Quiz



**CHIEF GUEST & Special Lecture by
Dr. Sultan Ahmed Ismail, Ph.D., D.Sc.,
Advisor,
Ecoscience Research Foundation, Chennai**

**for School Students
with CASH PRIZE
(9 to 12 std on 27-2-21)**

Zoom Meeting ID: 985 0306 7117
Passcode: 136807

PATRONS

**Dr. Mariazeena Johnson
Chancellor**

**Dr. Marie Johnson
President**

**Ms. Maria Bernadette Tamilarasi Johnson
Vice – President**

**Dr. T.Sasipraba
Vice-Chancellor**

**Dr.B.Sheela Rani - Director Research
Organizing Secretary**

Convener : Dr. V. Ganesh Kumar, Scientist – E, COR - Coordinator : Dr. D. Inbakandan, Head, COR
Co-Conveners : Dr. L. Stanley Abraham, Scientist – E, COR & Mr. S. Kishore, TBI Manager
Institution's Innovation Council Coordinators

Interested students kindly register in the link : <https://tinyurl.com/2a9ulqlo> till 27-2-21 10 am.
Quiz will be conducted on 27-2-2021 3.00 pm Kindly Contact : +91 98414 72463

www.sathyabama.ac.in





Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Report on National Science Day - 2021

Col.Dr.Jeppiaar Research Park, Sathyabama-Technology Business Incubator associated with Centre for Ocean Research organized “National Science Day” Celebrations programme sponsored by Tamil Nadu State Council for Science and Technology, Chennai. Programme included Quiz Competition for School students with cash prizes, students from eight states all over India participated on 27-2-2021 and winners were 1st Prize Mr. S R Hayagrievan, Maharishi VidyaMandir senior secondary school,Chetpet, Chennai 2nd Prize Ms.Sraddha Kanuparthi, Foster Billabong High International School, Hyderabad, Telengana 3rd Prize Mr. Sarukolla Vishnu Vardhan Yogivemana University School, Kadapa, Andhra Pradesh. Dr.Sultan Ahmad Ismail, Advisor, Ecoscience Research Foundation delivered a special lecture on Science Awareness on 1-3-2021.Students of SIST and various school students participated in the programme. Dr.R.Srinivasan,Member Secretary, TNSCST delivered the inaugural address and Dr.B.Sheela Rani Director (Research) delivered the welcome address. IIC Convener Dr.S.Kishore addressed the importance of IIC in Science Day and Dr.S.Seshadri explained the theme of National Science Day-2021. The programme concluded with Vote of Thanks by Dr.D.Inbakandan, Head, Centre for Ocean Research.



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Colour in food

Take home message
TRICOLOUR
every day



Sultan Ahmed Ismail

Celebration of International Women's Day -2021

Under the Theme

"CHOOSE TO CHALLENGE"

Guest of Honor

**Dr. Prabhdeep Kaur, M.B.B.S., Dip. N.B
Scientist E**

**National Institute of Epidemiology
Indian Council for Medical Research
Chennai**



8th -13th March 2021



11am-12 noon, Online (Zoom)



<https://forms.gle/s5AsJhDWB9Jbzk3R7>

Organized by

**TECHNOLOGY BUSINESS
INCUBATOR**

(Supported by NSTEDB- DST, Govt. of India)



Department of Science & Technology
Govt. of India

Earth Science Technology Cell (ESTC)

Marine Biotechnological Studies

Ministry of Earth Sciences (MoES)



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

(DEEMED TO BE UNIVERSITY)

Accredited "A" Grade by NAAC 12B Status by UGC Approved by AICTE

Jeppiaar Nagar, Rajiv Gandhi Road, Chennai- 119



PATRONS

Dr. Mariazeena Johnson

Chancellor

Dr. Marie Johnson

President

Ms. Maria Bernadette Tamilarasi Johnson

Vice-President

Dr. T. Sasipraba

Vice Chancellor

ORGANIZING SECRETARY

Dr. B. Sheela Rani

Director – Research

CONVENER

Dr. S. Gayathri –TBI



Dr. Renuka Ramakrishnan

Consultant Dermatologist & Cosmetologist
Social Reformer, Chennai



Ms. Viji Swaminathan

Director & CEO Founder of Woodpecker Furniture
Exxelo Training & Development Solutions Pvt Ltd, Chennai



Dr. M. Menaka

Asst. Prof, Dept. of Clinical Nutrition and Dietetics,
Ethiraj College for Women, Chennai



Ms. Shri Vishalini Rajaram

CEO, Build Geeks (Incubatee, Sathyabama-TBI), Chennai



Dr. Jayshree Ramkumar

Scientific Officer (G), Analytical chemistry Division,
Bhabha Atomic Research Centre, Mumbai - 85

Celebration of International Women's Day -2021



Inaugural Session

Day 1 Schedule 08.03.2021 (11.00am – 12.00 noon)		
Inauguration 11.00-11.15 am	Welcome Note	Dr. B. Sheela Rani Director (Research) Sathyabama Institute of Science and Technology
	Presidential Address	Dr. T. Sasiprabha Vice-Chancellor Sathyabama Institute of Science and Technology
	Programme Highlights	Dr. S. Gayathri Technology Business Incubator Sathyabama Institute of Science and Technology
Talk by the Guest 11.20- 12.00	Introduction to Guest of Honor	Ms. Jyotsna Centre for Ocean Research Sathyabama Institute of Science and Technology

Speakers

09/03/2021 4.00-5.00 pm	Dr. Renuka Ramakrishnan, MBBS, D.L.FRSB(London) Consultant Dermatologist & Cosmetologist Social Reformer, Chennai
10/03/2021 3.00-4.00pm	Ms. Viji Swaminathan Director & CEO (Founder of Woodpecker Furniture) Exxelo Training & Development Solutions Pvt Ltd, Chennai
11/03/2021 3.00-4.00pm	Dr. M. Menaka Asst. Prof, Dept. of Clinical Nutrition and Dietetics, Ethiraj College for Women, Chennai
12/03/2021 3.00-4.00pm	Ms. Shri Vishalini Rajaram CEO, Build Geeks (Sathyabama-TBI Incubatee), Chennai
13/03/2021 3.00-4.00pm	Dr. Jayashree Ramkumar Scientific Officer (G), Analytical chemistry Division, Bhabha Atomic Research Centre, Mumbai - 85

E certificates will be provided to the registered participants





Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)

Accredited "A" Grade by NAAC | 12 B Status by UGC | Approved by AICTE
Website: Sathyabama.ac.in



INNOVATIVE PROTOCOLS USING GAS CHROMATOGRAPHY AND MASS SPECTROMETRY (GC-MS)



Organized by :
Col. Dr. Jeppiaar Research Park,
Centre for Ocean Research
Earth Science & Technology Cell (MoES - ESTC)
IPR Cell - Sathyabama TBI

Date : 18th - 19th March 2021. Time : 10am - 3pm (IST)



Highlights:

- * Course covers the practical aspects of Gas Chromatography, Sample Preparation, Method development, Qualitative analysis and Spectral interpretation of GC-MS.
- * Beneficial for the people who are willing to enter the industries which relates to chemicals, pharmaceuticals, food, and many others.
- * IPR protection for Novel compounds identified using Natural products - An exclusive session on IPR.

Registration Fee:

For Students/Scholars/Academicians : INR 1000

For Industrial Participants/Other Labs : INR 2000

Mode of Application:

Applications are invited from Students, Academicians, Research Scholars, Scientist and Industrial Delegates.

PATRONS :

Dr. Mariazeena Johnson, Chancellor

Dr. Marie Johnson, President

Ms. Maria Bernadette Tamilarasi Johnson, Vice President

Dr. T. Sasipraba, Vice Chancellor

ORGANIZING SECRETARY :

Dr. B. Sheela Rani, Director (Research)

PROGRAMME COORDINATOR:

Dr. D. Inbakandan, Head & Scientist E, COR

CONVENER :

Mr. C. Kumar, Scientist B, COR

CO-CONVENER:

Dr. L. Stanley Abraham, Scientist E, COR

Registration Link : <https://http://bit.ly/30PoNfW>

Last date for Registration : 17. 03. 2021

Further Details Contact:

Mr. C. Kumar, 8220232039

kumar_cor@sathyabama.ac.in

Certificate will be issued upon successful completion of the programme



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Report on Hands on Training Programme on Gas Chromatography & Mass Spectrometry (GC-MS)

Col.Dr.Jeppiaar Research Park, Sathyabama-Technology Business Incubator and Centre for Ocean Research in association with Ministry of Earth Sciences – Earth Science & Technology Cell MoES – ESTC) organized 2 days Innovative protocols using gas chromatography and mass spectrometry (GC-MS).

on 18-19, March 2021. Mr.C.Kumar, Scientist-B of Centre for Ocean Research, Sathyabama Institute of Science and Technology handled the session. The programme mainly focused on sample preparation, method development and result analysis of gas chromatography techniques. Also the programme covered IPR protection for novel compounds identified in natural products. Totally 21 participants were trained and developed their skill from this programme. Participants were interactive with the speaker and asked few doubts at the end of each session to improve their understanding of the session.



Technology Business Incubator
(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)

www.sathyabama.ac.in



**SATHYABAMA INSTITUTION INNOVATION COUNCIL
ORGANIZES
Workshop on**

**INTELLECTUAL PROPERTY RIGHTS AND
IP MANAGEMENT FOR START UP**

**In association with Technology Business Incubator
(Supported by NSTEDB-DST, Govt of India)**

Meeting ID: 944 9489 6228

Passcode: 756271

Date: 18th, 19th & 20th March, 2021

Time: 11:15 AM - 12:30 PM

Registration link:

<https://forms.gle/C78HtwTqMEQ2fRdK8>

E-Certificate will be provided

IIC CO-ORDINATOR

STAFF CO-ORDINATOR

Dr. R. Subhashini
Professor and Head, Department of IT

Ms J. S. Vimali
Ms B. Keerthi Samhitha



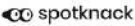
Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Zoom Meeting You are viewing Harshavardhan Maran's screen View Options

Recording... View

Mission 2021

What's Next

Don't Conclude Immediately – Certification or Online Course

- Find like minded friends
- Form a team
- Search for working professionals – Personal Connect / Support
- Learn from them and get referrals for opportunities or apply for opportunities

Harshavardhan Maran

Unmute Start Video Security Participants 167 Chat Share Screen Pause/Stop Recording Breakout Rooms Reactions More End

Ask me anything

11:58 PM 3/18/2021



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Zoom Meeting You are viewing Dr.A.Balaji Ganesh Professor's screen View Options

Recording...

VELAMMAL
UNIVERSITY
SATHYABAMA

What is patentable ?

- To be an invention

```
graph LR; A((New)) --> B((Involve Inventive Step)); B --> C((Capable of Industrial Application));
```

3/19/2021 WWW.PATENTSHOP.IN 13

Dr.A.Balaji Ganesh Professor

Unmute Start Video Security Participants 138 Chat Share Screen Pause/Stop Recording Breakout Rooms Reactions More

Activate Windows Go to Settings to activate Windows End

Ask me anything 11:43 PM 3/19/2021



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Technology



SATHYABAMA



INSTITUTE OF SCIENCE AND TECHNOLOGY

Accredited "A" Grade by NAAC | 12B Status by UGC | Approved by AICTE

www.sathyabama.ac.in



SATHYABAMA INSTITUTION INNOVATION COUNCIL

Cordially invites you to join the webinar on

"Business Model Canvas"

Date : 1-4-2021

Time : 4.00 pm – 5.00 pm



Meeting ID: 956 4436 8146 Pwd: 481316

PATRONS

Dr. Mariazeena Johnson

Chancellor

Dr. Marie Johnson

President

Ms. Maria Bernadette Johnson

Vice-President

Dr. T. Sasipraba

Vice Chancellor

Organized by

Dr.B.Sheela Rani, Director Research & IIC - Vice President

Conveners

Mr.S.Kishore Kumar

Manager, TBI

Dr.S.Gayathri

Assistant, TBI



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Report on Webinar on “Business Model Canvas”

Col.Dr. Jeppiaar Sathyabama Technology Business Incubator in association with Institute Innovation Council organized a Webinar on “Business Model Canvas” on 1st April 2021. Mr.Kishore Kumar, Manager,TBI was the speaker for the webinar.

Almost 70 students were participated in this program, The webinar focused on how to use Business model canvas to ensure ROI.

The screenshot shows a presentation slide titled "Building Block 1: Value Proposition". The slide contains a table with two columns: "Description" and "Questions to Ask".

Description	Questions to Ask
Value Proposition It seeks to solve customer problems and satisfy customer needs with a bundle of benefits.	- What value do we deliver to the customer? - Which one of our customer's problems are we helping to solve? - Which customer needs are we satisfying?

To the right of the table is a diagram of a puzzle piece with a gift box on it. The presentation interface includes a timer (0:07:42), a date/time stamp (4:37 PM), and navigation controls at the bottom. A sidebar on the right shows the next slide, "Building Block 2: Customer Segments", and a video feed of the speaker, Mr. Kishore Kumar.



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



00:01:13 4:31 PM

Food for Thought

1. What do these companies sell?
2. Who are their customers?
3. How do these companies sell their products?
4. What strategies do they deploy to ensure a return on investment?



Next slide

Four Main Areas of a Business



merchandise sells at low price points but has an expensive feel.

2. Apple: Initial purchase has a high margin, but consumables are sold at a low margin to entice initial purchase. Apple makes very low margins on iTunes but high margins on hardware.
3. HP: Consumer purchases a low-margin item like a razor handle or inkjet printer. Sale of necessary consumables such as replacement blades or ink cartridges.

Slide 2 of 17



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Technology



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

Accredited "A" Grade by NAAC | 12B Status by UGC | Approved by AICTE

www.sathyabama.ac.in



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



SATTRA.

SIMPLIFYING NUMBERS. AMPLIFYING BUSINESSES.

“How to plan for Start-up and legal & Ethical Steps”

Date : 17-4-2021

Time : 4.00 pm – 5.00 pm



Meeting ID: 810 8269 2180 Pwd: 813136

PATRONS

Dr. Mariazeena Johnson

Chancellor

Dr. Marie Johnson

President

Ms. Maria Bernadette Tamilarasi Johnson

Vice-President

Dr. T. Sasipraba

Vice Chancellor

Organizing Secretary

Dr.B.Sheela Rani

Director Research

Convener

Mr.S.Kishore Kumar

Manager, TBI



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Report on Webinar on “How to plan for Startup – Legal and Ethical Steps”

Col.Dr. Jeppiaar Sathyabama Technology Business Incubator organized a webinar on “How to plan for Startup – Legal and Ethical Steps” in association with SAATRA Consultancies on 17th April 2021 for the student startup team won the TBI startup grant.

Ms.Joshita, Mr. Karthick and Ms. Samyukatha from SAATRA Consultancy were the speakers for the webinar.

Legal aspects of company registration were covered in the webinar. Later 1-1 mentoring session took place for the startup teams.



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)
Accredited "A" Grade by NAAC 12B Status by UCC
Approved by AICTE
Jeppiaar Nagar, Rajiv Gandhi Road, Chennai- 119



PATRONS
Dr. Mariazeena Johnson, Chancellor
Dr. Marie Johnson, President
Ms. Maria Bernadette Tamilarasi Johnson, Vice-President
Dr. T. Sasipraba, Vice Chancellor

ORGANIZING SECRETARY
Dr. B. Sheela Rani, Director – Research

CONVENER
Mr. S. Kishore Kumar, Manager- TBI



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)

In association with



INSTITUTION'S INNOVATION COUNCIL
(Ministry of HRD Initiative)

celebrating

Small businesses
taking big ideas
to market

April 26 2021
11.00 – 12.00 noon



**WORLD
IP
DAY**
2021



SPEAKER

Saurabh Trivedi
Co-Founder & Director
Boudhik Ventures Pvt Ltd

Register Free : <https://tinyurl.com/tfjbt8u2>





Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Report on Celebration of World IP Day 2021”

Col.Dr. Jeppiaar Sathyabama Technology Business Incubator in association with Institution Innovation Council celebrated the World IP Day 2021 on the theme “Small Businesses taking big ideas to market” on 26th April 2021 11.00 – 12.00 noon

Dr. Seshadri, Advisor TBI welcomed the gathering and briefed about the importance of Intellectual Property Rights.

Mr. Saurabh Trivedi, Co-Founder and Director of Boudhik Ventures Pvt Ltd is the guest speaker of the day. He stressed the importance of IP and how small businesses can scale their ideas in to market using IP. How faculties commercialize their IP is also touched upon during the session.





Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Zoom Meeting

Centre for Re... Sundaram Se... Dr. INBAKANI... Pandiya Rajan... 38120037 | Kam...

Turn on Original Sound Recording...

Saurabh Trivedi

Participants (59)

Find a participant

- Centre for Resea... (Host, me)
- ST Saurabh Trivedi (Co-host)
- 3R 3810055 Rahul Raj
- 3- 38120003 - Abhishek Singh
- 3M 38120005-Abirami M
- 3R 38120006-Abirami R
- 3/ 38120007 / AHILA R R
- 3C 38120011-Archana C
- 3B 38120016 Bakya B
- 3J 38120022-Catherine Jenifer. R
- S 38120025- GnanaSourthariya
- 38120026-GNANAMANI.CT
- 38120034-JOHN WILFRED DAVL...

Invite Mute All ...

Chat



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)
Accredited "A" Grade by NAAC 12B Status by UGC
Approved by AICTE
Jeppiaar Nagar, Rajiv Gandhi Road, Chennai- 119

PATRONS

Dr. Mariazeena Johnson
Chancellor

Dr. Marie Johnson
President

Ms. Maria Bernadette Tamilarasi Johnson
Vice-President

Dr. T. Sasipraba
Vice Chancellor

ORGANIZING SECRETARY
Dr. B. Sheela Rani
Director – Research

CONVENER
Dr. S. Gayathri – Sathyabama TBI
Ph: 7299093926
Mr. Kishore Kumar- Sathyabama TBI
Ph: 9884163903

**TECHNOLOGY BUSINESS
INCUBATOR**
(Supported by NSTEDB- DST, Govt. of India)

In association
with



NATIONAL RESEARCH DEVELOPMENT CORPORATION
नेशनल रिसर्च डिवेलपमेंट कारपोरेशन
(An Enterprise of DSIR)
Ministry of Science and Technology, Govt. Of India
Facilitating Technology Transfer Since 1953

Organizes

IPR & TECHNOLOGICAL INNOVATION TALK SERIES



Time: 05.00 pm -06.00 pm

Reg: <https://tinyurl.com/4vtvssep>

Industries: Rs.500/-; Faculties & Scholars: Rs. 300/-
Students : Rs. 100/-



Dr B K Sahu,
Regional Manager &
Officer In-charge,
NRDC, IPFC and TISC,
GOVT OF INDIA



Mr T V Madhusudan,
Former Dy Controller of Patent,
Patent Office Chennai



N G Lakshminarayan
Chief-Business Development
NRDC



Ms. P. Ilanangai
IPR Consultant



Dr. L. Stanley Abraham
Sathyabama Institute of
Science and Technology

IPR & TECHNOLOGICAL INNOVATION TALK SERIES

08.05.2021	Innovation and IP Strategies	Dr. L. Stanley Abraham Scientist E, Centre for Ocean Research, Sathyabama Institute of Science and Technology
15.05.2021	Overview of IPR Spectrum	Dr B K Sahu, Regional Manager and Officer In-charge, NRDC, IPFC & TISC, GOVT OF INDIA, INNOVATION VALLEY, Vishakhapatnam
22.05.2021	Strategic IP Facilitation & Management	Dr B K Sahu, Regional Manager and Officer In-charge, NRDC, IPFC and TISC, GOVT OF INDIA, INNOVATION VALLEY, Vishakhapatnam
29.05.2021	Invention Due Diligence for Patentability & Patent Drafting	Ms. P. Ilanangai IPR Consultant
05.06.2021	Patent Systems in India: From Filing to Granting of Patent	Mr T V Madhusudan, Former Dy Controller of Patent, Patent Office Chennai
12.06.2021	Technology Transfer, Licensing, & Commercialization	N G Lakshminarayan Chief-Business Development National Research Development Corporation [An Enterprise of DSIR, Min. of Science & Technology, Govt. of India], New Delhi 110048



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Report on Six weeks IPR & Technological Innovation Talk Series

Col.Dr. Jeppiaar Sathyabama Technology Business Incubator in association with Department of Mechanical and NRDC organized a Six weeks IPR & Technological Innovation Talk Series from 8th May – 12th June 2021.

The workshop series focused on how to convert a research project to patent, patent drafting, how to avail trademarks and copyrights and PCT application process. 42 participants were attended the program.

The screenshot shows a Zoom meeting interface. On the left, a presentation slide titled "Case Study: IIHR (ICAR) Experience" is displayed. The slide lists the following points:

- MOU signed in 2009; Concluded in 2016
- 5 IPRs filed
- 8 technologies assigned
- 8 technologies commercialized
- 42 licenses issued to clients, Pan India
- Rs.54 lakhs earned from technology fees (Lumpsum Premium)

On the right side of the Zoom window, a list of participants is visible, titled "Participants (28)". The list includes names and icons for each participant, such as Sathyabama TBI (Me), SIST.PHD1 (Host), Lakshminarayan, 38150060 Leonard Ignatius, 38150064-MALLAMPALLI RAJESH, 38150708- SANTHOSHINI, Baalamurugan Jayaraman, Dr.Girisha C, Dr.V. Ganesh Kumar CDR, Dr.V.K.Bupesh Raja, Fatima Tuz Zehra, KOLUSHIK SAHA, Krishna moorthy, and L Stanley Abraham. At the bottom of the participant list, there are buttons for "Invite" and "Unmute Me".



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)

Sathyabama Institute of Science and Technology



Recording Turn on Original Sound

Potassium Humate to Improve Soil Health and Enhance Productivity

- Has favorable effects on plant tissue, nutrient balance, fertilizer uptake, shoot and root growth, crop yield and quality for crops
- Increases soil N-utilization efficiency and also enhances the uptake of K, Ca, Mg, P and Trace elements
- Conditions and improves the water holding capacity of soil
- Stimulates seed germination and viability, and root respiration, formation and growth
- Improves drainage and increases aeration of the soil
- Establishes a desirable environment for development of rhizosphere microbes
- Crop yields have increased from 10 to 30 per cent
- Proven manufacturing technology at commercial scales
- Technology Patent Protected in India
- Licensed to Seven Firms in India
- Making remarkable impact on Indian Agricultural Production
- Product launched by Prof.M.S.Swaminathan in Chennai



Lakshminarayan

Zoom Meeting You are viewing Lakshminarayan's screen View Options

Recording Turn on Original Sound

Popular Technologies Commercialized by NRDC

- Infant Food
- Swaraj Tractors
- Indelible Ink for Election Purpose
- Cinema Arc Carbon
- Soft Ferrite
- Titanium Substrate
- Insoluble Anodes
- Beta Naphthol
- Artificial Heart Valve
- Mini Cement Plant
- Phosphamidon
- Disposable Blood Bag System
- Spirulina Algae
- Water Filter Candles
- Silver Impregnated Graphite (SiG) Contacts
- High Draught Continuous Kén
- Permanent Marking Ink
- Monocrotophos
- Glucose Bio-Sensor
- Invert Sugar
- Vijetha (Silkworm bed disinfectant)
- Glycol Based Antifreeze Coolant
- Rice Husk Particle Board
- Zeolite-A Powder (Detergent Grade)
- Liquid Biofertiliser
- Thrombinase
- Gene Delivery System
- Mosquito Larvicide
- formulation of Bacillus thuringiensis israelensis (BTI)
- Superabsorbent Hydrogel
- Extraction of Azadirachtin and its formulation
- PMD Vaccine
- Vaccine against peste des petits ruminants (PPR)
- Potassium Humate from lignite
- Crop Specific Foliar Micronutrient Spray Formulations



Lakshminarayan

Participants (30)

Find a participant

- Sathyaba... (Vic) Unmute More
- SIST.PHD1 (Host)
- Lakshminarayan
- 38150060 Leonard Ignatius
- 38150064-MALLAMPALLU RAJESH
- 38150094 - Rudhrakshula Hema...
- 38150708- SANTHOSH.M
- Ajay varma Dandu
- Baalamurugan Jayaraman
- Dr.Ginsha C
- Dr.V Ganesh Kumar COR
- Dr.V.K.Bupesh Raja
- Fatima Tuz Zehra
- IMAM BASHAK

Unmute Start Video Participants Chat Share Screen Record Reactions Leave



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



technology



SATHYABAMA



INSTITUTE OF SCIENCE AND TECHNOLOGY

Accredited "A" Grade by NAAC | 12B Status by UGC | Approved by AICTE

Chennai – 600 119, Tamil Nadu, India

www.sathyabama.ac.in



TECHNOLOGY BUSINESS INCUBATOR

(supported by NSTEDB- DST, Govt of India)

&

SATHYABAMA INSTITUTION INNOVATION COUNCIL

Cordially invites you to join the webinar on

**“Prototype Validation –
Converting Prototype
into a Startup”**



Dr. S. Seshadri
Advisor, TBI



Date : 28-5-2021

Time : 4.00 pm – 5.00 pm

Meeting ID: 845 3475 7583

Pwd: 706498



PATRONS

Dr. Mariazeena Johnson

Chancellor

Dr. Marie Johnson

President

Ms. Maria Bernadette Tamarasri Johnson

Vice –President

Dr. T. Sasipraba

Vice Chancellor

Organized by

Dr.B.Sheela Rani, Director Research & IIC - Vice President

Conveners

Mr.S.Kishore Kumar & Dr.Gayathri



Technology Business Incubator

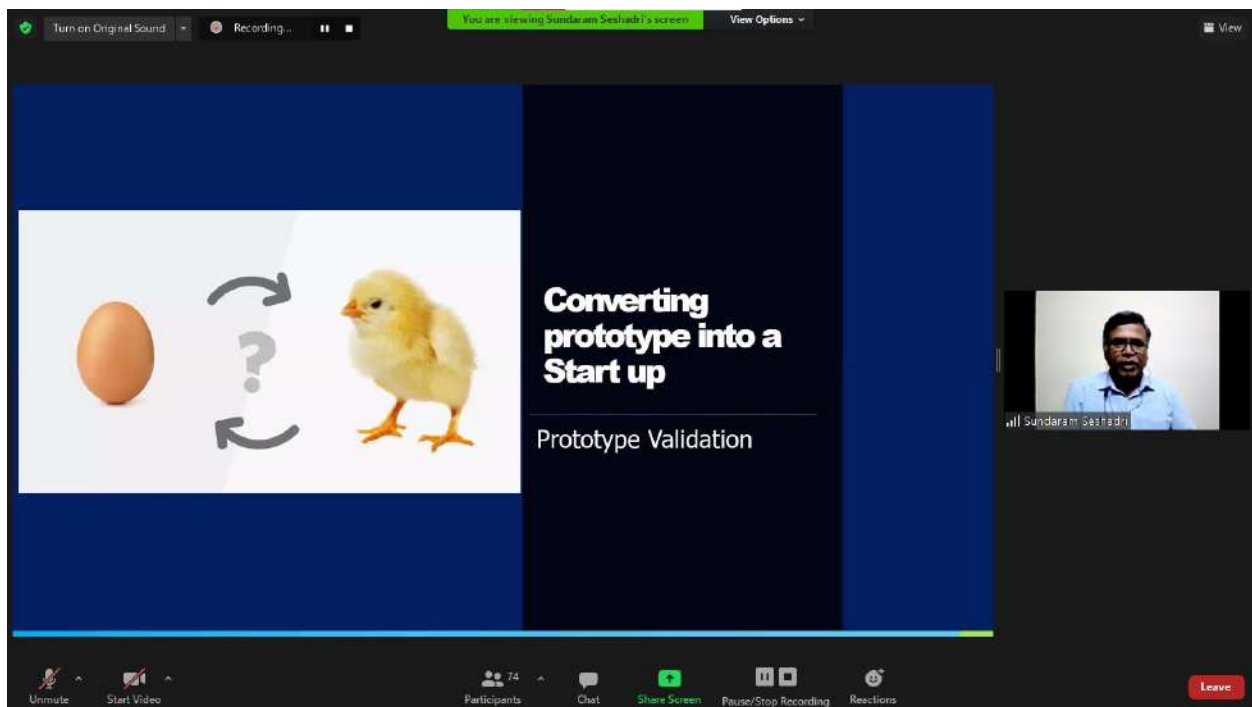
(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Report on Webinar on “Prototype Validation – Converting Prototype into a Startup”

Col.Dr. Jeppiaar Sathyabama Technology Business Incubator in association with Institute Innovation Council organized a Webinar on “Prototype Validation – Converting Prototype into a Startup” on 28th May 2021. Dr. S. Seshadri, Advisor, TBI was the speaker for the webinar.

Almost 94 students were participated in this program, The webinar focused on how to validate the prototype and effective ways to convert the prototype into a startup.





Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Zoom Meeting

Turn on Original Sound Recording...

defining problem statements

Who does the problem affect?	What are the boundaries to the problem? What impact does it have on people?	When does the problem occur? When does it need to be solved?	Where does the problem occur?	Why is it important we solve the problem?	What will tell us if we've solved the problem?
WHO	WHAT	WHEN	WHERE	WHY	HOW

NAME OR LOGO 4

Participants (92)

Find a participant

- Kishore | Sathyabama ... (Me)
- Sundaram Seshadri (Host)
- 40410119_Pooja U
- (39740147) Mohana Shree JA
- 38740112 B.keerthana
- 38740162 Pavithra V
- 38740186 reshma.B
- 38740243-Sumitra Thapa
- 38740254 SWETHA VL
- 39740019 M.DINESH
- 39740021 jkalaivani
- 39740023_G.karthickayan
- 39740027 j. Pooja
- 39740028 Preethi. E

Invite Unmute Me



Technology Business Incubator

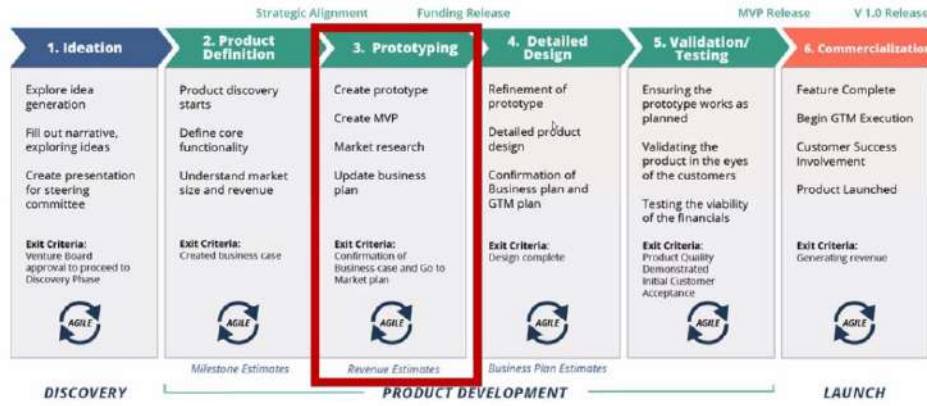
(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Zoom Meeting

Dr.S.Kishore Sathyabama IIC Kishore | Sathya... 39740040 Aaish...

Product Development Process In 6 Steps



Participants (76)

Find a participant

- Dr.S.Kishore (Me)
- Sundaram Seshadri (Host)
- Kesav Prasad
- (39740147) Mohana Shree A
- 38740112 B.keerthana

Invite Unmute Me

Chat

in WhatsApp sir

is it k the start

From Kishore | Sath... to Me: (Direct Message)

sure sir

Who can see your messages? Recording On

To: Kishore | Sathya... (Direct Message)

Type message here...



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

Accredited "A" Grade by NAAC | 12B Status by UGC | Approved by AICTE

Chennai – 600 119, Tamil Nadu, India

www.sathyabama.ac.in




Fireside Chat with
Ms. Priyanaka Madnani
Founder & CEO, Easy to Pitch



When

May 29, 2021
4:00 PM – 5:00 PM



Where

Virtual (Bevy)



Agenda

- Fire side Chat
- Q & A

PATRONS

Dr. MARIAZEENA JOHNSON, Chancellor

Dr. MARIE JOHNSON, President

Ms. Maria Bernadette Tamilarasi Johnson, Vice President

Dr.T.SASIPRABA, Vice Chancellor

CONVENER

Mr. S. Kishore Kumar
Manager, TBI

ORGANIZING SECRETARY

Dr. B. SHEELA RANI
Director (Research)



Tickets

<https://www.startupgrind.com/e/mms6xp/>

startupgrind

SATHYABAMA INSTITUTE OF SCIENCE & TECHNOLOGY

Presented with



Google for Startups

Easy to Pitch
A ONE STOP
pitching solution



Technology Business Incubator

(Supported by NSTEDB-DST, Govt of India)
Sathyabama Institute of Science and Technology



Report on Fire Side Chat with Priyanka Madanani

Startup Grind Sathyabama institute of science & technology chapter in association with Sathyabama Technology Business Incubator organized a fire side chat titled “Fire Side Chat with Priyanka Madanani” on 29th May 2021. Ms. Priyanka Madanani, Founder & CEO of **Easy to Pitch** was the speaker of this event.

The Fire side chat focused on the aspects of entrepreneurship, the key ingredients for a business startup and how to develop a mind-set to take up entrepreneurship as a challenging career instead of only trying to get jobs in government sectors and private sectors.

The industry is growing and changing at a pace that's faster than ever before, with opportunities for innovative thinkers. The Event focus on how to raise funds, what exactly needs to be there in the pitch deck, how to check whether the idea is venture backable etc .