

ATHARVA

25th Edition

December 2018

EDITOR'S CORNER

Dnya Pichumani

The entire Web and Media family wishes all its readers a very Happy and prosperous New Year. The month of December witnessed some great activities and events at SCIT.

Members of the Thalassemia Society visited the college to throw some light on the disease and the measures that can be taken to curb the same. The college also hosted the magnificent theme launch of Graffiti '19. The theme for this year's Graffiti was revealed and also the official trailer and website for the same were launched. The ISR committee organised a summit on the topic "Social Responsibility beyond charity and donation".

The seniors and the juniors are gearing up to host the flagship event of SCIT - Graffiti. The month of December has brought the students to work together to put up a grand show. Web and Media Committee is proud to present the 24th Edition of Atharva to all its readers. Happy reading!

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THALASSEMIA AWARENESS PROGRAM

Manpreet Kaur

"The question is not how to get cured, but how to live."

- Joseph Conrad

These beautiful lines are not only inspiring but give a ray of hope to all those who actually want to their life to the fullest. There are few immediately shattering diseases which shatter people entirely but there are few who still find courage and fight with such diseases. Sometimes negligence of two partners make their kids suffer whole life.

Thalassemia, is also such a disease which is inherited from parents and on which the patient has no choice but only suffering. Thalassemia is a blood disorder passed down through families (inherited) in which the body makes an abnormal form or inadequate amount of haemoglobin. The disorder results in large numbers of red blood cells being destroyed, which leads to anaemia. For addressing the same issue, Dr. Nita Munshi, Director of the Department of Laboratories at Ruby Hall Clinic group of Hospitals, President of Thalassemia Society, Pune visited SCIT to educate the students on 10th December, 2018.



Dr. Nita Munshi has contributed her career towards treating and helping the patients of Thalassemia. She educated the students on how they can actually put full stop on this deadly disease which is like a life-long curse. There were other members of the society also who were somehow directly and indirectly the victims of the same disease. Their stories left deep down effect on everyone's mind.

Dr. Nita Munshi explained that how unawareness regarding the same disease made enormous people see their loved ones suffering whole lives. This disease not only shaken them emotionally but also put huge financial burden on them. Dr. Nita also mentioned about the challenges that Thalassemia patients actually face not only in their day to day life but also in their work life. She also talked about the life toss one has to play if he wants to get rid from this disease.

Priya Vaswani, one of the society members also accompanied Dr. Nita and shared her experience with the students. She is Thalassemia patient and pursuing her post-graduation. Her words motivated every single individual and entirely changed their outlook towards life. She inspired everyone that the meaning of life is not just to run from the problems but actually to face them.

Thalassemia Society, Pune Chapter, shared their target of zero Thalassemia patients by 2020 and requested students to take appropriate measures not to fall prey of this disease. Students thanked Dr. Nita for her wonderful initiative which is changing lives of many people and telling them the new meaning of life. Every person in the hall made up their mind to support Thalassemia Society, Pune Chapter and help the society in accomplishing its target. Encapsulating, her words taught us one thing and that is the 'meaning of life'.



IN THE CAMPUS

ISR SUMMIT

Divya Pichumani



The Institutional Social Responsibility (ISR) Committee of SCIT organised a summit on the topic "Social Responsibility beyond charity and donation" on 15th December 2018. The event began with the lighting of the traditional lamp by Dr. Dhanya Pramod, Dr. Kanchan Patil and Dr. Anil Jadhav.

Dr. Anil Jadhav, Faculty Coordinator of ISR Committee welcomed the gathering to the summit and spoke about the various achievements of the Committee. He highlighted some of the major contributions done by his team and also introduced the context of the summit to everyone.

Dr. Dhanya Pramod, Director of SCIT highlighted the need for giving back to the society and how this deed is the duty of every individual.

Mr. Ravikaran Patil - Associate Director of IDEA Foundation and Ms. Poonam Subhash Jain - member of SNEHWAN Foundation spoke about the various initiatives taken by their organisations to help the ones in need.



They threw light on how small ideas triggered their organisations to identify a problem and start working towards solving the same.

A panel discussion on the topic "Are there other ways to contribute for social

responsibility part from charity and donation?" was held. Ms. Tanuja Yelale was the moderator for the discussion and spoke on why this topic was chosen as the focal point of the discussion.

Ms. Preeti Shinde - TCS CSR Pune Lead talked about utilising our skills to the fullest and thus engaging in acts that contribute to making the society a better living place for one and all. Mr. Vikrant Patil - Founder and President of Abhinav Global Foundation enlightened the audience on the need for investing more in terms of time than money. He said that investing our time to help others is one of the biggest investments that we could do.



Mr. Sai Prasad, member of Leadership for Equity discussed the activities conducted by his team and the various roles played by the government in aiding these initiatives. He said that the general perception regarding the contributions of the government have to be changed as many reforms by the same have paved way for organisations to bring about societal changes.

Mr. Sanket Deshpande, Founder of Maitrayuva Foundation, spoke about the importance of prioritising our time accordingly while engaging in tasks related to serving our society. He also spoke about the ways in which social psychology plays a major role in shaping one's mind-set to engage in societal works.

Dr. Anil Jadhav delivered the vote of thanks and thanked the audience for their esteemed presence and making the event a grand success.

The college band Konnect did a marvellous performance as the curtains were drawn for the day. The positive vibes from their performance gave a fitting end to the wonderful



talks and discussions on social responsibility and charity.

SCIT has always been a leading contributor in the society. The ISR seminar has done right justification to it. The talks from the experts and their contribution to the society is this an inspiration to all the students! The session was thought provoking and thus instilled awareness among everyone. The students felt more responsible and more conscious about giving back to the society.



The event on the whole was a complete package. It included everything right from accurate and needed information along with entertainment elements. The students thoroughly enjoyed and made complete use of the session.



IN THE CAMPUS

SPTC CHRISTMAS CELEBRATION

Divya Pichumani

SCIT Pune Toastmasters Club (SPTC) hosted its 15th meet on 22nd December, 2018. This meet was dedicated to celebrate the spirit of Christmas and also to welcome the New Year. The meeting witnessed the coming together of both Toastmasters and Non-Toastmasters, all to celebrate the spirit of the forthcoming festivals.

The Sergeant At Arms – Srishti Dubey, opened the meet by explaining the rules to be followed during the meet and invited the Presiding Officer to take over. The President – Aakansha Gupta, welcomed the guests to the meeting and assured everyone that the meet will have both formal and informal sessions for everyone to enjoy.

The Toastmaster of the Day- Srishti Dubey, took over and explained that the meet would only have Table Topics Session and that it would be a kind of Open mike session to encourage everyone to come forward and



share their thoughts.

The Table Topics Master – Trisha Jha, went on to explain how the session would be held and invited volunteers from the audience to come forward and speak on topics that were given to them on the spot. There was active

participation from the audience and the session was well-received among the same. The General Evaluator – Abhijith Nitta, gave his evaluations on the overall proceedings of the meeting and soon after this the celebrations followed. Ishankamal Mitra played the guitar and sang few songs. The college band, Konnect came together and sang Christmas carols for which the whole audience joined them. The celebrations ended with a cake cutting and a Brazilian group dance in which everyone participated and danced merrily.



GRAFFITI THEME LAUNCH

Divya Pichumani



December 17, 2018 was one of the most awaited days for both the juniors and seniors of SCIT. The backdrop and the stage were set and the audience gathered at the SIC Sports Arena to witness the grand theme launch of Graffiti '19. The event kick started with a splendid performance by Konnect - the college band. Rushiraj rendered beautiful poems right after the band's performance.

It was during this rendition that it was established that Graffiti '19 would be the combined efforts of both the seniors and

juniors. Symbeats, the dance group of SCIT captured the audience with their brilliant performance.

The Main Coordinators then took to the stage and thanked the performers and the audience for their support and encouragement and launched the theme of Graffiti '19 - 'Yuristika: Forge your Legacy'. The official video of Yuristika was also launched at the event. Yuristika is here to highlight the wonderful characteristics that the modern-day manager possesses. Man has sailed through the hardships thrown at him by improvising and making strategies that stand the test of time.



The modern-day manager that he has become is because of the lessons he has learnt at all stages.

A DJ night sealed the day and brought the audience to their feet. The theme launch of Graffiti '19 turned out to be a huge success because of the combined efforts of the students along with the continuous support and encouragement from the faculty and management.



QUANTUM COMPUTING

Dr. Manjiv Pande



Blog 4: Where and when will Quantum Computing start to make a significant difference?

This is the fourth in a series of blogs that I will be writing for everyone to get a basic understanding of this immensely important research field which is poised to become mainstream in a few years and significantly impact our daily lives.



In my previous blogs, I gave a high-level view of some fundamental differences between classical computers and quantum computers, and started off with some basic concepts of quantum mechanics which are needed for building quantum computers. While I have not yet completed the foundations, many of us would be keenly interested to understand why we need to use quantum computers at all in the first place, when there are so many powerful supercomputers available for use. Jump in and read on to get some insights.

The fact of the matter is that despite around six decades of constantly enhancing the power of computing systems, there are still some important problems and applications, which are not solvable using the current breed of conventional computing architectures and computer systems. These are mathematically called as difficult or complex problems. In the language of computational complexity, such problems are said to be solvable in non-polynomial or exponential time as the input data size increases [Ref 1]. Since there is a need for huge amount of memory and/or computation time for useful data sizes, current supercomputers will take tens or hundreds of years to solve such problems [Ref 2].

Some of the problems which are not currently tractable, include the chemistry and molecular dynamics simulations to support the design of better ways to understand and design chemical reactions, ranging from nitrogen fixation [Ref 3] as the basis for fertilizer production and design of pharmaceuticals [Ref 4, 5]. Problems in materials science such as finding compounds for better solar cells, more efficient batteries, and new types of power lines that can transmit energy without any losses [Ref 6]. Finally, Shor's algorithm [Ref 7], which harnesses quantum computing approaches to efficiently factor large numbers, could make current crypto-systems vulnerable to cyberattacks and eavesdropping (I will be talking about Shor's and Grover's algorithms in future blogs).

Quantum Computers have the potential to speed up the computing time to such an extent that the problems and others similar in complexity to the ones I have mentioned above, would become solvable. For example, on a classical computer it would take millions of years to find the ground state energy of a large molecule precisely, or to crack the encryption algorithm that secures today's internet traffic or the security of the blockchain. On an appropriately sized quantum computer such problems could be solved in minutes or even seconds [Ref 2].

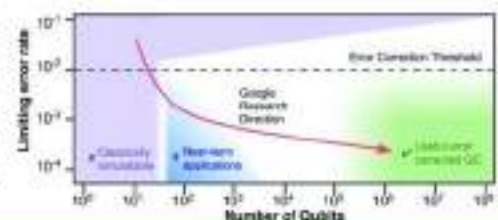


So, where are we in this journey of building quantum computers and when will they start making a difference in the everyday scheme of things? At this juncture, we may claim that an inflection or a tipping point has been reached. What this means is that in the past 4-5 years, scientists and industry have been able to develop small and intermediate-scale quantum computers in their labs [Ref 8, 9].



Prof. John Preskill, a very senior scientist at the California Institute of Technology, has coined a term called NISQ, which stands for Noisy Intermediate Scale Quantum [Ref 10]. This refers to a class of quantum computers which are currently being built and which will be developed in the near foreseeable future. These are systems with 20-1000 qubits which are highly error prone. The current technology does not have the wherewithal to perform sufficient error correction. To give a feel of error rates, in current (NISQ) quantum computers error rates are of the order of 0.1% to 1%. An error rate of 0.1% means that on an average, for every thousand instructions that are executed on the computer, there is 1 error.

The below table is from Google research labs [Ref 11], which shows the number of qubits on the x-axis and the error rates on the y-axis. For effective quantum computers, the error rate cannot exceed 10^{-2} which is the threshold (that is error rate should be not more than 0.01%). Once we are able to develop quantum computers with more than 100 qubits (the blue area at the bottom of the graph) some applications which may be computationally more efficient than classical computers could be developed. To be able to achieve a significant benefit over current classical systems, we need to develop quantum computers with 100000 or more qubits and error rates less than 10^{-4} as shown in the green area.



FACULTY BLOG

QUANTUM COMPUTING

Dr. Mandar Pande

There is a huge amount of R&D being done at a global academia and industry scale (with China, USA and Europe leading from the front) to build quantum computers beyond the NISQ and develop fascinating and novel applications which we may not even have any idea about and which we cannot develop on current classical computing systems.

I look forward to sharing some more interesting stuff in my later blogs..... not develop on current classical computing systems.

I look forward to sharing some more interesting stuff in my later blogs.....

References:

1. https://en.wikipedia.org/wiki/Computational_complexity

2. <https://cra.org/cra/wp-content/uploads/sites/2/2018/11/Next-Steps-In-Quantum-Computing.pdf> (Next Steps in Quantum Computing: Computer Science's Role)

3. <https://arxiv.org/abs/1605.03590> (Elucidating Reaction Mechanisms on Quantum Computers)

4. <https://arxiv.org/abs/1808.10402> (Quantum computational chemistry)

5. <https://arxiv.org/abs/1706.05413> (Quantum Information and Computation for Chemistry)

6. <https://www.nature.com/articles/s41467-017-01362-1> (Mixed-quantum-dot solar cells)

7. <https://arxiv.org/abs/quant-ph/9508027v2> (Polynomial-Time Algorithms for Prime Factorization and Discrete Logarithms on a Quantum Computer)

8. <https://www.nature.com/articles/nature08812> (Quantum Computers)

9. <https://www.pnas.org/content/114/13/3305> (Experimental comparison of two quantum computing architectures)

10. <https://arxiv.org/abs/1801.00862> (Quantum Computing in the NISQ era and beyond)

11. <https://www.tomshardware.com/news/google-72-qubit-quantum-computer,36617.html> (Google Unveils 72- Qubit Quantum Computer with Low Error Rates)

STAR ALUMNI

MEHER MEHTA

Dhruvi Luhar



Star Alumni of December 2018 is Meher Mehta. He is currently Director of Strategic Client Partner at Capgemini. He completed his MBA in IT Business Management from SCIT. He pursued his bachelor degree from Indian Institute of Technology, Bombay and BSc. IT from University of Bombay. He is a Senior Account Director across the Digital, Consulting, Technology and Outsourcing Services Industry with a consistently proven track record of success across 5 eographies and specific expertise areas:

1. Strategic Account & Relationship Management, Sales Transformation, Large Deals Shaper

2. Complex Transition and Due Diligence SME

3. Delivery Risk Management

He is extremely passionate, committed, creative and a highly motivated individual specifically in areas of Account Expansion and Transformation, Business Model Innovation and driving High-Performance Teams to deliver Business Outcomes, by analyzing Business needs, Industry trends, leveraging alliance ecosystem and identify solutions aligning to client requirements. He set the benchmark a level ahead for the SCITians with his achievements and interest in Business Development.

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