



**Avinashilingam Institute for Home Science and Higher Education for Women**  
(Deemed to be University Estd. u/s 3 of UGC Act 1956, Category 'A' by MHRD  
Re-accredited with 'A++' Grade by NAAC. CGPA 3.65/4, Category I by UGC  
Coimbatore - 641 043, Tamil Nadu, India

## **Bharat Ratna Prof. CNR Rao Research Centre**

**Report of the Webinar on**

### **“Advancements of Atomic Force Microscope (AFM)”**

**(PG students, Researchers of Science and Engineering disciplines  
of any institution)**

**Date: 23.09.2023 (Saturday)**

**Time: 10.00 am to 12.00 pm**

**Venue: Prof. CNR Rao Research Centre**

## Report on Webinar on AFM

A webinar on "Advancements of Atomic Force Microscope (AFM)" was organized by Dr. P. Lalitha (Coordinator), Dr. P. Arulpriya (Assistant Coordinator) and Ms. S. Suba Sree (Lab Technician) of Bharat Ratna Prof. CNR Rao Research Centre and Master of Ceremony was delivered by Ms. A. Pon Nivetha (Research Scholar, Chemistry). The webinar was held on 23rd September 2023 from 10.00 am - 12.00 pm at Prof. CNR Rao Research Centre of our institution for Researchers of Science and Engineering disciplines of inside and outside institution via online mode.

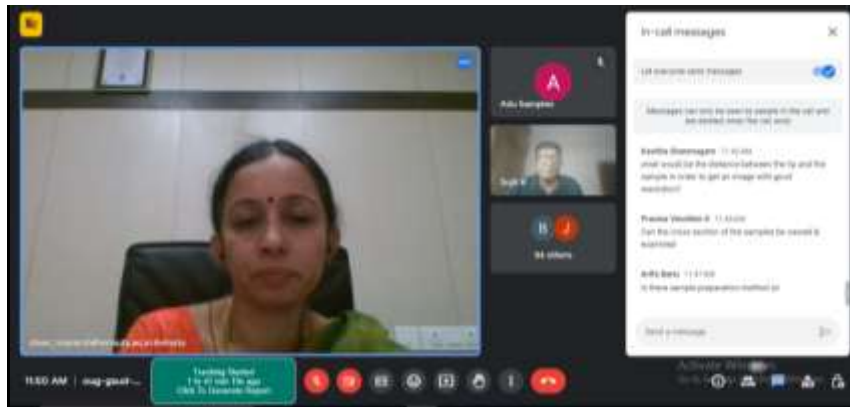
The session began with a prayer song and it is followed by welcome address and speaker introduction delivered by **Dr. P. Arulpriya**, Asst. Coordinator, Prof CNR Rao RC and introductory talk was delivered by **Dr. P. Lalitha**, Director, Research and Development Cell i/c. The facilities available at Bharat Ratna Prof. CNR Rao Research Centre and the various applications of AFM and its significance usage were highlighted in the talk.

The webinar on "Advancements of Atomic Force Microscope (AFM)" was handled by **Dr. Sujit Dora**, **Application Scientist, inkarp Instruments Pvt. Ltd., Switzerland**, The session focused on the journey of Scanning tunneling microscope to AFM, theory about force, beam deflection, two modes of AFM, and widest range, competing technologies, nano to micro level AFM-material contrast, topography, EFM, C-AFM, indentation, lithography, Flex-FPM, printing, and picking up target samples are highlighted and discussed.

The conclusion of the workshop was with the question and answer session. How accurate will be results obtained from AFM, Error Percentage, why images are always yellow, why not other colors not yet used, how often calibration required, is it possible to find a particle size, does it measures film thickness, distance between the tip and sample, cross section of the sample, sample preparation method, types of force, scanning duration, resolution are clearly explained by the speaker **Dr. Sujit Dora**.

Researchers belonging to Chemistry, Zoology, Biochemistry, Food Science and Nutrition from inside and outsiders from Kongunadu Arts and Science College, Vellore Institute of Technology, Hajee Karutha Rowther Howdia College (Autonomous), Pope's College, Autonomous, Dr.Kalaignar Government Arts Collage, PSG College of Arts and Science, National Institute of Food Technology Entrepreneurship and Management, Navarasam Arts and Science College for Women, Queen Mary's College, A.P.C.Mahalaxmi college for Women, Sri Ramachanadra, VLB Janakki Ammal College of Arts and Science, PSGR Krishnamal College for Women, College of Arts and Science, Muthayammal College of Arts and Science, SMS College of Arts and Science, Park's College, Chikkanna Govt Arts College The M. S. University of Baroda, Vadodara, V. O. Chidambaram College, Lrg Government Arts College for Women, Shrimati Indira Gandhi College, Sri Ramachandra Medical University, Sarah Tucker college, Bharathiar

University, Sri Ramachandra Institute of Higher Education and Research, E. M. E. A College of Arts and Science, and Panjab University **140 in numbers were the beneficiaries** of the workshop.



**Dr. P. Lalitha, Director (i/c), Research and Development, Coordinator Bharat Ratna Prof. C.N.R Rao Research Centre delivered introductory talk**



**Dr. Sujit Dora, Application Scientist, inkarp Instruments Pvt. Ltd., Switzerland, delivered the talk about “Advancements of Atomic Force Microscope (AFM)”**



**E-Certificate of participation (sample copy)**



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Coimbatore - 641 043, Tamil Nadu, India

## **Bharat Ratna Prof.CNR Rao Research Centre** **Webinar on**

**“Advancements of Atomic Force Microscope  
(AFM)”**

**On 23.09.2023 (Saturday)**  
**Time: 10.00 am to 11.30 am**

**Dr.P.Lalitha**

Director R&D i/c

Will deliver the introductory talk

**Resource Person**

**Dr. Sujit Dora**

Application Scientist,

inkarp Instruments Pvt. Ltd., Switzerland

**Free Registration**

**Eligibility - Research Scholars of all discipline**

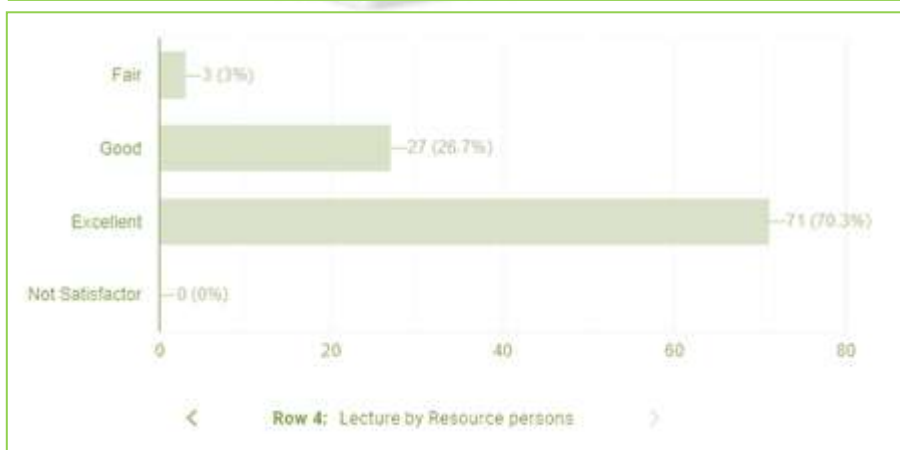
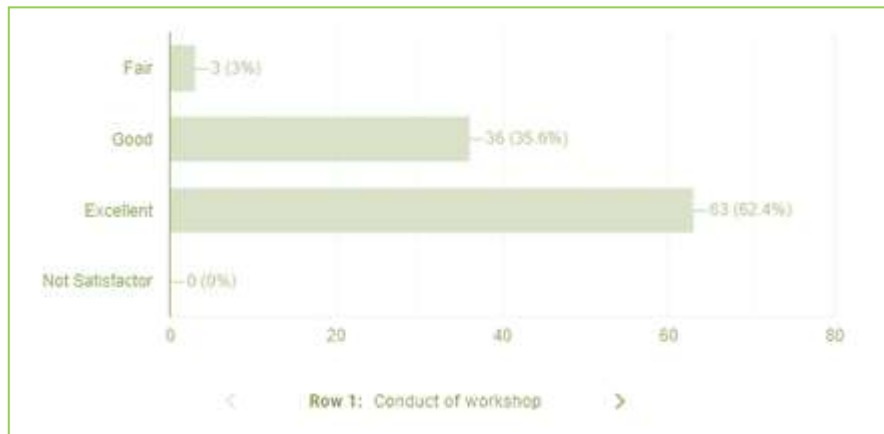
**Registration link: <https://tinyurl.com/278xem6f>**

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### **PROGRAMME**

10.00 am- 10.05 am	:	<b>Prayer</b>
10.05 am- 10.10 am	:	<b>Welcome</b> <b>Dr.P.Arulpriya</b> Asst.Coordinator, Prof CNR Rao Research Centre, Avinashilingam Institute for Home Science and Higher Education for Women
10.10 am- 10.15 am	:	<b>Dr.P.Lalitha</b> Professor of Chemistry, Director R & D i/c, Coordinator, Prof CNR Rao Research Centre, Avinashilingam Institute for Home Science and Higher Education for Women
10.15 am – 11.15 am	:	<b>Theory Session</b> <b>Dr. Sujit Dora</b> Application Scientist, inkarp Instruments Pvt. Ltd., Switzerland
11.00 am to 11.30 am	:	<b>Interaction/ Feedback Session &amp; Vote of Thanks</b>

## Feedback about the event



## Suggestion given by participants

Good
Nothing
Very informative session
Informative session
Good
Useful
Thank You
It's Well and Good and I am Satisfied
None
Nothing
Nice session, share the recording if possible thank you
No Suggestions. The webinar was very informative. Thank you for giving me an opportunity to participate in this useful webinar.
Looking forward to such more informative session for SEM and TEM.
Overall section was excellent
Very informative
We need more programs like this
Good session
None
Wonderful Session
Overall good session
Whether any E- certificate will be provided?
More informative
Awesome
Want one more workshop with u sir
If possible, kindly conduct seminar on interpretation of AFM results
Excellent
Very Good informative section
Nice
Informative session
Informative
Seminar was informative
Thank you
Very useful for me
Expecting more classes
Nothing
Thanks to the Coordinators, Conduct more no of Sessions in future, Very informative
Congratulations for the committee members for the successful completion of the webinar
Awaiting to attend a program on Applications of Nano materials in Forensic Science
Presenter's voice could have been clear
Very informative
IF WE GET PRESENTATION MATERIAL IT WILL BE MORE HELPFUL.
Very informative session
Excellent session

## Attendance Sheet of the Participants

### Google Meet Attendance Tracking Report

Meeting Name: oug-gsud-qye

Date: 23-Sep-2023

Attendance Tracking Started At : 10:02:47 AM  
Attendance Tracking Stopped At : 11:54:46 AM  
Total Number of people Attended : 143  
Total Meeting Duration : 1 hr 51 min 58s

S.No	Participant Name
1.	Sivasankari J
2.	Banumathir C
3.	Linniwilson
4.	Manasy Jayasurya
5.	Sasikala S
6.	Abarna ST
7.	Abi
8.	Abinayaroshini
9.	Aditi Negi
10.	Adu Samples
11.	Akhila C
12.	Ambilisph.D
13.	Amsaveni R
14.	Amulyha Bhaskar
15.	Angel Alaguu
16.	Apoorva T
17.	Archana R
18.	Arifabanu
19.	Arpanaparihar
20.	Aruna P Avinuty
21.	Brajalakshmi
22.	Banu Avinuty
23.	Bhuvaneshwari
24.	Bindu B
25.	Blessymol B
26.	Chhavamishra
27.	Dean_Research@Avinuty.Ac.Inavinuty
28.	Deepak
29.	Deepthi Sri R Avinuty
30.	Devi FSN
31.	Dhanyasruthi R
32.	Dhivya C
33.	Dinesh Babu Rathina sabapathy
34.	Divyabharathi
35.	Divya P
36.	Divyaam
37.	Dr. A. Muthuvinothini
38.	Dr.A.Vanmathimugasundari
39.	Dr.M.Jannathulfirdhouse



40.	Dr.N.Chandra Lekha
41.	Elsa Devassy
42.	Fathimayunus.M
43.	Francitafonseka
44.	Geethamala GV
45.	Gnanambal R
46.	Gobi R
47.	Govindaraj Thimmarayan
48.	Harinivashini R
49.	Haritha M.
50.	Hepsibavijay
51.	Indiramani N Avinuty
52.	J Jenil
53.	Jesti Cbnr
54.	Jilsheena PK
55.	Kaarunya K
56.	Kalaiarasi S
57.	Karthika G
58.	Karthikeyan S
59.	Karthikeyani R
60.	Kavinanc Y
61.	Kavithasa N
62.	Kavitha shanmugam
63.	Keerthanagirija
64.	Keerthana L
65.	Keerthana T
66.	Keziahgracelin J
67.	Kiruthika S
68.	Kowsalyakowsalya
69.	Krishnamoorthyganesan
70.	Krishnaveni T
71.	Kumuthavarshini K
72.	Mamsaveni
73.	Madhu Varshini
74.	Madhumitha P
75.	Maga
76.	Manju Mozhi
77.	Manojj
78.	Melophilejanu
79.	Mirthvicks.V
80.	Mittalgunja N
81.	Mohanasundari M
82.	Nagomi
83.	Nandini B
84.	Nanthini N
85.	Naveenkumar
86.	Nayana C
87.	Nisha R
88.	Nithya AN
89.	P.Adlin Helen
90.	Pavithrara
91.	Pinki Mahur



92.	Pon Nivetha A
93.	Ponnarasi Sudhandhiran
94.	Prakash N
95.	Pravinavinothini S
96.	Priyadharshinim S
97.	R & D Department
98.	R Anupriya
99.	Rajalakshmi R
100.	Rajesha
101.	Ramyayoganandham
102.	Ranjani S
103.	Reeba N
104.	Renukadevi D
105.	Revathi
106.	Revathiunni K
107.	Santhanambikam S
108.	Santhoshkumar V
109.	Saradhambal M
110.	Saravanankandasamy
111.	Saru Selva
112.	Shamkumar S
113.	Shamli T C
114.	Shantini M S
115.	Sharly C
116.	Sharonvanguri
117.	Shemona Mona
118.	Sindhu S
119.	Sobana Rethinavelu
120.	Sobiyar A
121.	Sreedevi R Krishnan
122.	Sri Rooshni
123.	Suba Sree
124.	Subashini
125.	Subhashinik Sripathi
126.	Subramani S
127.	Sujit K
128.	Sujitha M
129.	Supriyashanmugam
130.	Surya S
131.	Swathika RS
132.	Takl
133.	Thahsin Mariyam
134.	Thrisha K
135.	Vini Sh
136.	Vinoline Golda
137.	Vinothini A
138.	Vinothini A
139.	Vishnu Priya
140.	Vyshnavisavi
141.	Yasotha P

## Permission Letter

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**GUIDELINES/PROFORMA FOR ORGANISING CONFERENCES, WORKSHOPS, SEMINARS, WEBINARS OR OTHER EVENTS MARCH 2022 and onwards**

**Name of the applicant:** Dr.P.Lalitha, Department: Prof. CNR Rao Research Centre School: R & D

- Activity : **Webinar**
- Geographical Coverage : Institutional Level
- Name of the Event : **Advancements of Atomic Force Microscope**
- Date(s) : 23.09.2023 Total number of days: One
- Venue : Online
- Name & Designation of Convenor/Organizing Secretary and Team  
Convenor : Dr. P. Lalitha, Director R&D i.e, Coordinator, Prof. CNR Rao RC  
Organizing Secretary : Dr. P. Arulpriya, Asst. Coordinator, Prof. CNR Rao RC  
Organizing Member : Ms. S. Suba Sree, Lab Technician, Prof. CNR Rao RC
- Financial Assistance Required : **No** ✓
- Details of assistance sought from other sources : **Nil**
- Details of collaborating institution, if any : **Nil**
- Detailed Proposal of the Activity
  - Aims/Objectives :  
To learn about the advanced material characterization in Atomic Force Microscope (AFM) for the students and research scholars of Science and Engineering division
  - Target audience/participants with expected number: 30
  - Details of Sessions:  
The Session covered the advancement of AFM Instrument, Material Characterization and its effective usage in the field of science and Engineering
  - Please mention themes/topics to be covered under each Technical Session and names of Resource Persons:  
**Demonstration : Dr. Sujit Dora, Application Scientist, Inkarp Instruments PVT LTD, Bangalore**
  - Expected outcome: Understand the concept and material characterization involved in AFM
- In case of an International Conference and collaboration, kindly give resources for International travel and a letter from the concerned head of the collaborating body
- Registration fee: NIL

*P. Arulpriya*  
12.09.2023  
Asst Coordinator

*P. Lalitha*  
12/9/2023  
Coordinator

*P. Lalitha*  
12/9/2023  
Director R&D

*Arulpriya*  
12/9/23  
Finance Officer

*P. Lalitha*  
12/9/23  
Registrar

*Arulpriya*  
12/9/23  
Vice Chancellor

**Date: 12.09.2023**  
**Place: Coimbatore**

Recd  
12/9/23  
5:10pm  
vld/288  
12/9/23

## Acknowledgement

The organizers thank the authorities of the Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore for the necessary approvals and opportunity to conduct this event.

### Signature of the Coordinator

  
**Dr. P. Lalitha**  
Professor of Chemistry & Director M&D  
& Co-ordinator  
Bharat Ratna Prof. CNRRao Research Centre  
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Coimbatore - 641 043 E-mail: lalitha\_chem@avinash.ac.in  
Dean\_research@avinash.ac.in

