

زیرات
Winter 2015

“ZEEST”, PIEAS QUARTERLY NEWSLETTER

Pakistan Institute of Engineering and Applied Sciences Nilore, Islamabad

Remembering young sages, who were martyred in Peshawar school attack.

16th of December, 2014 will be remembered as one of the most tragic days of our sixty seven yearlong history as a nation. The assailants of Army Public School, Peshawar demonstrated a horrible savagery. We, as Pakistanis, must ensure elimination of such heinous crimes. We have a firm belief that the innocent martyrs shall be enjoying a pleasant life in the orchards of Paradise. May Allah grant peace and patience to the bereaved families!

Rector PIEAS, Dr. Muhammad Aslam

The tragedy perpetuated by terrorists in APS Peshawar has aggrieved and distressed the whole nation immensely. May Allah grant fortitude to the families of the martyrs to bear the loss of their loved ones. This is not an isolated event though; thousands of Muslims and Non-Muslims have been mowed down in recent years by the forces of evil in the name of glorifying the religion. Let us understand that there are no quick fixes to curb these barbaric acts and heinous crimes against humanity. The Frankenstein that has been nourished in the garb of strategic asset by the state over last thirty years or so can only be defeated by establishing a just and humane society engrained with tolerance for dissent. To accomplish this task, it is the responsibility of our religious and political leadership to make bold and sensible decisions within the framework of constitution and basic human rights.

Head Student Affairs Division, Dr. Muhammad Arif

I strongly condemn the cowardly and horrific attack on the Army Public School in Peshawar, on December 16th 2014. It is an unspeakable brutality that has claimed lives of the young children and staff of the school along with their principal. There can be absolutely no justification for targeting children in this way. The killing of innocent children is contrary to Islam. It has shaken me deeply.

Prof. Engr. Dr. Mohammad Javed Hyder



“Youth: the hope, the future, the guarantee of magnificent tomorrow..... But, 12/16/2014 told another story of brutal description. I hoped the news of Peshawar massacre would be a nightmare but not reality. I felt bruised. I wish patience and heavenly reward for the affected families.”

Advisor PIEAS Literary Society, Dr. Abdul Jalil

It was not an ordinary act of terrorism. It was the most brutal murder of young sages and scholars. Scholars who were meant to bring wisdom to the land that had been plagued by extremism. It is tragic to see men becoming savages, who do not even care about the flowers of the garden of Almighty Allah. The damage is irreversible and the pain is everlasting. It was the hatred that made man worse than an animal. But how to cure hatred? , Surely not with hatred. It is a dilemma that we all must solve, because if we don't, this hatred might destroy the very foundations of this country and this nation.

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اک ننھے مجاہد کی ماں

پوچھنے پر خاموش ہے کیوں لعل میرا؟
ماں کی سسکیوں سے کیوں نہیں ہے ہلتا
یوں کیوں مرجھا گیا ہے یہ چاند کھلتا
سرخ رنگ میں لپٹا ہے بھلا کیا ہوا ہے؟
روتی ہوئی ماں کی یہ دل ہلاتی صدا ہے
مانا ناراض تھا اسکول جانے سے پہلے
پر اتنا تو لحاظ کر اس سسکتی ہوئی ماں کا
اٹھ کر بیٹھ میرے لعل کیوں چپ ہے؟
دیکھ تیرے لئے یہ کیا ہے بنایا
بس اٹھ میرے شہزادے
جانے سے پہلے تھی تیری جو فرمائش
میری جان سے بڑھ کر ہے تیری خواہش
کہہ کر گیا تھا ماں ۱۱ انتظار کرنا
پوار کروں گا میں تیرا ہر سپنا
تانے کھڑی ہوگی سر کو فخر سے
کیوں مجھ سے اب یوں ہوا تو خفا ہے؟
اٹھ کر بیٹھ میرے لعل کیوں چپ ہے؟

عثمان اشرف



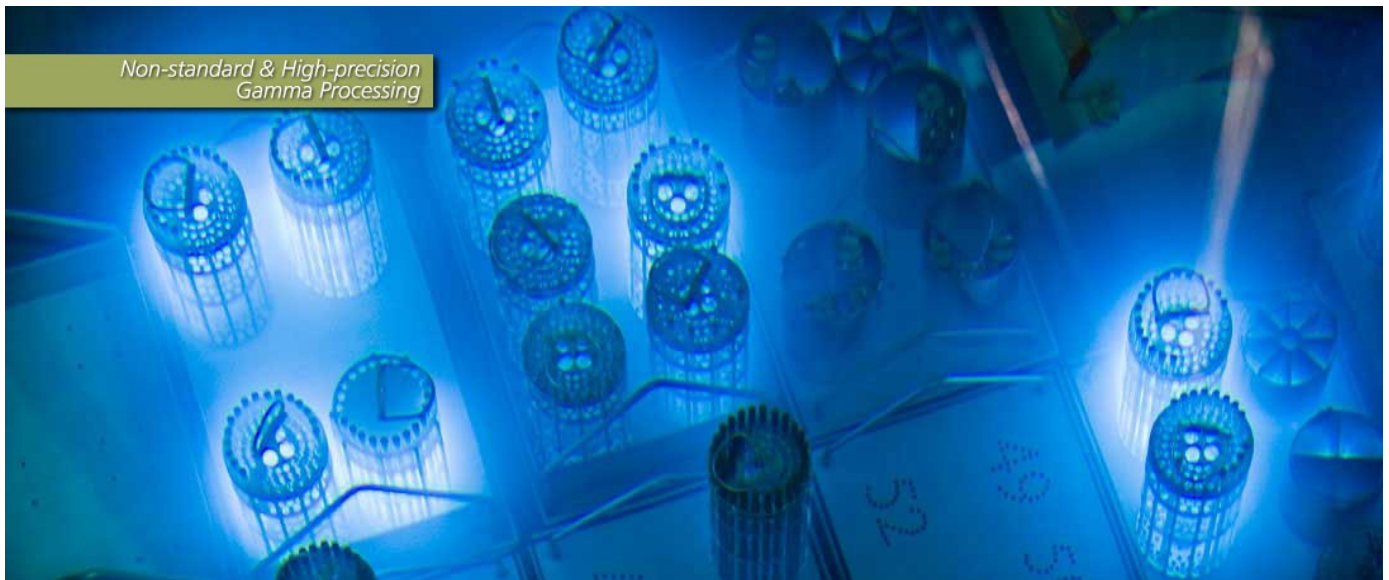
Gamma Radiation Sterilization and Medical Devices

Dr Asuman Yekta Özer, Head, Department of Radio pharmacy, Hacettepe University, Ankara, Turkey gave a talk on 'Gamma Radiation Sterilization and Medical Devices' in PIEAS Colloquium on Wednesday, November 19, 2014, at 14:00 hrs, in the Teleconference Hall, A-Block, PIEAS.

Introduction:

Prof. Dr. A. Yekta Özer graduated from Faculty of Pharmacy, Hacettepe University, Ankara, in 1975 and became an assistant in the Department of Pharmaceutical Technology. She got her PhD degree in 1981 and Associate Professorship in 1988. She worked in the Department of Pharmaceutics, Utrecht University. She was promoted to full Professor in 1994. She is serving as Secretary General of TUFTAD (Association of Turkish Pharmaceutical Technology Scientist) since its start in 1991. She became first Head; Department of Radio pharmacy established in 1993 and has been carrying out this responsibility since then. She established Turkish Association of Radio pharmacy and is currently giving scientific consultation to Turkish ministry of Health on licensing affairs. She has been the national coordinator of European union- Radio pharmacy certificate program since 2004.

She has more than 220 publications including research/review articles and book chapters. Her research interests include tablet technology, dissolution and stability studies, drug delivery systems (Liposomes, Niosomes, Spingosomes), Radiopharmaceutical, radiolabelling and gamma radiation sterilization. She is the recipient of 5 National and 5 International Awards.

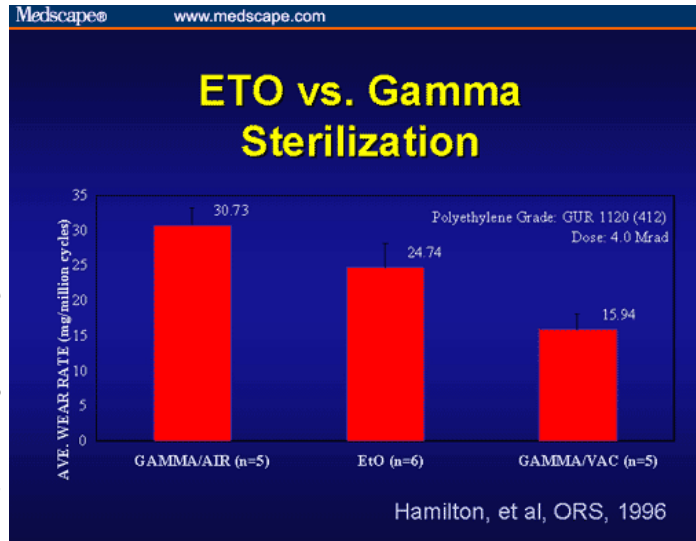


Summary of the Talk:

Dr. A. Yekta emphasized that sterilization through gamma radiation is a simple, proven process; safe, reliable, and highly effective at treating single-use medical devices. Employed by the medical manufacturing industry for over 40 years, gamma sterilization is an environmentally preferred option to other sterilization modalities, including ethylene oxide (EO) and e-beam. With the ability to penetrate products while sealed in their final packaging, gamma sterilization economizes the manufacturing and distribution process, while still ensuring full sterility of the product.

The Race for GaN Blue Laser Diode: A Tribute to Akasaki, Hiroshi and Nakamura (Nobel Laureates of 2014)

Dr Arshad Mahmood, Head of Materials Division, NILOP, gave a talk on 'The Race for GaN Blue Laser Diode: A Tribute to Akasaki, Hiroshi and Nakamura (Nobel Laureates of 2014)' in PIEAS Colloquium on Wednesday, December 10, 2014, at 14:00 hrs., in Teleconference Hall, A-Block, PIEAS.



Introduction:

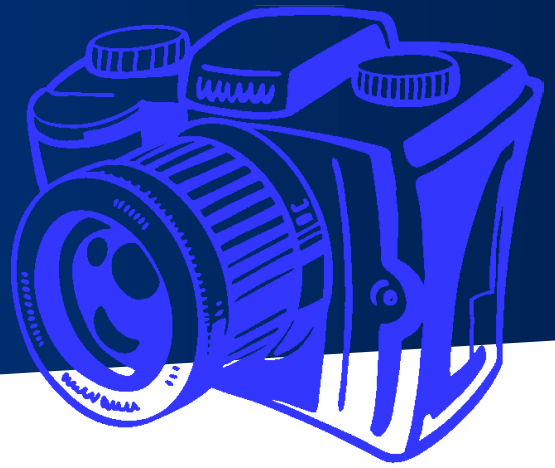
Dr. Arshad Mahmood is a deputy chief scientist and Head; Material Science Department at NILOP. He is an active researcher in the field of semiconductor science and technology. He has published more than 60 research papers in international journals. He established material science department in NILOP and currently he is a project director of a project entitled “research and fabrication of laser diode a current application of nanotechnology”. In this project he has established several laboratories including synthesis, characterization and device process facilities. His main focus is on synthesis of GaN based LED/LDs. These devices are becoming increasingly important in many fields such as: Biomedical, photodynamic therapy, entertainment and display, graphic arts, holography, inspection, instrumentation, laser pumping, optical data storage (CD, DVD-ROMS), Sensing, LIDAR, pollution monitoring, trace element sensing, high resolution spectroscopy and especially in optical communications.

In 2014, Akasaki, Hiroshi and Nakamura got the Noble Prize in Physics, on GaN blue laser diode.

Dr Arshad will deliver a talk on the overview of GaN based laser diode: a tribute to these noble laureates.

PIEAS NEWS

AN OVERVIEW OF THE
PAST FEW WEEKS



PIEAS Volunteers Society Organized a Fund-Raising Campaign

PVS started a campaign to collect funds for the victims of the flood. Students and teachers actively participated. Donations were made by almost every student on the campus and a fund of more than 50,000 was collected. PVS made sure of getting these contributions to the deserving people.

Intra PIEAS Badminton Competition

Currently there is an Intra PIEAS badminton competition going on. Games are organized to find out whos really is the champion in PIEAS of this



game. Winners will be declared at the end and certificates would be handed out to the deserving ones. So if you happen to have a good hand in badminton, you know where you want to be.

PIEAS Annual Magazine Dareecha Was Published And Distributed Among The Students

ASME Tests Cancelled

A series of mock tests were prepared by ASME for



GRE and TOEFL. Unfortunately these tests were cancelled due to country wide security issues.

NUKTA Annual Buffet:

A dinner has been arranged for NUKTA team members on the upcoming Tuesday 23rd December. The event was a big success due to contribution of all the team members. PIEAS Performing Arts Society and PIEAS Debating Society will be joining hands for the arrangement of this treat.

IEEE Academic PIEAS

Inauguration:

The grand launching ceremony of IEEE Academic was held on Thursday December 18, 2014 at PIEAS Auditorium, Islamabad. IEEE PIEAS SB is the very first student branch in IEEE Islamabad Section to launch

What is IEEE Academic?

IEEE Academic is:

- ◆ Dozens of teams from all over the world: Teams in various universities and schools from over 15 countries.
- ◆ Students and professors working together: Students are involved at all levels of the project and work side-by-side with their professors to make sure videos are useful for students.
- ◆ Creating free educational multimedia material: All the content will be available to everyone, everywhere, using any device on the web, for free!
- ◆ In their own languages, meeting their own needs: Education is local, and content should be created locally, based on what is needed on the ground.
- ◆ Inventing new tools for education: Pooling our experience as students, teachers, and



(Counselor IEEE PIEAS SB) and other senior faculty members. Talha Yasin (Member IEEE YP PIEAS) is now acting as the first Chair of IEEE Academic PIEAS.

Ceremony started with Tilawat-e-Quran and Naat. The Counselor IEEE PIEAS Student Branch Dr. Haroon-ur-Rasheed introduced the branch to audience as well as gave an overview about its previous activities. Talha Yasin explained in detail about IEEE Academic project as well as the future plans of the chapter. Dr. Inaam-ur-Rehman and Chief Guest Syed Yusuf Raza were also called on stage to say a few

LaTeX Workshop

IEEE PIEAS Student Branch arranged a workshop on LATEX on December 11, 2014.

LaTeX is a document preparation system and document markup language. It is widely used for the communication and publication of scientific documents in many fields including mathematics, physics, computer science, statistics, economics and political science.

It was arranged in the Computer Centre. Dr. Waqas Ahmed from DEE was the guest speaker. Many students other than IEEE members attended the workshop. A basic knowledge and use of general tools of LaTeX were introduced. The response of the students was very positive. After the workshop, many students admitted that LaTeX is quite powerful and saves quite a time. They also said that this workshop was very helpful in introducing an important tool that would help them in future in preparing thesis and reports.

IEEE PIEAS SB plans to arrange these educational workshops on different topics to help the students of PIEAS in sharpening their skills and make them practical.

the IEEE Academic initiative.

Syed Yusuf Raza (Member Power, PAEC) honored the ceremony as Chief Guest. Professor Emeritus Dr. Inaam-ur-Rehman (Founder PIEAS) patronized the ceremony along with Dr. Muhammad Aslam (Rector, PIEAS), Dr. Haroon-ur-Rasheed

words. They were deeply impressed by the initiative and congratulated IEEE PIEAS Student Branch and its volunteers for doing such an extraordinary work for the betterment of society and spreading of education. They also assured that their support will always be ready for this cause.

Certificates were distributed to Chair IEEE PIEAS Student Branch Usman Amin Fiaz and Chair IEEE Academic PIEAS Talha Yasin by the Chief Guest. Shields were given to Chief Guest Syed Yusuf Raza, Dr. Inaam-ur-Rahman, Rector PIEAS Dr. Muhammad Aslam and Dr. Haroon-ur-Rasheed.

To conclude the ceremony, cake was cut to mark the beginning of IEEE Academic PIEAS.

SEMA'15



Shell Eco-marathon challenges student teams from around the world to design, build and test ultra-energy efficient vehicles. The winners are the teams that go the furthest using the least amount of energy. The events spark debate about the future of mobility and inspire young engineers to push the boundaries of fuel efficiency. The event spans over 3-4 days and observes an attendance of 15-20 thousand people including students from all over the continent from 250-300 universities of different countries, as well as audience of all age groups that

have come to support and watch this event.

The Eco-marathon has seen Pakistani teams participating enthusiastically since 2009, more teams from various engineering universities in Pakistan have entered each year, joining others from all over the continent at the Sepang International Circuit in Kuala Lumpur, Malaysia, or Luneta Park, Manila, Philippines. This year, there are nearly 20 teams participating in this competition from Pakistan.

The competition aims to create interest in alternative energy for meeting the deficit of conventional fuels, as well as the search for greener vehicles with fewer emissions. The competition has captured the interest of young Pakistani engineers. This year the competition will be held in Manila, Philippines and it promises to be bigger and better than ever.

PIEAS participated first time in Shell Eco Marathon Asia '14 and got to the track by successfully passing the technical inspection. It was an

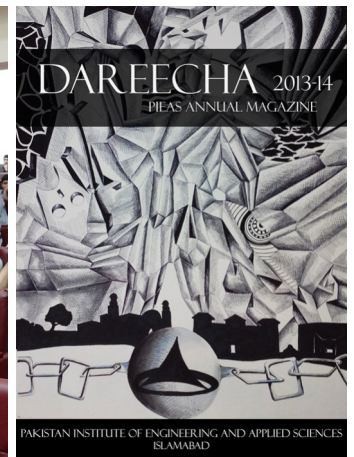
honor because only two Pakistani universities have passed the technical inspection and PIEAS was one of the two. Moreover PIEAS driver of the car has the distinction of having the minimum escape time from the car, among all the universities of Asia participating in the competition. After our success in the previous competition, we have been invited to compete again in the 2015 SEM.

It is a privilege to be representing our country at the Shell Eco Marathon and our main aim is to showcase the aptitude and talent of forthcoming Pakistani engineers to the world. This time we are designing an Ethanol Powered Engine Car that reduces emissions and will help make Pakistan Green and pollution free (In shaa ALLAH).

Our aim this year is to hit the maximum mileage mark ever made in ethanol and gasoline category. For this we have made our best possible efforts in minimum resources. 150 km/L in ethanol and 100 in gasoline is our primary target.

Dareecha'14 Inauguration Ceremony

PIEAS 3rd Annual Magazine



The inauguration ceremony for the annual magazine of PIEAS “Dareecha” for the year 2014 was held in the PIEAS Auditorium on 26th of November. It was a wonderful moment and a delightful achievement. Balance was once again restored to the dynamic and commendable legacy of PIEAS annual magazine since it was compiled and published in due time.

The chief guest for the evening was Pro Rector PIEAS, Nasir Majid Mirza.

Dr. Abdul Jalil addressed the audience and appreciated the prolific efforts of team Dareecha. He showed his absolute pride and trust in the efforts put in by the society in establishing the authority of literature in the university. He emphasized upon the significance of book reading. He in a euphemized but purely critical manner emphasized upon the contrast between national and foreign politicians. He argued that our politicians are divested of the habit of newspaper and book reading which is a dilemma considering the embroiling current situation of country and advised the audience to take a leaf from the books of great American presidents who had or has a daily routine of book reading. With his judicious words he bit adieu.

Certificates were distributed to the team members of Dareecha'14. Nasir Majid handed the certificates to the members. Prizes were also given to the best Urdu, English essay, and prose writer for Dareecha'14.

In the end the chief guest Nasir Majid was asked to share his thoughts with the audience. He was presented with a copy of magazine earlier and he expressed latter that it impressed him so much that he couldn't take his eyes off it. Though he hadn't come up with a prepared speech but he couldn't have done better than what he did on the occasion. He appreciated the team effort for producing Dareecha on their own and repeatedly seemed incredulous on how a team so young could come up with a magazine so incredible? (He was reading it for some time and holding it during the speech). He longed that the tradition of annual magazine will carry on. He also desired to seek help of students in improving the Research magazine of PIEAS.

NUKTA' 14

An Overwhelming Display of Art, Talent and Confidence



Report By: Wajeeha Akbar, Mahnoor Aftab, Zukhruf Amjad, Sultan Abdul Wasay

Photographs by: Haseeb Shafaqat, Abdul Rafay Fiyaz, Ammar Qaseem

Preparations for NUKTA'14

The preparations for Nukta'14 started in October 2014. For convenience, the whole management team of Nukta' 14 was divided into subgroups that mainly included Registration, Finance, Lodging, Messing, Security, Transport, Decoration and Backstage teams. The registration team, headed by Mr. Hashaam Mehmood, worked efficiently and was able to gather registrations from more than 50 institutions just 3 weeks before event; that included 30 videos, 25 Dramas and almost 70 speakers. However after the screening process videos and dramas were reduced to 19 and 20 respectively while the number of speakers was increased to 80.

A grand budget was approved for the event and the finance team headed by Mr. Hammad Aslam was responsible for managing all the purchasing for event. The decoration team, headed by Ms. Mahnoor Aftab, worked hard during last week before Nukta '14 and decorated entire auditorium with splendid ideas. Abdullah Tariq and Abdul Wasay were responsible for entire documentation and kept record of every approval before event. All preparations for messing and lodging were done one day before Nukta'14. Mr. Hammad Hassan and Mr. Abdul Wahid handled every issue very well and it was result of their efforts that Nukta '14 management team was more organized and more enthusiastic compared to last year.



NUKTA'14 Day 1

Months of pulling all nighters, missing classes, running from office to office for approvals; all that hard work had brought us to this day, the morning to 4th December, the first day of the biggest event in the academic calendar of PIEAS – Nukta'14.

Nukta'14 – referring to the Urdu word 'dot' or perspective, is the third installment of the distinct All Pak event held under the banner of PIEAS Performing Arts Society and PIEAS Debating society that hosts students from all over Pakistan and provides them with a platform to showcase their talent in the field of Declamations, Dramatics and Videography. Promising to be bigger and better than before one could feel the buzz of excitement around the university prior to the beginning of the event, the PIEAS auditorium was decorated to impress – and so were the host team. Looking at their determined faces now, you couldn't tell how most of them had stayed up most of the night making last minute arrangements.

The reputable heads presiding over the event were Hammad Hassan (President PPAS) and Abdul Wahid (President PDS), under their guidance more than 500 delegates from over 20 schools around the country participated in the event, making it one of the most successful events to date.

As per schedule, the day would start off with the first round of Declamations, followed by a short break after which the event moved on to the Dramatics and Videography part of the competition.

The house was opened by Faraz Hassan of BS 14-18 and the event was headed by Abdul Wahid and Waleed Yousaf as the Chair and Vice-Chair. The esteemed judges for this round were Mr. Abdul Wahab, Mr. Waleed bin Shahid, Mr. G.M Shah, Mr. Zohab Ahmed, Mr. Kamran Ashraf and Mr. Faisal Fateh. Notable declamations in this round were done by students from MAJU, EME, NUST, UET Taxila and RMC Rawalpindi. After a round of intense and inspiring declamations, the competition suspended and the participants took this time to explore the food and campus of PIEAS.

The next segment of the competition, comprising of dramatics and videography begun soon afterwards and the PIEAS auditorium packed up as the audience awaited the performances. The esteemed judges for this section of the competition were Mr. Taufeeq Shah and Mr. Aslam Mughal for dramatics, Mr. Sajjad Munir for videography and Mr. Anik-ur-Rehman for both categories. The auditorium was graced with the presence of Mrs. Riffat Nazir, one of the most glorified reporters and producers working with Pakistan Television (PTV).

The day ended on a high note, with distinguished performances from Genuine Fankars, UET Taxila, MAJU, Hamdard University and CASE. Standouts in the videography category included



Renowned news reporter, Ms. Riffat Nazir



NUKTA'14 Day 2

The second day of NUKTA started with the same amount of enthusiasm as the end of Day 1. The day started with the name of Almighty Allah and then the first round of declamation continued. Every participant did his/her best to prove their point of view on the selected topic. The session lasted for approximately 6 hours and at the end of session judges were called to the stage to give their critique and advice to the participants.

After the scheduled break of about an hour, the second session started with the announcement of debaters that had been selected for Round 2. The qualified teams included Punjab University Lahore, Government Collage University Lahore, UET Taxila (Team A), NUML Islamabad, BZU Multan while individual winners of English were from LUMS, Women Post Collage Haripur, UOG, UET Taxila and of Urdu were of

Rawalpindi Law Collage. Opening of dramatics segment was done by IST after which dramas and videos were played alternatively. The dramas that performed on this day were from Bahria, UOL, Iqra, Comsats (Wah) and GEB Mirpur. Videos included LUMS, K.E Medical College, UOG, NCA and FC. With the heart throbbing performance of Bahria University day came to an end.



NUKTA'14 Day 3

The 3rd and the last day of NUKTA began at 10:30 am on Sunday. The program commenced with the declamation session of the qualified declaimers of 2nd round. In this session the responsibility of chair was taken by Mr. Abdul Wahid and Mr. Waleed Yousaf. The post of vice chair was shared by Khawar Latif, Abdaal Khalid and Abdullah Sani. There were 18 declaimers and to prove their point each of them was given 4-6 minutes. In this small duration of time, the judges had to select the best declaimer of all Pakistan Declamation, Nukta'14. This session continued for 5 hours. Then our own PIEAS fellow Mr. Khawar Latif closed the house with his brilliant speech. Afterwards, all of the judges were requested to come on the stage to give their valuable views and advices to the declaimers.

The event continued with the 2nd session that included dramatics and videography competition. Mrs. Kanwal Naseer was the honorable chief guest for this session. It started with the wonderful drama of PU Law College Lahore. After this BNU, BZU, GCU Sialkot and performed. During this the videos of BNU, UOG, PU Lahore, and BZU were played. This session continued for 6 hours and ended with the breath taking performance of Punjab University Lahore. While the judges were compiling results videos made by the members of PPAS were played and many participants voluntarily came to perform.



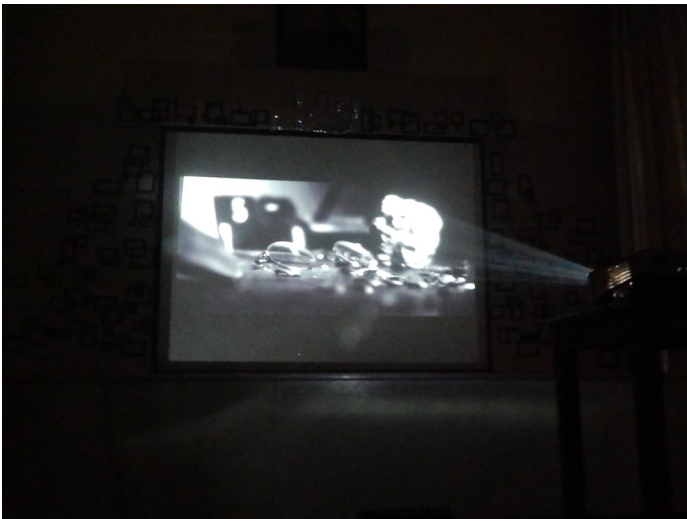
After half an hour judges came back with the compiled results.

First of all Mr. Hammad Hassan, Event head of NUKTA, and Mr. Abdul Wahid, president PDS, were requested to come for the speech and appreciation of the team members of NUKTA. They called each team with their head on the stage to give them a big round of applause for their hard work. Then our honorable chief guest was requested to come on the stage to receive her shield and all other judges of the dramatics, videography and declamation were given shields.

First of all the results of declamation were announced. Started with the individual category English 3rd position was awarded to the Nida Zulfiqar of UET Taxila, second position was given to Sidra Baig of WPGC Haripur and 1st position was awarded to the very deserving, Sibtain Raza of PU Lahore. Then the results of individual category Urdu were announced in which 3rd position was given to Iqra Kiran of UET Taxila, 2nd position was given to Adnan Nawaz of GCU Lahore and the best debate award was given to an incredible debater Huzaiifa Anwar PU Lahore. And the team trophy went to PU Lahore.

After this, results of videography were declared in which award for best camera work was given to video "Sadkay jaon kismat" by BNU. Best Screen Play award was given to PU Lahore for video "Hurr se hadayat tak". Best Editing was awarded to the video "Button Man" by FC College Lahore. Best Direction award was given to "Chan Mere Makhna" by UOG. Finally Best Acting award was given to "Hurr se hadayat tak" by PU.

Finally the results of dramatics were announced in which Mohsin Mohiudin from IST was declared as





From left to right: Renowned PTV News anchor, Ms. Kanwal Naseer; Director Quality Assurance Cell PIEAS, Dr. Abdul Jalil; Head Student Affairs Division, Dr. Muhammad Arif

the Best Actor and Maira from BNU was declared as the best actress. Award of Best Actor in Supporting Role was given to Ammar from UOL and award for best actress in supporting role was given to Aimen Nasrullah of GEB College. Zakia Munaf was declared as Best Actor in Negative Role. Best script award was given to Dictionary by UOL. Award for the best direction was given to "Tamasha" PU Lahore. Best Production was awarded to "Kerta kiya na Kerta" performed by IST. Finally the best drama award was given to incredible drama "Tamasha" performed by PU Lahore and best mime was awarded to GIKI.

After formal thanks to chief guest, judges and Dr. Muhammad Arif Gilgiti, SADiv PIEAS, NUKTA'14 came to an end.



Renowned Speakers and Judges for Declamation from left to right: Mr. Zohab Ahmad, Mr. Kamran Ashraf, Mr. G.M. Shah, Mr. Waleed bin Shahid



From Left to right: A renowned Speaker and Declamation judge, Mr. Syed Abdul Wahab; Declamation judge, Mr. Faisal Fateh; Dramatics and Videography Judge, Mr. Sajid Munir



From Left to right: Mr. Aslam Mughal, Mt. Taufeeq Shah, Mr. Aneeq Ur Rehman



A small portion of Nukta's Management Team

ڈاکٹر محمد جاوید حیدر



ڈاکٹر محمد جاوید حیدر 30 سال سے پیاس سے وابستہ ہیں۔ آپ نے زیادہ تر تعلیم بیرون ملک حاصل کی۔ آپ نے Rensselaer Polytechnic Institute USA سے مکینیکل انجینئرنگ میں PhD کی۔ آپ پیاس میں فیکلٹی آف انجینئرنگ کے ڈین اور مکینیکل انجینئرنگ ڈیپارٹمنٹ کے سابق ہیڈ رہ چکے ہیں۔ اس کے علاوہ آپ انفارمیشن اینڈ پبلک ریلییشن ڈیپارٹمنٹ کے سابق ہیڈ بھی ہیں۔ ڈاکٹر صاحب کی ہمارے ساتھ ایک نشست کا حال پیش ہے۔

زیست: سر اپنے بچپن کے بارے میں کچھ بتائیں کہ بچپن کیسا گزرا؟
ڈاکٹر جاوید حیدر: میں بچپن سے ہی سنجیدہ مزاج ہوں۔ زیادہ تر پڑھائی میں ہی مصروف رہا۔

زیست: طالب علمی کا دور کیسا گزرا؟
ڈاکٹر جاوید حیدر: طالب علمی کا دور بہت اچھا تھا۔ مجھے پڑھنا اچھا لگتا تھا۔ زیادہ تر تعلیم میں نے بیرون ملک حاصل کی۔

زیست: سر اپنی پروفیشنل لائف کے بارے میں کچھ بتائیں؟
ڈاکٹر جاوید حیدر: پروفیشنل لائف بس ادھر پیاس میں ہی گزری ہے۔ تیس سال سے زیادہ عرصہ ہوا ہے مجھے PAEC سے وابستہ ہوئے۔ پہلے سی این ایس (پیاس کا پرانا نام) میں پڑھاتا رہا اور اب میں پیاس میں پڑھا رہا ہوں۔ یہ میرے لئے گھر کی طرح ہے۔

زیست: سر ایک استاد کی حیثیت سے آپ پاکستان کے نظام تعلیم میں کس قسم کی اصلاحات لانا چاہیں گے؟
ڈاکٹر جاوید حیدر: ہمارے نظام تعلیم میں سب سے زیادہ فقدان تربیت کا ہے۔ پہلے اسکول میں طلبہ کو اخلاقیات کا درس دیا جاتا تھا اور بڑوں کا ادب سکھایا جاتا تھا مگر اب سکولوں کا بنیادی مقصد پیسہ کمانا بن گیا ہے۔ آج امتحان میں زیادہ نمبر لینے تو سکھائے جاتے ہیں مگر دوسروں کا احترام نہیں سکھایا جاتا۔

زیست: سر آپ پیاس کو بطور درس گاہ کیسا سمجھتے ہیں، آپ کے خیال میں بطور درس گاہ کس قدر بہتری کی ضرورت ہے، غیر جانبدارانہ رائے

دیں۔

ڈاکٹر جاوید حیدر: اگر تعلیمی لحاظ سے دیکھیں تو پیاس میں طلبا اور اساتذہ میں interaction کم ہے۔ اس کو بہتر کرنے کی کوشش کرنی چاہیے تاکہ طلبہ زیادہ بہتر انداز میں سیکھ سکیں۔

زیست: آپ کے خیال میں انسانی تربیت میں صوفیائے کرام اور تصوف کا کیا کردار ہے؟

ڈاکٹر جاوید حیدر: انسانی تربیت میں صوفیائے کرام اور تصوف کا بہت بڑا کردار ہے۔ تصوف دراصل انسانی شخصیت کی روحانی تربیت کا نام ہے اور یہ تربیت صوفیائے کرام کرتے ہیں۔ ہماری بد قسمتی ہے کہ آج کل دنیاوی تعلیم تو دی جاتی ہے مگر روحانی تربیت پر توجہ نہیں دی جاتی۔ روحانی تعلیم سے ہی دل و دماغ کے درتچے کھلتے ہیں۔ تصوف ایک کٹھن راستے کی مانند ہے جسے اکیلے طے کرنا بہت مشکل ہوتا ہے اس لیے آپ کو راہنما کی ضرورت ہوتی ہے اور وہ راہنما صوفیائے کرام ہیں مگر لوگ اسے تسلیم نہیں کرتے اس میں کچھ قصور جعلی پیروں کا بھی ہے جن کے باعث ایک عام انسان کے لیے ان کی پہچان مشکل ہو گئی ہے لیکن اگر کوئی کوشش کرے تو صحیح اور غلط میں فرق معلوم کر سکتا ہے۔

زیست: سر ادب سے لگاؤ ہے؟

ڈاکٹر جاوید حیدر: جی ہاں! بالکل ہے۔

زیست: اردو ادب میں زیادہ دلچسپی ہے یا انگریزی ادب میں؟

ڈاکٹر جاوید حیدر: اردو ادب زیادہ پسند ہے۔

زیست: ادب سے وابستگی بطور قاری ہی ہے یا لکھاری بھی؟

ڈاکٹر جاوید حیدر: بطور لکھاری شاعری کرتا رہا ہوں اور مختلف مضوعات پر مضامین بھی لکھے ہیں۔

زیست: سر اپنا پسندیدہ شعر سنادیں۔

ڈاکٹر جاوید حیدر: اقبال کا شعر ہے:

زندگی کی اوج گا ہوں سے اتر آتے ہیں ہم صحبت مادر میں طفل سادہ رہ جاتے ہیں ہم

یہ شعر جب سے میں نے ملازمت شروع کی ہے میرے ساتھ ہے۔ بلکہ ہمیشہ میری میز پر لکھا ہوا موجود ہوتا ہے۔ یہ علامہ اقبال کی اپنی

والدہ کی وفات پر لکھی جانے والی نظم کا شعر ہے، اس وقت وہ لندن میں تھے اور واپس نہیں آسکے تھے۔

زیست: کوئی ایسی کتاب جو آپ بار بار پڑھنا چاہیں گے۔

ڈاکٹر جاوید حیدر: ممتاز مفتی کی کتاب ہے "الکھنگری"۔ ویسے تو یہ ایک ناول ہے مگر اس میں تصوف کی ساری حقیقت بیان کی گئی ہے۔ اگر کوئی تصوف کو سمجھنا چاہتا ہے تو اسے یہ کتاب ضرور پڑھنی چاہیے۔

زیست: سر آپ کے خیال میں کتابوں کی ایک طالبعلم کی زندگی میں کتنی اہمیت ہونی چاہیے؟ نصابی کتب کے علاوہ۔

ڈاکٹر جاوید حیدر: میرے خیال میں یہ بہت ضروری ہیں۔ یہ انسان کی سوچ کا دائرہ وسیع کرتی ہیں۔ مگر آج کل طلبہ کا کتابوں سے لگاؤ بہت کم ہو گیا ہے اور یہی وجہ ہے کہ آج کل آپ کو بہت کم اچھے شاعر اور ادیب نظر آئیں گے۔

زیست: آپ کے آجکل کے ادب کے بارے میں کیا خیالات ہیں؟

ڈاکٹر جاوید حیدر: آجکل ادب ہے ہی نہیں۔ آپ آجکل کے ڈرامے اور موسیقی دیکھ لیں۔ موسیقی میں کہیں اچھی شاعری نہیں نظر آئے گی۔ دو تین بے ہودہ جملے ہوتے ہیں یا اچھل کود۔ اسی طرح ڈراموں میں بھی چال بازیاں اور لڑنا جھگڑنا ہی دکھایا جا رہا ہے۔ ڈراموں کی اصل روح ختم ہو گئی ہے۔

زیست: آپ کے خیال میں موجودہ ملکی حالات میں ایک استاد پر کیا ذمہ داریاں عائد ہوتی ہیں؟

ڈاکٹر جاوید حیدر: استاد کو چاہیے کہ وہ اپنے طالبعلموں کو اخلاقیات سکھائیں، کیونکہ اگر اخلاقیات ہوں گی، تو لوگ سیدھے راستے پر چلیں گے، رشوت چھوڑ دیں گے، حرام چھوڑ دیں گے۔ غرض بہت سی معاشرتی برائیاں ٹھیک ہو جائیں گی، کیونکہ اگر افراتھیک ہو جائیں تو معاشرہ خود بخود ٹھیک ہو جائے گا۔

زیست: پاکستان اس وقت مختلف مسائل کا شکار ہے، آپ کے خیال میں وہ کون سے مسائل ہیں جنہیں آپ پاکستان کی تعمیر و ترقی میں سب سے بڑی رکاوٹ سمجھتے ہیں؟

ڈاکٹر جاوید حیدر: میرے خیال میں سب سے بڑی رکاوٹ تربیت کا فقدان ہے۔ ہماری موجودہ نسل کے لئے دولت ہی سب کچھ ہے اور وہ دولت کمانے کے لئے ہر طرح کے قانونی اور غیر قانونی طریقے استعمال کر رہی ہے جو بے شمار مسائل کا سبب بن رہا ہے۔ اور تربیت کی کمی کے باعث ہی معاشرے میں عدم برداشت بڑھ رہی ہے۔ اپنے آپ کو قائم رکھنے کے لئے اشتعال انگیز بیان بازی کی جاتی ہے۔ اس سب

نے ہماری سوچنے سمجھنے کی صلاحیتوں کو ختم کر دیا ہے جس کے باعث ہم مسائل حل نہیں کر پارہے ہیں۔

زیست: آپ نے بیرون ملک تعلیم حاصل کی، آپ کو ان کے اور پاکستانی تعلیمی اداروں میں کیا فرق نظر آتا ہے؟
ڈاکٹر جاوید حیدر: ہمارے تعلیمی اداروں میں کتابوں کی اہمیت کو نظر انداز کیا جاتا ہے۔ اکثر اساتذہ طالب علموں کو نوٹس دے دیتے ہیں کہ بس ان سے تیاری کر لو، جس کی وجہ سے طلبہ میں سوچنے کی صلاحیت کم ہوتی جا رہی ہے۔ جبکہ بیرون ملک ایسا نہیں ہے، وہاں کتابوں کو اہمیت دی جاتی ہے اور طلبہ کو ٹیکسٹ بک اور مضمون سے متعلق دوسری کتابوں سے مدد لینی پڑتی ہے جو ان کی سوچ کا دائرہ وسیع کرتی ہیں۔ اس کے علاوہ ترقی یافتہ ممالک میں طلبہ اساتذہ سے سوال کرتے ہیں کہ آپ نے ہمیں کیا علم دیا جبکہ ہمارے یہاں طلبہ کہتے ہیں کہ پڑھنا نہ پڑے اور ڈگری مل جائے۔ جب مقصد علم حاصل کرنا نہ ہو بلکہ صرف ڈگری حاصل کرنا ہو تو پھر ایسا ہی نتیجہ نظر آئے گا جو آج سب کو نظر آ رہا ہے۔

زیست: کوئی ایسی کامیابی جس پر آپ کو فخر ہو؟

ڈاکٹر جاوید حیدر: ہمیشہ سچ پر قائم رہا، کبھی جھوٹ کا سہارا نہیں لیا اور ہمیشہ حق بات کہی۔ میرے خیال میں یہی میرے لئے سب سے بڑی کامیابی ہے۔

زیست: کوئی شکوہ یا شکایت جو آپ کو اپنے طالب علموں سے ہو؟

ڈاکٹر جاوید حیدر: آج کل طلبہ کو پڑھنے کا شوق نہیں ہے صرف ڈگری چاہئے۔ اس کا یہ مطلب نہیں ہے کہ سب ہی ایسے ہیں۔ بہت سے اچھے طلباء بھی ملے جنہیں علم حاصل کرنے کا شوق تھا اور وہ اس میں کامیاب بھی ہوئے۔

زیست: سر پڑھنے والوں کے لئے کوئی پیغام یا نصیحت جو آپ دینا چاہیں؟

ڈاکٹر جاوید حیدر: جو بھی پڑھیں سمجھ کر پڑھیں۔ جب تک آپ سمجھنے کی کوشش نہیں کریں گے آپ کامیاب نہیں ہو سکتے۔ اس کے علاوہ یہ بات ہمیشہ ذہن میں رکھیں کہ وقت سے پہلے اور مقدر سے زیادہ نہیں مل سکتا، اس لئے دولت کے پیچھے مت بھاگیں اور مطمئن زندگی گزاریں۔

WRITER'S GUILD

THINK, WRITE AND INSPIRE

Lawrence M. Krauss

Written by: Basit Ali

A Universe from Nothing, Why is there something rather than nothing?

The deepest, most far reaching and sublime question “Why is there something rather than nothing?” has always been a cosmological mystery ever since it was first posed in the intellectual history in 17th century. From theology to philosophy, ontology to teleology to epistemology there have been enumerate answers given for this ultimate question but as far as scientific rationality and empirical studies are concerned, we have reached nowhere. Standing amidst the vastness of the ever expanding universe, sometimes with huge telescopes, sometimes with mathematical models, sometimes with melancholy and sometimes with faith, men stood and wondered “Why is there something rather than nothing?”

Why does this question matter so much? Ludwig Wittgenstein, the greatest philosopher of 20th century says “It is not how things are in the world that is mystical; it’s that the world exists.” And Arthur Schopenhauer, another great philosopher went on to say as much that those who don’t wonder about the contingency of their existence and the contingency of world’s existence are mentally deficient.

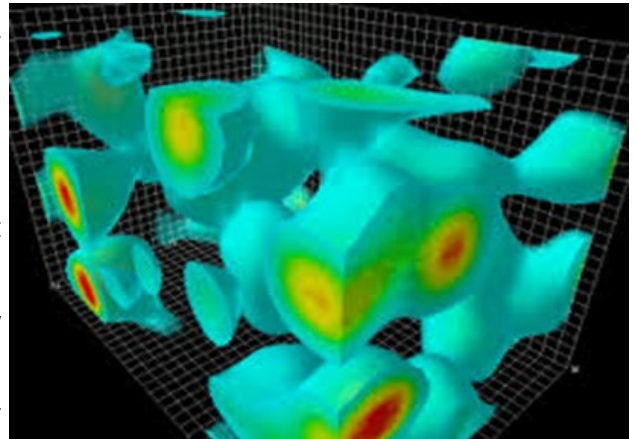
Lawrence M. Krauss is a theoretical physicist, cosmologist, professor of the School of Earth and Space Exploration and director of its Origin's Project at Arizona State University, America. He is the best selling author of “The physics of Star Trek”, “The fears of physics” and “A universe from nothing” among other great books. He, by this day has published more than 300 scientific peer reviewed journals and is hailed as a formal public intellectual.



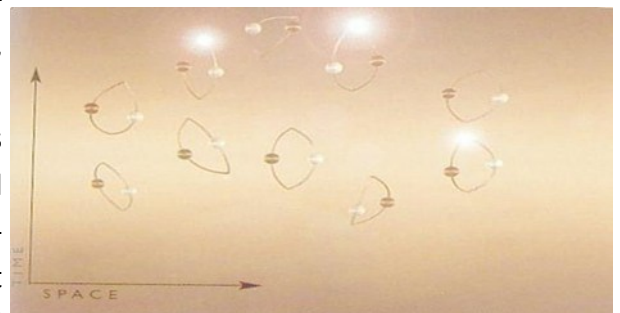
Science is the best guide to the nature of reality. The epistemology of our universe, with the lambda-cold dark matter (Λ CDM) model and all available observations (cosmic microwave background, abundance of light elements), is usually explained as an event of big bang aided by inflation, where a singularity underwent exponential expansion which is still going on. Big bang, inflation and expansion may well be considered as facts in scientific community but where did singularity come from, or how did it form still remains a mystery. This is a scientific question, not a theological one and science must answer it, but can it?

Since about 1960s and 1970 physicists, with the development of quantum mechanics, started to purport the idea that a universe could actually come from sheer nothingness or out of a void. Among great physicists of today who support the spontaneous origin of universe from nothing, Stephen Hawkins and Alex Vilenkin are the prominent ones, but never was this bright and breath-taking idea more popularized than it was by Lawrence M. Krauss.

Aristotle defined “nothing” as “What rocks dream of” while others define nothing as “Absence of something”. But nothing in science is different from that of philosophy. Nothing is though absence of something or in scientific terms can be defined as absence of space, time and matter or absence of space, time and energy. Something that has zero energy is actually nothing and can come out of nothing; with the development of flat model of our universe it has been proved that the total energy of our universe is zero. There is repelling gravity in outer space that plays the part of negative energy so the total energy of universe comes out to be precisely zero. Lawrence Krauss, supporting his insight with quantum mechanics says that nothing is actually something and it is unstable. If you take everything out of this universe, what you are left with is nothing or vacuum. Our vacuum is the fabric of cosmos and it is a bubbling, boiling gas of virtual particles which emerge and emerge out in it due to quantum fluctuations.



In classical physics (applicable to macroscopic phenomena), empty space-time is called the vacuum. The classical vacuum is utterly featureless. However, in quantum mechanics (applicable to microscopic phenomena), the vacuum is a much more complex entity. It is far from featureless and far from empty. The quantum vacuum is just one particular state of a quantum field (corresponding to some particles). It is the quantum mechanical state in which no field quanta are excited, that is, no particles are present. Hence, it is the "ground state" of the quantum field, the state of minimum energy. The picture on the left illustrates the kind of activities going on in a quantum vacuum. It shows particle pairs appear, lead a brief existence, and then annihilate one another in accordance with the Uncertainty Principle.



The Uncertainty Principle states that for a pair of conjugate variables such as position/momentum and energy/time, it is impossible to have a precisely determined value of each member of the pair at the same time. For example, a particle pair can pop out of the vacuum during a very short time interval.



The uncertainty of the position of the particle



The uncertainty of the velocity of the particle



The mass of the particle

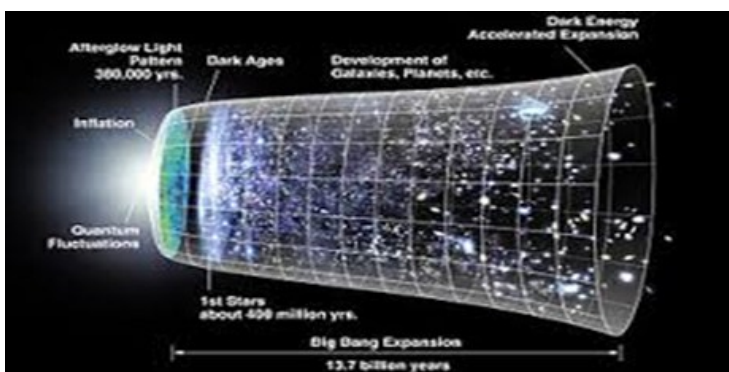
$$\Delta x \Delta p \geq \hbar \quad \text{Not smaller than Planck's constant} \\ \geq 1.054 \times 10^{-27} \text{ erg-sec}$$

Quantum fluctuation is the temporary appearance of energetic particles out of nothing, as allowed by the Uncertainty Principle, in the temporary change in the amount of energy in a point space, That means that conservation of energy can appear to be violated, but only for small values of t (time). This allows the creation of particle-antiparticle pairs of virtual particles. The effects of these particles are measurable.

We have to keep in mind that universe was created as a singularity underwent exponential expansion, where singularity itself was so small that not even quark could exist in it. Here Lawrence Krauss (in his book Universe from nothing) emphasized that a little quantum fluctuation could have formed the singularity which underwent expansion. A vigorous mathematical proof of the idea has also been given.

If particles like virtual particles can come out of nothing spontaneously, then why can't our universe? Or if there can be a slight change in quantum energy due to uncertainty, why can't singularity be formed spontaneously some 13.7 billion years ago?

These are few questions which have been raised with the advent of quantum mechanics. We may not know for sure why there is something rather than nothing but if we wish to draw philosophical conclusions about our own existence, our significance, and the significance of the universe itself, our conclusions should be based on empirical knowledge. A truly open mind means forcing our imaginations to conform to the evidence of reality, and not vice versa, whether or not we like the implications.



We have to keep exploring asking 'Why' and "How" instead of "Who?" We may try and fail or we may succeed but the final arbiter of this question will not come from hope, desire, revelation, or pure thought. It will come, if it ever does, from an exploration of nature.

Self Organizing Robots; The Largest Swarm Ever Created

Organizing entities and troops has been a pain in the head for far too long. Even today, the assembly lines in schools resemble with crooked timber. But Robots have exceeded far beyond this discipline.

Harvard computer scientists have successfully created a swarm of self organizing robots which they smugly declare as 'kilobots'. These kilobots have the capability to arrange themselves in random forms, shapes and formations. If a traffic jam of these bots occur during their movement, the nearby robots sense it and cooperate to fix it. They can even mimic 2D images as received by a computer. This mind-boggling technology is supposed to be a milestone in the upcoming robotic age.



<http://phenomena.nationalgeographic.com/2014/08/14/a-swarm-of-a-thousand-cooperative-self-organising-robots/>

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