



National Institute of Technical Teachers Training and Research, Chandigarh

Newsletter

National Seminar on Blockchain Technology



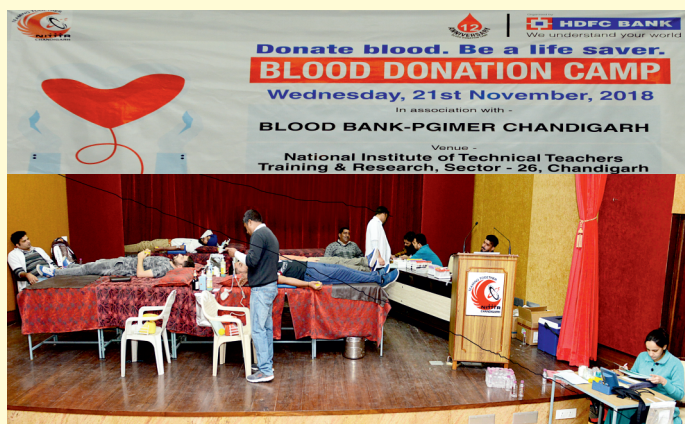
The department of Computer Science and Engineering of the institute organised a National Seminar on **Blockchain Technology** on 14 December, 2018. A total of 34 delegates from all over the country attended the seminar. Mr. Tariq Deep Singh, Principal Solution Architect, TechMahindra delivered the inaugural and keynote address. Mr. Kunal Nandwani from uTrade Solutions, Chandigarh and Dr. Mani Madhukar from IBM, Gurgaon were invited to engage the sessions in the seminar. The seminar aimed at demystifying Blockchain Technology and provided hands-on experience of developing smart contracts and digital identity. Some of the initiatives taken by IBM in this domain were also discussed. The seminar was coordinated by Dr. C. Rama Krishna and Dr. Mala Kalra.

National Workshop on Latest Techniques in Waterproofing Applications



A two days National Workshop on Latest Techniques in Waterproofing Application was conducted by Civil Engineering Department, NITTTR, Chandigarh in association with Indian Concrete Institute, Chandigarh Centre and Dr. Fikit Institute of Structural Protection & Rehabilitation from 29-30 November, 2018.

During the workshop, experts from industry, academic discussed various aspects of water presentation in Structures, resultant deterioration, quality construction practices, waterproofing techniques for terraces, walls, basement, etc. It was attended by 30 participants including government officials from MES, Water Supply Division of Chandigarh Administration CMPDI, Ultratech Cement and faculty of engineering colleges & polytechnics. The programme was coordinated by Dr. Sanjay Kumar Sharma and Er. Himmi Gupta from Civil Engineering Department, NITTTR, Chandigarh.



A Blood Donation Camp was organized in association with Blood Bank, PGIMER Chandigarh, wherein 72 donors (faculty, staff and ME/Ph.D. scholars) donated blood. HDFC Bank sponsored the event.





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The Twenty First Century and Research witnesses the influence of the technological advancements and its inevitable role in day today life of a common man even in the less developed regions. The foreseeable role of smart phones and internet in everyday life inspired engineers and scientist to work on technologies for ease of living. Advancement in existing technologies and emergence of new technologies helps to change the social life particularly in communication, health care, transportation, industrial sector, etc.

To achieve the social, economic and defence goals of the society the new knowledge acquired through research need to be channelize by the combined efforts of government as well as non-government institutions. The accessibility of internet has given a new face to global scientific research even in less developed regions. Most of the recent research in science and engineering are related to technological improvements and in automation field.

Recent era, the automation or technological improvement process has to handle various uncertain conditions which are difficult to solve with traditional theories and formula. Engineering research is currently handling such kind of problems to improve the perfection and accuracy of the design. This is mostly achieved by replacing rational physical hardware with embedded chips which contains intelligent programmes trained using previous data. Injecting intelligence of decision making to machines is so called machines learning or Artificial intelligence which can act on behalf of mankind. Creating intelligences from huge data is a great challenge which requires reliable and accurate data mining tools.

Statistical Engineering

The uncertainties can better be handled with Statistics – A science of decision making. Decision making capability of statistics boosted its application in science and engineering research. We are going through data era, where data is considered as new oil. In the latest world economic forum in Davos, Switzerland, Ruth Porat of Google stated that “Data is more like sunlight than oil” as it is like sunshine - we keep using it and it keeps regenerating. In our everyday life a large quantum of data is generated through different human as well as mechanical activities. Data scientist are trying to analyse these data for the betterment of mankind and subsequent research. Mining of huge data for useful information helps us to identify clusters, patterns, interrelationship etc. which is useful for the construction of a better design.

The increased application of statistics in academic research of all domains and applied technologies resulted in high demand for statistical packages. Among the emerging as well as existing statistical packages, SPSS kept its place unchanged because of its operational simplicity, wide range of options in analysis and presentation of data, consistent improvements in new versions, etc.

SPSS

SPSS is a popular simple statistical package used to execute complex data analysis. Statistical Package for the Social Sciences, as the name indicates, it was initially developed for social science research. As a reason, the developers paid special attention to make it simpler and user friendly even less computer savvy's to perform complex data analysis. SPSS is one of the oldest statistical packages since 1968 by SPSS Inc. On July 28th, 2009, IBM acquired SPSS Inc and labelled its name as IBM SPSS statistics. The latest version in this series is 25.0 which was released in the year 2017.

The simplicity and easy to lean feature of SPSS attracted a wide rage of users from different domains namely data miners, health researchers, education researchers, government entities, market researchers, survey companies, marketing organizations and many more interested in data annalistic. The key features of SPSS such as effective data management, wide range of options in data mining, analysis and visualization has labelled it as a professional data mining software in the current Big Data era.

SPSS has wide range of data preparation features which can easily identify invalid values, view patterns of missing data, uncover missing data patterns, estimate summary statistics and impute missing values through statistical algorithms and other data manipulation methods namely computation, recodes, sort, filter, split, merge, etc.

SPSS contains a comprehensive set of statistical tools such as Descriptive statistics, Bivariate statistics procedures, Factor and cluster analysis, Linear, Non-linear, ordinal, Logistic and 2SLS regression, Generalized linear modelling and survival analysis, Bayesian Statistics, Decision trees, Direct Marketing tools, Neural Networks (NN), Exact tests, Complex sampling, Bootstrapping, Structural Equation Modelling (SEM) and many more. It can create publication ready charts, tables, and decision trees in one tool along with drag and drop interface.

SPSS enhanced its capability through plug-in for integrating Open Source programming languages. Widely used data mining languages such as R and Python are used to enhance SPSS Syntax through specialized extensions. Apart from more than 130 extensions available in SPSS Extension Hub, the users can build their own extensions for customized solution.

In this data era, the scientist and engineers are forced to deal with various kinds of data to answer the research problems. Knowledge of statistics along with simple and efficient software such as SPSS is worth in engineering education for building a strong research community to address the social needs.



The institute organized a short term programme on 'Neuro Linguistic Programming' from 06 – 10 October, 2018 in collaboration with Planet Psychology Academy, Chandigarh, which was attended by the faculty, staff and ME/Ph.D. Scholars.



The institute organized Vigilance Awareness week from 29th October to 3rd November, 2018. During the week, the institute organized various outreach activities for raising awareness amongst employees, ME/Ph.D. scholars and STC participants. Poster Competition, essay writing competition, expert lecture on the theme and Open Quiz competition for faculty, staff and students related to anti-corruption were held. In addition, an expert talk on "Relevance of Gandhian Principles in Today's Scenario in India" by Professor (Dr.) ML Sharma, Former Professor, Department of Gandhian Studies, Panjab University, Chandigarh.

One Day Regional Workshop for "Orientation of Participating Institutes to Initiate Work in Adopted Village Clusters under Unnat Bharat Abhiyan" was organized by Rural Development Department on 04.12.2018 in Collaboration with IIT, Delhi.



Centre for Clean Technologies and Sustainable Development of the institute organized a programme, '**Sustain and Enhance Technical Knowledge in Solar Energy**' under Green Skill Development Program of ENVIS Scheme in collaboration with ENVIS HUB, Department of Environment, Chandigarh Administration from 17th September to 22nd November, 2018 at NITTR, handigarh.



**Institute celebrated Viswakarma Day
on 8th November, 2018**



Seventh Alumni Meet was organized on 6th October, 2018. The event was inaugurated by Dr. SS Pattnaik, Director of the institute. An Eminent Alumni Talk was presented by Er. KK Dhiman, General Manager, NHAI, Delhi. In addition, interactive session on 'Future Roadmap for next 5 years and Alumni contribution for development of NITTTR, Chandigarh was held. A Quiz was organized by Er. Mala Kalra. Various games like Musical Chair, Volley Ball and Cricket were organized between Alumni and Faculty/staff. Dr. Poonam Syal coordinated the event.

Training programmes conducted during

| Programmes Mode | October - December, 2018 | |
|---------------------------------|--------------------------|----------------------------|
| | Number of Programmes | Number of Teachers Trained |
| Contact Mode | 48 | 910 |
| Training Programmes through ICT | 19 | 2974 |

Massive Open Online Courses : The institute launched following two MOOCs on Swayam Portal:

| Sr. No. | Title | Duration | No. of Registrations |
|---------|------------------------------------|--------------------------|----------------------|
| 1. | Self-Learning Material Development | 29.10.2018 to 21.12.2018 | 789 |
| 2. | Research in Technical Education | 26.11.2018 to 20.1.2019 | 963 |