(Approved by AICTE New Delhi, DTE Mumbai & Affliated to Savitribai Phule Pune University)

Accredited with B++ Grade by NAAC



Dr. T.K. Nagaraj ME. (Civil Engg), Ph.D (Civil Engg) LMISTE, LMIGS, LMIRC LMISRMTT, LMIE Principal



B.E. (Elec.) PGDM, Ph.D Founder Secretary

#### Report on

## One Week Online Guest Lecture Series "SHODHSARITA"



#### On

"Recent Trends in Mobile Computing with Real Time Approach" (Under the aegis of "IETE Pune Centre" and "IEEE Communication Society Pune Chair")

Department of Electronics and Telecommunication Engineering Bhivarabai Sawant Institute of Technology & Research Wagholi, Pune

| Name of The         | One Week Online Guest Lecture Series "SHODHSARITA" On                     |
|---------------------|---|
| Programme           | "Recent Trends in Mobile Computing with Real Time Approach"               |
|                     | Under the aegis of "IETE Pune Centre" and "IEEE Communication             |
|                     | Society Pune Chair"   |
| Date                | 27 <sup>th</sup> March 2023 to 1 <sup>st</sup> April 2023                 |
| Mode                | Online  |
| Organizer           | Department of Electronics and Telecommunication Engineering of Bhivarabai |
|                     | Sawant Institute of Technology & Research Wagholi, Pune                   |
| Programme           | Dr. Y. S. Angal, HOD (E&TC)   |
| Convenor            |   |
| Programme           | Asst. Prof. S. V. Malge (E&TC)  |
| Co-Ordinator        | Asst. Prof. P. V. Gawade (E&TC)   |
|                     | Asst. Prof J. Y. Suryawanshi (E&TC)                                       |
| <b>Participants</b> | 39 Participants   |

The One Week Online Guest Lecture Series "SHODHSARITA" aims to provide opportunities to students to enrich their skill and research in the field of Mobile Computing. The Programme also intends to develop the knowledge of students in the relevant field for inculcating learning values in students. The One Week Online Guest Lecture Series "SHODHSARITA" was attended by 39 students of Electronics and Telecommunication department.

#### **Objective:**

| Sr. No. | Objective  |
|---------|--|
| 1       | This Guest Lecture Series provides a platform to learn Wireless technologies and   |
|         | planning Ad-hoc Network.   |
| 2       | An ability to study the basics of wireless, cellular technology and the working of |
|         | Mobile IP, ad hoc network, features of mobile operating systems.                   |
| 3       | An ability to understand the use of M-Commerce application                         |

#### **Inaugural Session:**

| Inaugural Session |                 |
|-------------------|-----------------|
| Date              | 27th March 2023 |
| Time              | 1:45 PM         |

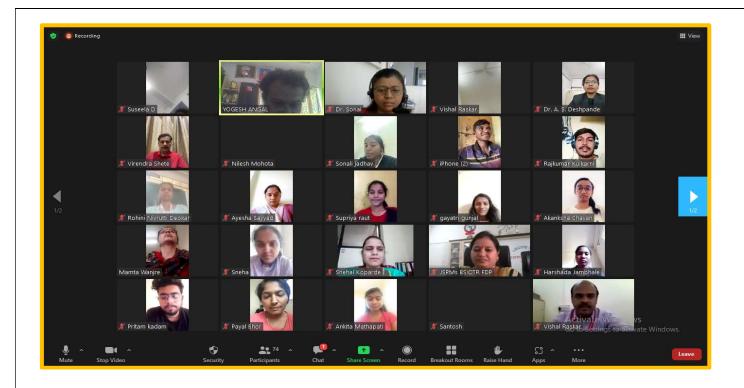
The esteemed personalities present on the inauguration of the Programme:

| Dr. V.V. Shete   | Chairman, IETE, Pune Centre             | Chief Guest |
|------------------|---|-------------|
| Dr. M. M. Jadhav | Chair, IEEE Communication Society, Pune | Chief Guest |
|                  | Chapter                                 |             |
| Dr. T.K. Nagaraj | Principal, BSIOTR                       | Host        |
| Dr. Y. S. Angal  | HOD(E&TC), BSIOTR                       | Host        |

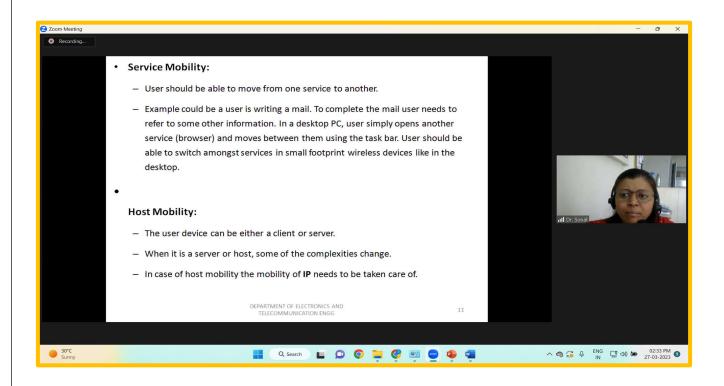
In welcome speech, Hon. Principal Dr. T. K. Nagaraj shared his views with the students' participants that if students want to develop themselves, then attending such Guest Lecture Series would enhance their skills of learning concepts practically. Sir further shared that it helps to improve the performance of students in mobile computing and highlighted the importance and objectives of organizing One Week Online Guest Lecture Series "SHODHSARITA". He briefed the participants about the subjects chosen for the Guest Lecture Series and highlighted the reasons and importance of the same. In the inaugural speech, Hon. Dr. V.V. Shete shared his views on student development. He further added that this Programme will provide special benefits to students. The inauguration Programme ended with vote of thanks by Mrs. Jayshree Suryawanshi.

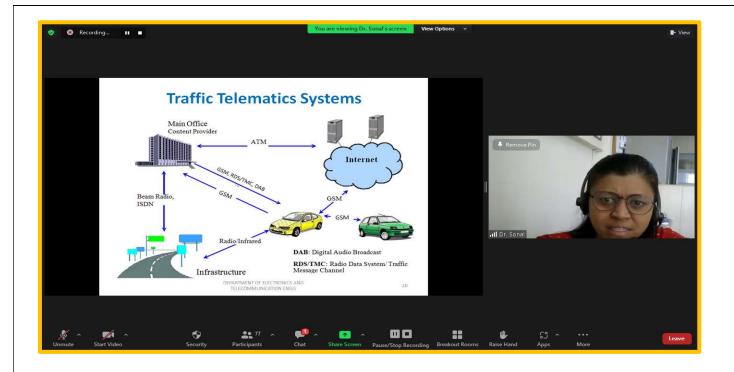


Inaugural Session of the Guest Lecture Series with Dr. V.V. Shete Chairman, IETE, Pune Centre and Dr. M. M. Jadhav Chair, IEEE Communication Society, Pune Chapter.



| Date                   | 27th March 2023 (Day One)                             |
|------------------------|---|
| Session                | One   |
| Topic                  | Basic of Mobile Computing                             |
| <b>Resource Person</b> | Dr S. K. Jagtap Professor and HOD(E&TC), SKNCOE, Pune |
| Time                   | 2:00 PM To 3:30 PM                                    |





Dr S. K. Jagtap Professor and HOD E&TC), SKNCOE, Pune has delivered an interactive lecture on "Basic of Mobile Computing". In this session participants were learned the Applications of Mobile Computing- Generations of Mobile Communication Technologies, Multiplexing: Spread spectrum, MAC Protocols: SDMA, TDMA, FDMA, and CDMA.

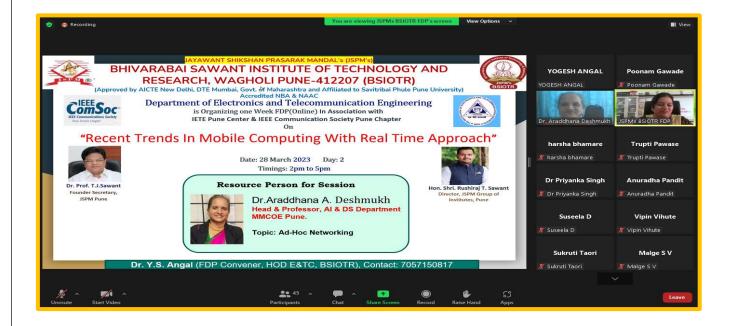
| Date            | 27th March 2023 (Day One)   |
|-----------------|---|
| Session         | Two   |
| Topic           | <b>Introduction to 5G &amp; Recent trends in Telecommunication Industries</b> |
| Resource Person | Dr. Anuradha S. Deshpande Professor, E&TC, JSPM's ICOER Wagholi,              |
|                 | Pune  |
| Time            | 3:30 PM To 5:00 PM  |

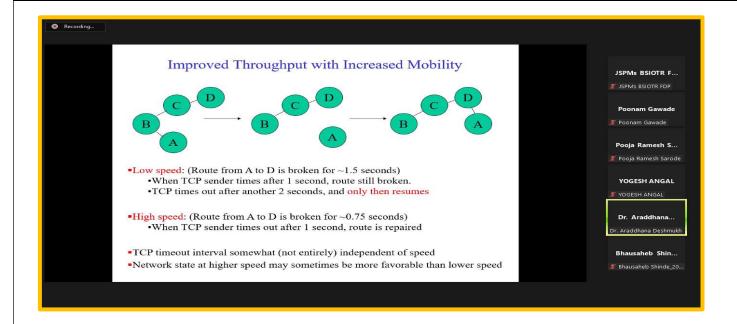




An informative lecture on "Introduction to 5G & Recent trends in Telecommunication Industries" was discussed by Dr. Anuradha S. Deshpande Professor, E&TC, JSPM's ICOER Wagholi, Pune. In this session participants were learned the Introduction of 5G, 5G –Architecture, Key Enabling Technologies for 5G and Recent trends in Telecommunication Industries.

| Date            | 28th March 2023 (Day Two)                                    |
|-----------------|--|
| Session         | One  |
| Topic           | Ad-Hoc Networking  |
| Resource Person | Dr. Araddhana A. Deshmukh Head& Associate Professor, AI & DS |
|                 | Department, MMCOE, Pune                                      |
| Time            | 2:00 PM To 5:00 PM   |

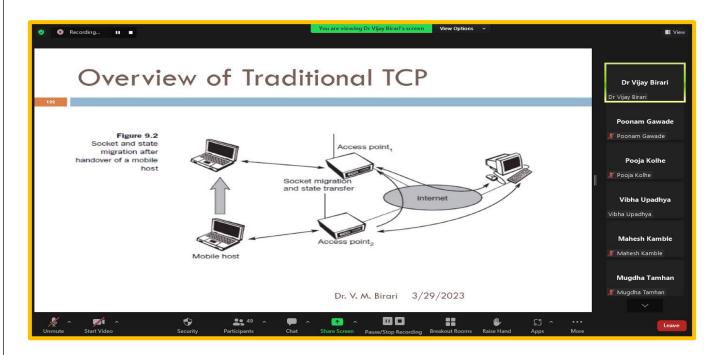




Dr. Araddhana A. Deshmukh Head& Associate Professor, AI & DS Department, MMCOE, Pune has delivered an informative lecture on "Ad-Hoc Networking". In this session participants were taught Mobile IP, DHCP, AdHoc, Proactive protocol-DSDV, Reactive Routing Protocols: DSR, AODV, Hybrid routing: ZRP, Multicast Routing: ODMRP, Vehicular Ad Hoc networks VANET, MANET Vs VANET: Security

| Date            | 29th March 2023 (Day Three)                               |
|-----------------|---|
| Session         | One   |
| Topic           | Mobile IP and Transport Layer                             |
| Resource Person | Dr. Vijay M. Birari Professor and HOD(E&TC) NDMVP KBTCOE, |
|                 | Nashik.   |
| Time            | 2:00 PM To 5:00 PM  |

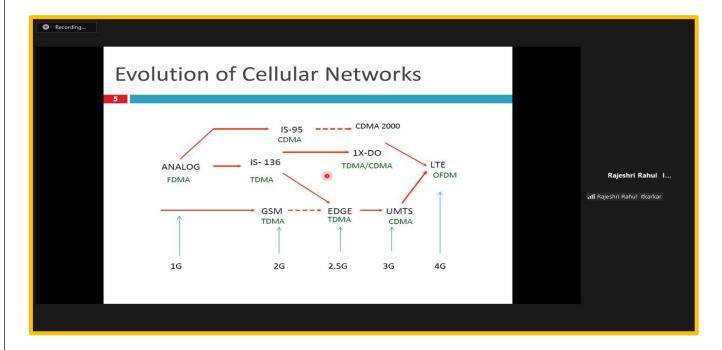




Dr. Vijay M. Birari Professor and HOD(E&TC) NDMVP KBTCOE, Nashik, has illuminated on "Mobile IP and Transport Layer". In this session participants were gained with the knowledge of the on Mobile IP: Need of mobile IP, IP packet delivery, Agent Discovery, Registration, Tunnelling and encapsulation, Route optimization, IP Handoff. Transport Layer: Overview of Traditional TCP and implications of mobility control. Improvement of TCP: Indirect TCP, Snoop TCP, Mobile TCP, Fast Retransmit/fast recovery, Time-out freezing, Selective retransmission, Transaction-oriented TCP.

| Date            | 30th March 2023 (Day Four)                      |
|-----------------|---|
| Session         | One   |
| Topic           | Mobile System                                   |
| Resource Person | Dr. R. R. Itkarkar Professor, AISSMS COE, Pune. |
| Time            | 11:00 AM To 1:00 PM                             |

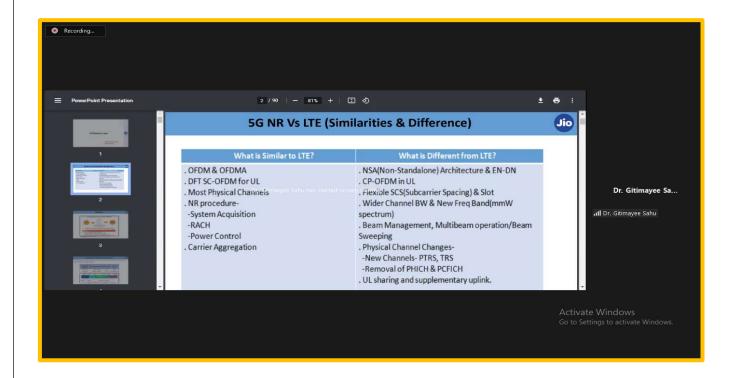




Dr. R. R. Itkarkar Professor, AISSMS COE, Pune has discussed on "Mobile System". In this session she gave insightful talk on Mobile Systems. Her presentation was both informative and engaging, and participants learned a lot from her expertise on the topic. Participants were gained with the knowledge of the on Introduction to Cellular Systems, GSM architecture, Protocols, Connection Establishment, Frequency Allocation, Routing, Mobility Management, Security, GPRS and UMTS: Architecture, Handover, Security. Introduction to 5G: Introduction, 5G network architecture, Applications, 5G enable technologies, Recent trends in Telecommunication Industries.

| Date            | 30th March 2023 (Day Four)                               |
|-----------------|--|
| Session         | Two  |
| Topic           | Fading Channels  |
| Resource Person | Dr. Gitimayee Sahu Sr.Manager, JIO Platforms Ltd, Mumbai |
| Time            | 2:00 PM To 5:00 PM                                       |

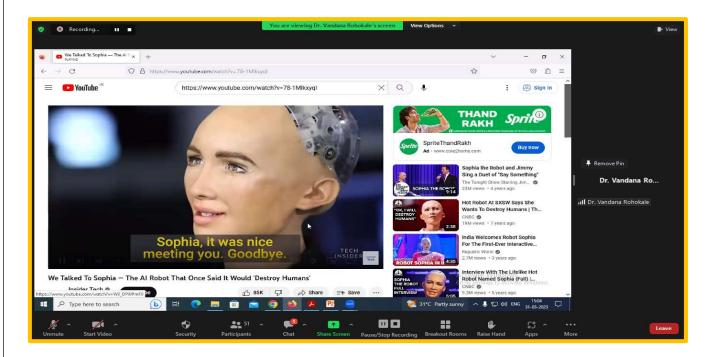




Dr. Gitimayee Sahu Sr.Manager, JIO Platforms Ltd, Mumbai has focused on "Fading Channels". In this session participants were familiar with Rayleigh Fading and Statistical Characterization, Properties of Rayleigh Distribution, BER in Fading, Narrowband vs Wideband Channels, Characterization of Multipath Fading Channels, Choice of Modulation, Coherent versus Differential Detection, BER in Fading, Ricean Fading.

| Date            | 31st March 2023 (Day Five)                                   |
|-----------------|--|
| Session         | One  |
| Topic           | Computational Intelligence in Mobile Computing               |
| Resource Person | Dr. Vandana M. Rohokale Prof & HOD(E&TC), SIT's, Narhe, Pune |
| Time            | 2:00 PM To 4:00 PM   |

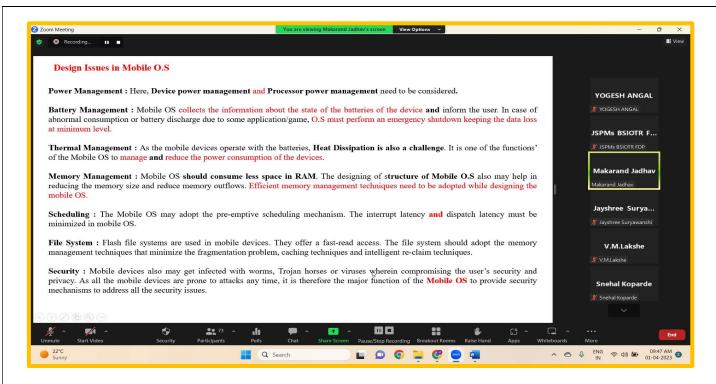




Dr. Vandana M. Rohokale Prof & HOD(E&TC), SIT's, Narhe, Pune has explained "Computational Intelligence in Mobile Computing". In this session participants realized the significance of Recent Trends in Mobile Computing, CI vs AI, principles Computational Intelligence, AI & ML, Deep learning, Uses of Computational Intelligence, Deep Learning Approach for Interference Mitigation in MIMO-FBMC/OQAM Systems.

| Date                   | 1st April 2023 (Day Six)                              |
|------------------------|---|
| Session                | One   |
| Topic                  | Operating System & Applications of Mobile Computing   |
| <b>Resource Person</b> | Dr. Makarand M Jadhav Prof & HOD(E&TC), NBN STC, Pune |
| Time                   | 9:00 AM To 11:00 AM                                   |





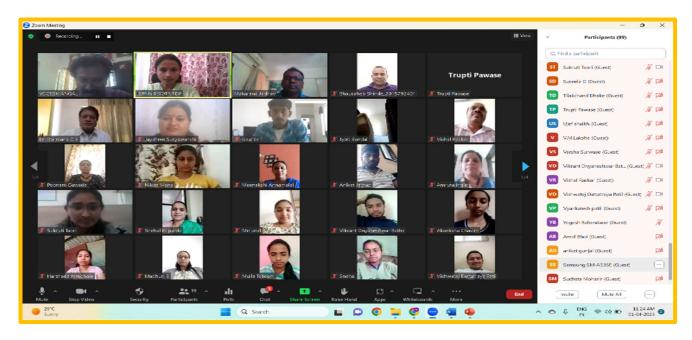
A discussion on "Operating System & Applications of Mobile Computing" was delivered by Dr. Makarand M Jadhav Prof & HOD(E&TC), NBN STC, Pune. In this session participants got the knowledge about Operating System: A Few Basic Concepts, Special Constraints and Requirements of Mobile OS, A Survey of Commercial Mobile Operating Systems, Windows Mobile, Applications: M-Commerce, Business to Consumer (B2C) Applications, Business to Business (B2B) Applications. Structure of M-Commerce, Pros and Cons of M-Commerce, Mobile Payment System, Mobile Payment Schemes, Desirable properties of a Mobile Payment system, Mobile Payment solutions, Process of Mobile Payment, Security Issues.

#### **Valedictory Session:**

| Valedictory Session |              |  |
|---------------------|--------------|--|
| Date                | 1 April 2023 |  |
| Time                | 11:00 AM     |  |

The esteemed personalities present on the Valedictory of the Programme:

| Dr. D. S. Bormane | Member, Governing Council, IETE, New Delhi      | Chief Guest |
|-------------------|---|-------------|
| Dr. M. M. Jadhav  | Chair, IEEE Communication Society, Pune Chapter | Chief Guest |
| Dr. T.K. Nagaraj  | Principal, BSIOTR                               | Host        |
| Dr. Y. S. Angal   | HOD(E&TC), BSIOTR                               | Host        |



Valedictory Session of the Guest Lecture Series with Dr. D. S. Bormane Member, Governing Council, IETE, New Delhi and Dr. M. M. Jadhav Chair, IEEE Communication Society, Pune Chapter.



All the personalities appreciated the department for organizing the One Week Online Guest Lecture Series "SHODHSARITA". The program was ended with vote of thanks by Mrs. Suchipriya Malge, Asst. Prof., Electronics & Telecommunication Dept., JSPM'S BSIOTR & Coordinator of the One Week Online Guest Lecture Series "SHODHSARITA". The One Week Online Guest Lecture Series "SHODHSARITA" received a lot of positive feedback from students. There were 39 enthusiastic participants in total, who took part in the 6-day online One Week Online Guest Lecture Series "SHODHSARITA". Each session was of Minimum 90 minutes & Maximum 180 minutes and included open questions, answer session. Zoom meeting was the platform used for each session links (Zoom Meeting

https://us02web.zoom.us/j/83443301126?pwd=c1V6eWdDUU9BcDVLMWVjZHlsYU5xUT09); feedback links were shared, MCQ Test was conducted at the end of One Week Online Guest Lecture Series "SHODHSARITA". The registered participants were engaged in a special WhatsApp group. The recordings are being uploaded on the Google Drive. (https://drive.google.com/drive/folders/1E0-QfZB-is5pjq51jJKe4m85nnD7FebA?usp=share\_link). 39 E-certificates were awarded to all registered participants by sharing Google Drive Link. The One Week Online Guest Lecture Series

"SHODHSARITA" was concluded on the tanks giving note to the Chief Guest, Management, Campus Director, Principal, Deans and all the Participants.

### **Sample Certificate:**



#### JAYAWANT SHIKSHAN PRASARAK MANDAL'S (JSPM'S)

# BHIVARABAI SAWANT INSTITUTE OF TECHNOLOGY AND RESEARCH, WAGHOLI PUNE-412207 (BSIOTR)



Approved by AICTE New Delhi, DTE Mumbai, Govt. of Maharashtra and Affiliated to Savitribai Phule Pune University, Accredited by NBA and NAAC

Department of Electronics and Telecommunication Engineering
Organized One Week Online Guest Lecture Series "SHODHSARITA"



"Recent Trends in Mobile Computing with Real Time Approach"



This is to certify that Ms. Nandani Hemant Gawhane from JSPM's Bhivrabai Sawant Institute Of Technology And Research, Pune has attended One Week Online Guest Lecture Series "SHODHSARITA" on "Recent Trends in Mobile Computing with Real Time Approach", Organized Under the aegis of "IETE Pune Centre" and "IEEE Communication Society Pune Chair" from 27/03/2023 to 01/04/2023.



Dr. M. M. Jadhav
IEEE Communication Society,
Pune Chair



Dr. T. K. Nagaraj Principal, BSIOTR

#### **Outcome:**

All the sessions were very much informative. The discussed areas are of great benefit for the participants as the topics match with the current working domain. Participants were enlightened with the most widely used advance technologies in this domain. This in turn will help in research activity.

| Sr.<br>No. | Outcome  | PO                 | PSO  |
|------------|--|--------------------|------|
| 1          | Understand concepts of Mobile Communication.               | PO1                | PSO1 |
| 2          | Analyze next generation Mobile<br>Communication System     | PO2                | PSO2 |
| 3          | Understand network layers of Mobile Communication          | PO1                | PSO1 |
| 4          | Understand IP and Transport layers of Mobile Communication | PO1                | PSO1 |
| 5          | Study of different mathematical models                     | PO2, PO3, PO4, PO5 | POS3 |
| 6          | Understand different mobile applications.                  | PO11, PO12         | PSO3 |

| Sr.<br>No. | Outcome  |
|------------|--|
| 110.       | TI 1 4 1 CM 1'1 C  |
| 1          | Understand concepts of Mobile Communication.               |
| 2          | Analyze next generation Mobile Communication System        |
| 3          | Understand network layers of Mobile Communication          |
| 4          | Understand IP and Transport layers of Mobile Communication |
| 5          | Study of different mathematical models                     |
| 6          | Understand different mobile applications.                  |

| Programme Co-Ordinator | Asst. Prof. S. V. Malge (E&TC) BSIOTR          | Leboing.          |
|------------------------|--|-------------------|
|                        | Asst. Prof. P. V. Gawade (E&TC)<br>BSIOTR      | Bilo:             |
|                        | Asst. Prof. J. Y. Suryawanshi (E&TC)<br>BSIOTR | Jage.             |
| Programme Convenor     | Dr. Y. S. Angal, HOD (E&TC), BSIOTR            | That Try's Avecal |
| Principal              | Dr. T. K. Nagaraj, Principal, BSIOTR           |                   |

PRINCIPAL
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Wagholi, Pune- 412707

