TEACHING LEARNING CENTRE

RAMANUJAN COLLEGE

(Accredited Grade 'A' by NAAC)

UNIVERSITY OF DELHI

in collaboration with

OPEN TECHNOLOGY FORUM (OTF);

TELECOM SECTOR SKILL COUNCIL;

MAGMA INDIA;

and

COREDGE

under the aegis of

PANDIT MADAN MOHAN MALAVIYA NATIONAL MISSION ON TEACHERS AND TEACHING

MINISTRY OF EDUCATION

is organising

ONLINE ONE-WEEK FACULTY DEVELOPMENT PROGRAMME

DTC TRANSFORMATION

DATA CENTERS, TELECO, COMMUNICATION

21 - 28 FEBRUARY 2022

CALL FOR REGISTRATION AND PARTICIPATION

RAMANUJAN COLLEGE

Ramanujan College is a constituent College of the University of Delhi (DU). It is inspired by the life and work of Srinivasa Aiyangar Ramanujan, one of the world's greatest mathematicians. The College has been accredited Grade "A" by the National Assessment and Accreditation Council (NAAC) in its First Cycle. It is located in the well-known area of Kalkaji, near Nehru Place, in South Delhi.

The College was established in 1958 as an evening college for boys with just five programmes. Since 2010, Ramanujan College has been expanding and now with the latest addition of B.Sc. Environmental Sciences (Hons) in 2020, it at present offers sixteen undergraduate programmes in different disciplines. This achievement, in alignment to the recommendations of the National Education Policy (NEP) 2020, makes the College a centre for interdisciplinary studies and research with a future focus on blended learning. It has gradually grown into a self-sufficient and self-reliant institution owing to its academic vigour and intellectual capital.

Ramanujan College was awarded the Deen Dayal Upadhyay - Knowledge Acquisition and Upgradation of Skilled Human Abilities and Livelihood (DDU KAUSHAL) Kendra in 2016 by the UGC, under which two vocational courses were started in Banking Operations and Software Development.

The College has conducted a Course on Human Rights, Environment and Ethics through its National Resource Centre (NRC), under the Annual Refresher Programme in Teaching (ARPIT) scheme of Ministry of Education (MoE). This Course was uploaded on MoE's Massive Open Online Course (MOOC) platform SWAYAM and many participants registered for it.

Ramanujan College offers various short-term diploma, certificate, and executive development programmes on contemporary and skill-oriented themes. These are conceived and designed by faculty members in consultation with external experts.

The courses get exceptional response from the students and are conducted throughout the academic session. They are open to alumni and students of all the colleges. Some of these courses support the curriculum, some prepare the students for higher studies and also accelerate the professional growth.

The College is the Study Centre of School of Open Learning (SOL), Non-Collegiate Women Education Board (NCWEB) and Indira Gandhi National Open University (IGNOU) for various courses. As an initiative towards students and teachers exchange programmes, the College has entered into Memorandum of Understanding(s) with foreign universities. It is also working for collaboration with other higher education institutions located in remote areas of the country, under the Vidya Vistar Scheme of the University of Delhi.

The prestigious Teaching Learning Centre was awarded to Ramanujan College in 2017 by the Ministry of Education, under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT) scheme.

In pursuit of its vision: “Discover, Empower, Transform: Building A Better World”, Ramanujan College is today perceived as one of the best colleges in the country.

TEACHING LEARNING CENTRE, RAMANUJAN COLLEGE

Teaching Learning Centre (TLC) is mandated by the Ministry of Education (MoE) to organise Faculty Development Programmes (FDPs), Faculty Orientation and Induction Programmes (FIPs), discipline specific and interdisciplinary Refresher Courses, conferences, workshops, through offline and online modes. These programmes are based on in-depth subject knowledge, quantitative and qualitative research methodologies, and on an interdisciplinary approach as is envisaged in the National Education Policy (NEP), 2020.

The TLC, Ramanujan College has been set up with the aim of "Reaching the Unreached" teachers in terms of regional diversity and geographically remote areas of the country. It has successfully conducted more than hundred learner-centric programmes since October 2017 and trained over one lakh teachers across the country in various discipline specific and interdisciplinary programmes.

In the TLC Programmes distinguished and internationally acclaimed resource persons deliver lectures and conduct sessions on wide ranging disciplines/topics of relevance in the contemporary and ever evolving global scenario to benefit the teaching fraternity, corporates and researchers. The sessions are also uploaded for larger audiences on the official YouTube Channel of the College.

Ramanujan College is a pioneer in offering offline/online courses for faculty members of higher education institutions and research scholars through the customised Learning Management System (LMS), designed by the College's Research Development and Services Cell. It is predominantly participant-friendly and incorporates evaluation methods and comprehensive feedback systems to judge learning outcomes. The LMS is hosted on CLOUD with high scalability and reliability. The College has installed its own Cloud Infrastructure to host its servers for research and data analysis.

Enrichment Spectrum at the TLC, Ramanujan College

- Transforming teachers into knowledge-creators
- Emphasis on creating self-learning space for participants
- Interaction with eminent scholars and academicians
- Four Quadrant Approach (e-tutorial, e-content, Self-Assessment and Web Resources).
- Regular follow-up with the participants through Google Classroom/ Telegram/ Discussion Forum.
- Adaptation skills for the dynamic contemporary environment
- Augmentation of professional capabilities and research-based knowledge
- Inter and cross-disciplinary methodologies of study
- Co-creation and mutual contribution between participants and facilitators
- Formation of knowledge capital
- Online certificates using the Blockchain Technology to ensure authenticity and verifiability

OPEN TECHNOLOGY FORUM

Open Technology Forum (OTF) is a subgroup of the Social Purpose Organization (SPO) Emerging Open Tech Foundation (eOTF), which is a registered firm under section 8 Companies Act (India) as of May 14, 2021. Previously in 2016, the proposed name was "Emerging Technology for Engineers". Domain was acquired and a website was established for **Open Tech Foundation**.

The objective of the organization is to help improve digital collaboration amongst various global and local Open Organizations (technology, operations, software source, hardware infrastructure, data domains, vertical industry solutions) to accelerate industry adoption.

The eOTF timeline will reflect two horizons, near-term -- representing less than 5 years covered by Open Technology Forum (OTF) -- and medium-term -- representing between three and ten years in time covered by Emerging Technology Forum (ETF) .

Over the last 5 years, OTF meetup group has organized over 20 events, spanning Open Infrastructure mini-summits, upstream days for Cloud and NFV/SDN, and AI/ML meetups for India's Digital Transformation. Due to the Covid-19 pandemic, OTF hosted a virtual event OTF Techfest 2020 at the end of the year. eOTF (OTF and ETF) welcomes sponsorships and participation to realize and accelerate the vision for 2030 for India taking her place in the global sphere and uplifting her people with Transformation Through Technology (T3). The baseline for eOTF/OTF is to promote all 17 verticals of United Nation (UN) Sustainable Development Goals (SDG) using Digital (DT3), Operational (OT3), Knowledge(KT3) and Quantum (QT3).

TELECOM SECTOR SKILL COUNCIL

Telecom Sector Skill Council (TSSC) is a Non-Profit Organization, registered under the Societies Registration Act,1860. We are an industry-led apex body, jointly set up by the Cellular Operators Association of India (COAI), Indian Cellular Association (ICA), Association of Unified Telecom Service Providers of India (AUSPI) and National Skill Development Corporation (NSDC), to ensure adequate availability of skilled manpower to boost growth and productivity in the Telecom sector.

VISION

The Telecom Sector Skill Council is committed to develop world class skilled manpower for the Telecom industry.

MISSION

Telecom Sector Skill Council, a non-profit industry driven body set up under the aegis of the NSDC would strive to:

- Create a viable ecosystem by implementing an "integrated approach" by prioritizing initiatives that can have a catalytic

effect to develop competency based framework of world class excellence for skill development and quality assurance of personnel in the Telecom sector

- Narrow the existing gap between demand and supply of skills by increased collaboration between the three primary stakeholders i.e. HR, Industry and academia
- Up-skill and certify 45 Lacs personnel in 150 trades, train 24,000 trainers, accredit 500 training organizations and to cover the whole country progressively over a period of 10 years by signing MOUs with around 200 industries
- Facilitate Training the Trainer
- Develop necessary frameworks for standards, curriculum and quality assurance at all levels in vocational / technical programs to meet the needs of the industry.
- Participate in regional and international vocational telecom sector development initiatives

MAGMA INDIA

Magma India is a community of collaborators coming from diverse professional backgrounds of academia, research and industry who are passionate towards cultivating an environment of open, collaborative and an integrated ecosystem. The objective is to build an unified platform, where open-source projects related to 5G can be evangelized through research & development and education & advocacy.

COREDGE.io

Coredge is building a revolutionary cloud and edge platform to address the orchestration and management requirements driven by new-age applications/use cases that requires low latency and hyper-automated delivery. We are helping our customers to solve the complex orchestration and day 0, day 1 and day 2 management issues while moving to modern infrastructure. We are targeting our solutions for technologies like industrial IoT, wearables, self-driving cars, OTT, AR/VR, 4K Streaming, voice/video over IP and the fundamental use case for the Edge Cloud.

Founded in October 2020, we have raised early-stage SEED capital. Our leaders are experienced in building PaaS and IaaS products at scale for large telco and enterprise customers. The team at Coredge is a combination of experienced and young professionals alike having many years of experience in working with edge computing, telecom application development and Kubernetes.

We assure the customers to completely fulfil the requirements of the new edge cloud service providers, public cloud providers and telecom cloud.

CONCEPT NOTE

The new normal in the post-Covid era is Compute & Communication technology-driven growth. Few technologies that have helped maintain the economy are Data Center Infrastructure, Remote access using WiFi/Cellular Radio Links with device and network equipment. The Cloud underlay and overlay to support vibrant verticals and Over The Top (OTT) health, entertainment, and essential social interactions to stay sane and connected. The advent of digital twins with high-performance compute and network acceleration together are making real-time edge computing clouds economical. The emerging technologies include Unmanned Aerial Vehicles (UAV) or drones, high altitude platforms (HAP) balloons and Low Earth Orbit (LEO) satellite, 5G and more.

We need to equip our educators with knowledge of these technology advancements both in computer science and communication to better prepare our students to leverage these technologies and drive them further forward through innovation. This will help India better achieve its sustainable development goals (SDG) and that of its Geo-political partners who believe in human advancement for the greater good of society.

THEMATICS

- Data Center Compute & Storage
- Fixed Broadband & Wireless Communication
- Cloud and Edge delivery Modes
- Innovative Software & Applications for Industry Verticals

DATA CENTER COMPUTE & STORAGE

Compute & Storage Resources are key to a development economy like India. Fair access to these is still another challenge which we address later in the communication track.

Learning Goals:

- State of Data Centers in India and its Geo-political allies
- Architecture - Hyper Converged vs Distributed Edge Micro Data Centers
- The challenges to overcome - COTS (commercial off the shelf) Hardware, Open Source Software and Operating Systems, Power, Cooling, Locations, Standardization, Security Hardening
- Operations and simplifying maintenance & meeting Service levels using Containers & Kubernetes
- Addressing Trust and Security of Campus for Research collaboration

FIXED BROADBAND & WIRELESS COMMUNICATION

The increased penetration of Broadband Cable network for entertainment and use of 5G Private / Campus networks is creating innovation in applications that were out of reach for common and Consumers.

- State of Fixed Broadband & Wireless Networks in India & Geo-political allies
- Architecture - DOCSIS 3.x vs 4G/5G NSA/SA vs. WiFi 6/6E PM-WANI
- The challenges to overcome - Access Gateway/Transport/Core Hardware & Open Source Software stack , Constrained Locations/Energy, Standardization & Multi Vendor support including Make in India & Production Linked Incentives (PLI)
- Operations and simplifying maintenance & Service levels using Containers & Kubernetes
- Addressing Trust and Security of Campus for Research Network

CLOUD AND EDGE DELIVERY MODES

Cloud is shifting from Hyper Converged DC offerings to local Micro DC or isolated Data Centers in the middle of nowhere, is causing

disruptions and cost versus service level, security & privacy concerns - a good challenge to have for growth.

Learning Goals

- State of Cloud & Edge in India & Geo-political allies
- Architecture - Community cloud /BharatNet & Knowledge Network (KNN) vs Private / Public Clouds & Isolated Edge Clouds
- The challenges to overcome - OTT Content & PAAS / SAAS revenue models, Open Source Software and Licensing / IPR compliances,
- On-boarding Applications & Services, Location selection for deployments & delivery, Standardization, Hardening and Multi-Vendor support
- Operations and simplifying maintenance, management & Service levels using Containers & Kubernetes
- Addressing Usage, Trust and Security of Campus for Research collaboration through Cloud & Edge resources

INNOVATIVE SOFTWARE & EMERGING APPLICATIONS IN INDUSTRY VERTICALS

Systems and Applications that drive the underlay and overlay platforms are becoming cloud native and resulting requirements to design based on micro-services are driving agility, innovation into tools & platforms for Industry Verticals like Industry 4.0, Smart Warehousing, Automated Drone Delivery, Smart IoT sensing and AIML based optimizations and automation.

Learning Goals:

- State of Vertical Industries in India & Geo-political allies
- Architecture - Global/Local Reference Architectures to Standardize and contain deployment cost like Industry 4.0, Smart Warehousing etc. using AIML

- The challenges to overcome - One size does not fit all Verticals & revenue models vary, Open Source Software need to be Cloud Native and meet Data location & Tax compliances, Emplanting Applications & Services, Location selection for deployments & delivery, Standardization, Hardening and Multi-Vendor support
- Operations and simplifying with CI/CD with GitOps, MLOps using Containers & Kubernetes
- Addressing B2C/B2B2C usage, Trust and Security of commercial & social collaboration through Innovation like Aadhar, ArogyaSetu, UPI etc.

REGISTRATION AND PAYMENT PROCESS

ELIGIBILTY

Faculty members (regular/adhoc/temporary) in teaching profession and research scholars are eligible to apply for this programme.

All those who meet the eligibility criterion are required to register and pay a **Non-Refundable fee of INR 950/- by visiting**

rcmoocs.in

REGISTRATION DEADLINE: 20 February 2022

After successful registration & payment, the participants will receive a confirmation via email. Please keep checking the spam folder of the email as the bulk email sent may end up in the spam folder.
An official group has been made for communication with the participants on "Telegram." You are therefore requested to install the Telegram App either from the Play Store or App Store. The link to join the official group will be provided in the confirmation mail.

IMPORTANT:

- Registration is mandatory for participation.
- Attempting and submitting all the quizzes and assignments is mandatory, and each participant should score atleast 50% aggregate to be eligible for the completion certificate.
- Graded certificates on the basis of performance will be awarded to the participants.
- As part of the Ministry of Education's requirement under the PMMMNMTT scheme, all participants need to submit online feedback for each session.
- **No Objection Certificate (NOC) or Leave is NOT REQUIRED to participate in the Programme**
- Failing to meet any of the above conditions will result in the denial of completion certificate.

For further information, write to us at:

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