



Institute for Development and Research in Banking Technology

(Established by Reserve Bank of India)

Castle Hills, Road No. 1, Masab Tank, Hyderabad-57, India.

e-Programme on

EMERGING TECHNOLOGIES FOR BANKING

January 18 - 21, 2022

Introduction

We cannot live in today's world without technology. Banking is not an exception. With the continuous development of newer technologies, we, at every moment, also face the dilemma of whether we should embrace new technologies or continue with relatively older ones. Therefore, banking personnel must continuously update themselves about the developments in technology frontier. Moreover, they should envisage the upcoming technologies and prepare their banks to adopt the technologies for better needs.

Objectives

In this context, this e-Program on “Emerging Technologies for Banking” will cater to the appetite for technologies of the banking personnel. This program will address the following:

- Enlighten the required technologies to address particular problems in banking sector
- Highlight the importance of embracing certain relatively new technologies in banking sector
- Provide across-discipline training where a person working in a particular domain will get to know about other technological domains
- Provide updates of new technological trends across other industries

Contents

- Artificial Intelligence/Machine Learning Applications for Banking
- Robotic Process Automation
- Block Chain
- Continuous Authentication Using Behavioural Biometrics

Mode of Teaching

Online teaching plus learning inputs through reading material, videos, webinars, assignments, quizzes, online interactions and clarifications. Each e-Programme will have four live webinars and course material will be made available in advance for study.

Who Can Participate?

Staffs from any department of banks (across various levels of hierarchy) can attend the program. Staffs from other financial organizations can also attend the programme.

End Use:

Knowledge about all recent and potential technologies in banking will provide the banker an overall perspective of viewing the system. Cross-domain and cross-industry knowledge will help them in their career and knowledge growth.

Programme Coordinators:

Dr. Rajarshi Pal, Assistant Professor, IDRBT; e-mail: prajarshi@idrbt.ac.in

Fees:

For Indian Participants

- RRBs & Coop Banks: Rs. 11,800/- (Rs. 10,000/- + 18% GST)
- All Other Banks & Financial Institutions: Rs. 14,750/- (Rs. 12,500/- + 18% GST)

For International participants

- US \$ 220 (per participant, All inclusive)

Bank Account Details for Remittance of Fees

The fees for this e-programme can be remitted to the following accounts:

For Indian Participants

Account Name : IDRBT
Bank & Branch : Axis Bank Limited, Humayun Nagar, Mehdiapatnam, Hyderabad
Account No. : 426010100018823
MICR Code : 500211012
IFSC Code : UTIB0000426

For International participants

Receiver's Correspondent Bank : JP Morgan Chase, New York, USA
Swift Code : CHASUS33XXX
Fed Wire Routing Number : ABA 021000021
Beneficiary Bank & Branch : Axis Bank Ltd., Mumbai, India
Account Number : 0011407376
Beneficiary Bank Swift Code : AXISINBB

Ultimate Beneficiary

Account Name : IDRBT
Customer ID : 030021632
Account No. : 426010100018823
Bank & Branch : Axis Bank Ltd., Jubilee Hills, Hyderabad, India. (AXISINBB030)

Nominations

Banks may nominate any number of participants to these e-Programmes, which may be accepted on a first-cum-first-served basis. While nominating, please provide the details of the participants (Name, Designation, Bank, Mobile No/Phone No, email address, fees billing address, GST No. of the Bank).

Apart from nominations by banks, staff members of banks can self-nominate themselves for these e-Programmes by providing their employee credentials and paying the programme fee latest by **January 17, 2022**.

How to Register

The nominations for these e-Programmes, and queries if any, may please be sent to eprogram@idrbt.ac.in. Please visit <https://www.idrbt.ac.in/eprogrammes.html> for more details about these programmes.

e-Programmes in January 2022

| S. No. | Name of the e-Programme | Date | e-Programme Coordinator | Last Date for Nomination |
|--------|--|-----------------|--|--------------------------|
| 1 | Security Operations Centre | 03 – 06 | Dr. V. Radha | Dec 31, 2021 |
| 2 | Secure Financial Infrastructure | 04 – 07 | Dr. Susmita Mandal | Jan 03, 2022 |
| 3 | Smart Banking using AI and ML | 10 – 13 | Dr. Mridula Verma | Jan 07, 2022 |
| 4 | Emerging Technologies for Banking | 18 – 21 | Dr. Rajarshi Pal | Jan 17, 2022 |
| 5 | Introduction to Containers | 18 – 21 | Dr. P. Syam Kumar | Jan 17, 2022 |
| 6 | Cyber Forensics for Cyber Defence - A Proactive Approach | 18 – 21 | Dr. B. M. Mehtre | Jan 17, 2022 |
| 7 | Introduction to Authentication Techniques | Jan 31 – Feb 03 | Dr. M.V.N.K. Prasad & Dr. N.P. Dhavale | Jan 28, 2022 |
| 8 | Deep Learning and Reinforcement Learning for Banks | Jan 31 – Feb 03 | Dr. V. Ravi | Jan 28, 2022 |

e-Programmes in February 2022

| S. No. | Name of the e-Programme | Date | e-Programme Coordinator | Last Date for Nomination |
|--------|--|-----------------|--------------------------|--------------------------|
| 1 | Threats to Digital Payment Ecosystem | 01 – 04 | Dr. Susmita Mandal | Jan 31, 2022 |
| 2 | Distributed Ledger Technology and Banking Applications | 07 – 10 | Dr. N. V. Narendra Kumar | Feb 04, 2022 |
| 3 | IT Project Management | 08 – 11 | Dr. Abhishek Thakur | Feb 07, 2022 |
| 4 | Technologies for Financial Inclusion | 08 – 11 | Dr. M. V. N. K. Prasad | Feb 07, 2022 |
| 5 | Video Analytics in Banking & Finance | 14 – 17 | Dr. Mridula Verma | Feb 11, 2022 |
| 6 | Malware Analysis | 15 – 18 | Dr. Rajarshi Pal | Feb 04, 2022 |
| 7 | Dark Web Monitoring for Threat Intelligence | 15 – 18 | Dr. B. M. Mehtre | Feb 14, 2022 |
| 8 | RBI Guidelines on Cyber Security | 21 – 24 | Dr. Dipanjan Roy | Feb 18, 2022 |
| 9 | Virtualization and Cloud Computing | 22 – 25 | Dr. P. Syam Kumar | Feb 21, 2022 |
| 10 | API Security and Governance | Feb 28 – Mar 03 | Dr. Abhishek Thakur | Dec 27, 2021 |

e-Programmes in March 2022

| S. No. | Name of the e-Programme | Date | e-Programme Coordinator | Last Date for Nomination |
|--------|---|---------|-------------------------|--------------------------|
| 1 | Workshop on Registration Authority Operations | 01 – 04 | Dr. N. P. Dhavale | Feb 28, 2022 |
| 2 | AI/ML and Data Science for Banks | 01 – 04 | Dr. V. Ravi | Feb 28, 2022 |
| 3 | Proactive Cyber Defence Strategies | 07 – 10 | Dr. Dipanjan Roy | Mar 04, 2022 |

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| 4 | Introduction to Authentication Techniques | 08 – 11 | Dr. M. V. N. K. Prasad & Dr. N. P. Dhavale | Mar 07, 2022 |
| 5 | Recent Cyber Crimes and Defences | 08 – 11 | Dr. Rajarshi Pal | Mar 07, 2022 |
| 6 | Data Centre Management | 14 – 17 | Dr. P. Syam Kumar | Mar 11, 2022 |
| 7 | Emerging AI/ML Technologies | 14 – 17 | Dr. Mridula Verma | Mar 11, 2022 |
| 8 | Big Data Analytics through Elastic Map Reducer for Banks | 21 – 24 | Dr. V. Ravi | Mar 11, 2022 |
| 9 | Mobile Banking, Social Media Banking and Mobile Security Testing | 21 – 25 | Dr. V. N. Sastry | Mar 18, 2022 |
| 10 | Targeted Attacks - Detecting in Early Stages | 22 – 25 | Dr. B. M. Mehtre | Mar 21, 2022 |
| 11 | Secure Coding Practices | 22 – 25 | Dr. V. Radha | Mar 21, 2022 |
| 12 | Re-envisioning Digital Banking Systems | 28 – 31 | Dr. Susmita Mandal | Mar 25, 2022 |

e-Programmes in April 2022

| S. No. | Name of the e-Programme | Date | e-Programme Coordinator | Last Date for Nomination |
|--------|--|---------|--------------------------|--------------------------|
| 1 | Distributed Ledger Technology and Banking Applications | 04 – 07 | Dr. N. V. Narendra Kumar | Apr 01, 2022 |
| 2 | Technologies for Financial Inclusion | 04 – 07 | Dr. M.V.N.K. Prasad | Apr 01, 2022 |
| 3 | Workshop on Registration Authority Operations | 05 – 08 | Dr. N. P. Dhavale | Apr 04, 2022 |
| 4 | AI/ML for Cyber Security | 05 – 08 | Dr. Rajarshi Pal | Apr 04, 2022 |
| 5 | Adversarial ML for Banks | 18 – 21 | Dr. V. Ravi | Apr 13, 2022 |
| 6 | Smart Banking using AI and ML | 18 – 21 | Dr. Mridula Verma | Apr 13, 2022 |
| 7 | Cyber Forensics for Cyber Defence - A Proactive Approach | 19 – 22 | Dr. B. M. Mehtre | Apr 18, 2022 |
| 8 | API Development | 19 – 22 | Dr. V. Radha | Apr 18, 2022 |
| 9 | Future of Innovative Smart Banking | 25 – 28 | Dr. Susmita Mandal | Apr 22, 2022 |
| 10 | Security in Cloud Computing | 26 – 29 | Dr. P. Syam Kumar | Apr 25, 2022 |
| 11 | Introduction to Hardware Security | 26 – 29 | Dr. Dipanjan Roy | Apr 25, 2022 |

e-Programmes in May 2022

| S. No. | Name of the e-Programme | Date | e-Programme Coordinator | Last Date for Nomination |
|--------|---|---------|---------------------------|--------------------------|
| 1 | Re-imagining customer engagement with conversational Chatbots | 09 – 12 | Dr. Mridula Verma | May 06, 2022 |
| 2 | Introduction to Governance, Risks and Compliance | 10 – 13 | Dr. Abhishek Kumar Thakur | May 09, 2022 |
| 3 | Continuous Security Validation | 10 – 13 | Dr. V. Radha | May 09, 2022 |
| 4 | Secure Financial Infrastructure | 10 – 13 | Dr. Susmita Mandal | May 09, 2022 |

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|----|---|---------|--|---------------------|
| 5 | Cyber Security for Remote Working Scenario | 17 – 20 | Dr. Rajarshi Pal | May 16, 2022 |
| 6 | Proactive Cyber Defence Strategies | 17 – 20 | Dr. Dipanjan Roy | May 16, 2022 |
| 7 | Dark Web Monitoring for Threat Intelligence | 17 – 20 | Dr. B. M. Mehtre | May 16, 2022 |
| 8 | Introduction to Authentication Techniques | 23 – 26 | Dr. M.V.N.K. Prasad Dr. N.P.Dhavale | May 20, 2022 |
| 9 | Explainable AI for Banks | 24 – 27 | Dr. V. Ravi | May 23, 2022 |
| 10 | Big Data and Cloud | 24 – 27 | Dr. P. Syam Kumar | May 23, 2022 |

e-Programmes in June 2022

| S. No. | Name of the e-Programme | Date | e-Programme Coordinator | Last Date for Nomination |
|--------|--|-----------------|--------------------------|--------------------------|
| 1 | Privacy Preserving Machine Learning for Banks | 06 – 09 | Dr. V. Ravi | June 03, 2022 |
| 2 | Distributed Ledger Technology and Banking Applications | 06 – 09 | Dr. N. V. Narendra Kumar | June 03, 2022 |
| 3 | 5G Use Cases and IoT Applications for Banks | 06 – 10 | Dr. V. N. Sastry | June 03, 2022 |
| 4 | Threats to Digital Payment Ecosystem | 07 – 10 | Dr. Susmita Mandal | June 06, 2022 |
| 5 | Technologies for Financial Inclusion | 07 – 10 | Dr. M.V.N.K. Prasad | June 06, 2022 |
| 6 | Emerging AI/ML Technologies | 13 – 16 | Dr. Mridula Verma | June 10, 2022 |
| 7 | Workshop on Registration Authority Operations | 14 – 17 | Dr. N. P. Dhavale | June 13, 2022 |
| 8 | Privacy and Security Risks in Machine Learning | 14 – 17 | Dr. Rajarshi Pal | June 13, 2022 |
| 9 | RBI Guidelines on Cyber Security | 20 – 23 | Dr. Dipanjan Roy | June 17, 2022 |
| 10 | Introduction to Containers | 21 – 24 | Dr. P. Syam Kumar | June 20, 2022 |
| 11 | Targeted Attacks - Detecting in Early Stages | 21 – 24 | Dr. B. M. Mehtre | June 20, 2022 |
| 12 | API Development | Jun 28 – Jul 01 | Dr. V. Radha | June 27, 2022 |