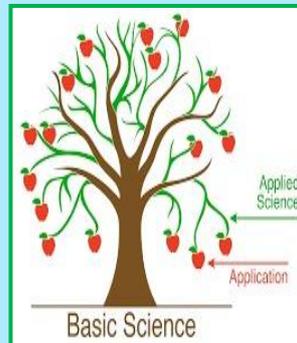


BNMIT Sciencia

Newsletter

Departments of Physics, Chemistry & Mathematics



Volume 2

Issue 2

June 2018

Vision and Mission of the Institute

Vision

To be one of the premier Institutes of Engineering and Management education in the country.

Mission

- To provide Engineering and Management education that meets the needs of human resources in the country.
- To develop leadership qualities, team spirit and concern for environment in students.

Department of Physics

Vision

To be a department to address the needs of application of physics in Engineering.

Mission

- To provide knowledge of Engineering Physics needed for understanding engineering courses.
- To provide a platform to keep abreast with current happenings in Science & Technology.
- To engage faculty members in research, to enrich teaching-learning process.

Department of Chemistry

Vision

Impart concepts of engineering chemistry for students to comprehend its applications in engineering solutions.

Mission

- Provide understanding of applications of chemistry in engineering.
- Develop concern for environmental issues and responsibility for preserving green environment.
- To engage faculty members in research, to enrich teaching-learning process.

Department of Mathematics

Vision

Mould the students to acquire mathematical skills required for engineering education.

Mission

- Provide platform to acquire abilities to evaluate problems using analytical / numerical / graphical techniques.
- Provide a background for relating mathematical techniques to solve real life problems.
- To involve faculty in research which enriches teaching-learning process.

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Message from the Editorial Team

Dear Readers,

Welcome to the June 2018 issue of the newsletter 'BNMIT Sciencia'.

The team of 'BNMIT Sciencia' is delighted to present the current issue of interesting and informative newsletter to our readers. The newsletter endeavors to reflect the values and the quality of our Institution. The presentation of the entire newsletter shows the innovative and creative indulgence of our students. A lot of thought has been put in bringing out this newsletter. We would like to express our appreciation to all those who have contributed articles in this issue. It is this willingness to make the effort to share knowledge, concerns and special insights that have made this issue possible.

About Departments

Department of Physics aims in training the future engineers with various aspects of fundamental physics, which makes them understand, develop and innovate, thus contributing to the advancement of technology. The Department has got well-established laboratory to provide good hands on experience of physics experiments to students, dedicated research laboratory and is actively engaged in research activities in the areas of Photo physics and Materials Science. It has fully fledged Research Centre, recognized by Visvesvaraya Technology University, Belagavi.

Department of Chemistry aims to impart high quality education by inspiring students to come out to compete globally. The Department has got well-equipped laboratory to provide individual attention to the students and also academically rich experienced and research oriented faculties in the areas of Corrosion, Medicinal Chemistry, Nano Technology and Pharmaceutics. It has fully fledged Research Centre, recognized by Visvesvaraya Technology University, Belagavi.

Department of Mathematics is equipped with full fledged, experienced, highly academically oriented and research oriented faculties in the areas of Fluid Mechanics and Graph Theory. The Department has been witnessing excellent results consistently and every year a good number of students are scoring cent percent. It has fully fledged Research Centre, recognized by Visvesvaraya Technology University, Belagavi.



Departments of Physics, Chemistry & Mathematics dedicate the current issue of "BNMIT Sciencia" to Stephen William Hawking. Stephen Hawking (8 January 1942 – 14 March 2018) was an English theoretical physicist, cosmologist and author. He was a Lucasian Professor of Mathematics at the University of Cambridge between 1979 and 2009. He was director of research at the Centre for Theoretical Cosmology at the University of Cambridge at the time of his death.

Antarctica's Largest Iceberg B-15 Is About to Die - Near the Equator

NASA scientists reported that, after drifting for nearly 20 years, the largest iceberg ever to break away from Antarctica's Ross Ice Shelf is about to disappear forever.



Iceberg B-15 broke off of the Ross Ice Shelf in 2000, floated three quarters of the way around Antarctica and is now veering north toward its doom.

Antarctica's largest iceberg is about to melt away near South America, after 18 years of drifting

Now floating northwest of the South Georgia islands near the tail of South America, the iceberg, named B-15, has travelled more than 6,600 miles from the ice shelf and is veering dangerously close to the equator. Satellite images taken from the International Space Station on May 22 confirm that the remains of the iceberg are on a crash course with warm tropical waters, where growing pools of melt water will soon "work [their] way through the iceberg like a set of knives," NASA glaciologist Kelly Brunt said in a statement.

The free wheel in', formerly Connecticut-size iceberg first embarked on its long cruise after breaking away from the Ross Ice Shelf in 2000, NASA said. At the time, it was the largest single chunk of ice ever to split off from the shelf, measuring 160 nautical miles long and 20 nautical miles wide. Currents swept the berg three-quarters of the way around Antarctica; then, it suddenly shifted northward into the southern Atlantic Ocean within the past year or two. The stately raft of ice has gradually splintered into many smaller pieces, most of which have already melted. The chunk observed from the ISS last month (its name is B-15Z) still has a surface area of about 50 square nautical miles, but it is likely nearing the end of its journey as it floats ever closer to the equator. According to NASA, icebergs have been known to rapidly melt once they drift into this region.

A large fracture is already visible at B-15Z's center, and smaller pieces are crumbling away from its edges. B-15 will be missed.

Climate Change Killed the Aliens - It Will Probably Kill Us Too, New Simulation Suggests

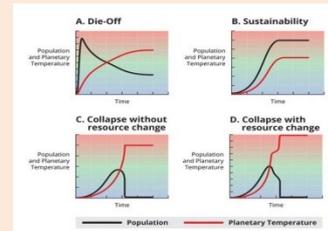
Did climate change already kill all the aliens we've been searching for?

According to astrophysicist Adam Frank, it's certainly a possibility — and whether humans are doomed to the same fate may already be out of our hands.

Frank, a professor of physics and astronomy at the University of Rochester in New York, is the lead author of a new paper published May 1 in the journal *Astrobiology* that aims to take what Frank calls a "10,000-light-year" view of anthropogenic (human-caused) climate change. Using mathematical models based on the disappearance of a real-life lost civilization here on Earth (the former inhabitants of Easter Island), Frank and his colleagues simulated how various alien civilizations might rise and fall if they were to increasingly convert their planet's limited natural resources into energy.



Using mathematical models, astrophysicists simulated how various alien civilizations might rise and fall as they used up their planet's natural resources.



Researchers simulated four common scenarios for the end of a high energy-use civilization. Three of them resulted in massive population losses.

"The laws of physics demand that any young population, building an energy-intensive civilization like ours, is going to have feedback on its planet," Frank said in a statement. "Seeing climate change in this cosmic context may give us better insight into what's happening to us now and how to deal with it."

The results, as you might expect, were generally pretty grim. Of four common "trajectories" for energy-intense civilizations, three ended in apocalypse. The fourth scenario — a path that involved converting the whole alien society to sustainable sources of energy — worked only when civilizations recognized the damage they were doing to the planet, and acted in the right away. Researchers simulated four common scenarios for the end of a high energy-use civilization. Three of them resulted in massive population losses.

"The first trajectory we found is what we call the die-off," Frank said.

In this scenario, the civilization's population skyrockets over a short period of time, and as the aliens guzzle energy and belch out greenhouse gases, the planet's temperature spikes, too. (In this study, temperature was used to represent human-made impacts on the planet's habitability via greenhouse gas pollution.) The population peaks, then suddenly plummets as rising temperatures make survival harder and harder. The population eventually levels off, but with a fraction of the people who were around before.

The second scenario is sustainability. Here, both the planet's population and its global temperature climb rapidly but then level off when the civilization recognizes how its resource management is affecting nature. To reach equilibrium, Frank said, the population would need to switch from resources that take a high toll on the planet (like oil) to more sustainable resources (like solar energy). Civilization is saved!

Both the third and fourth scenarios are called "collapse." Here, as in the "die-off" scenario, both the planet's population and the planet's temperature rise dramatically over a short period. But this time, when people start dying from a lack of basic resources, there are no survivors. Whether a civilization merely dies off or totally collapses depends on how sensitive the environment is and how quickly it responds to rising populations.

Even if the civilization realizes it's damaging the environment and makes attempts to switch to sustainable resources — a scenario called "collapse with resource change" — it's too late. The civilization might see a temporary slowing in the population decline, but eventually, it drops to zero anyway. The damage is done; civilization is doomed.

The difference between a sustainable future and a deadly collapse was largely dependent on a population's foresight — how soon they realized they were destroying their planet, and how quickly they took action. According to Frank, this difference should motivate humans to take climate change seriously.

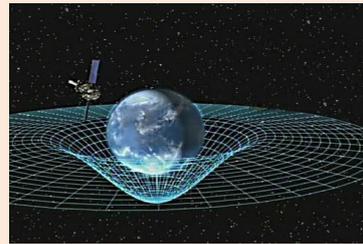
"Across cosmic space and time, you're going to have winners — who managed to see what was going on and figure out a path through it — and losers, who just couldn't get their act together and their civilization fell by the wayside," Frank said.

"The question is, which category do we want to be in?"

A new way to study our Universe:

Three American physicists Rainer Weiss, Kip Thorne and Barry Barish have won the Nobel prize 2017 in physics for the first observations of gravitational waves, ripples in the fabric of space time that were anticipated by Albert Einstein a century ago.

All three scientists have played leading roles in the Laser Interferometer Gravitational-Wave Observatory, or Ligo, experiment, which in 2015 made the first historic observation of gravitational waves triggered by the violent merger of two black holes a billion light years away. Prof Olga Botner, a member of the Nobel committee for physics, described this as **“a discovery that shook the world”**.



Two-dimensional illustration of how mass in the Universe distorts space-time

All three scientists, working mostly independent of one another, focussed on different aspects of electron microscopy, a technique that has been in existence for over eight decades. But it was thought to be suitable only for studying dead matter because when a powerful beam of electrons, which is used in electron microscopy as against light used in light microscopy, passes through a sample, it could burn through the biological material, defeating the whole purpose. The prize-winning laureates' discoveries over a span of four decades helped optimise “every nut and bolt” of the electron microscope, helping it re-emerge as an indispensable tool to study the molecules of life.

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Source: *Internet*

BASIC SCIENCE DEPARTMENT EVENTS

- **BNMIT Science Forum** organised a poster presentation competition on the topic “**Recent Advances in Science & Technology in solving Energy Crisis using alternate Energy Sources**”, for II Semester students of all the braches on the occasion of celebration of Science day on 28th Feb 2018.
- **BNMIT Science Club** organised a Lecture for first year Chemistry cycle students on 11th April 2018. **Shri Rajeeva Deekshit**, Chief Managing Director, Pyro Ecogreen Technologies Pvt. Ltd., Kanakapura has delivered a talk on the topic “**Ground water pollution**”.
- **BNMIT Science Club** organised a Lecture for first year Physics cycle students on 12th April 2018. **Dr. S.P. Basavaraju**, Retd. Prof., Dept. of Physics, BIT, Bangalore has delivered a talk on the topic “**Early History of Quantum Mechanics**”.

STAFF ACHIEVEMENTS

- Dr. J. Thipperudrappa, Prof. & HOD of Physics, Dr. Deepa H R, Assoc. Prof., Dr. Prasad K N N, Assoc. Prof., and Chandrasekar S, Asst. Prof., Department of Physics have published their research papers in reputed National and International Journals, presented their research papers in National and International Conferences during the year 2018.
- Dr. B K Jayanna, Prof. & HOD of Chemistry, Dr. Prathibha B S, Assoc. Prof., Dr. Prashanth M K, Asst. Prof., and Dr. Shanmuga Priya K, Asst. Prof., Department of Chemistry have published their research papers in reputed National and International Journals, presented their research papers in National and International Conferences during the year 2018.
- Dr. S Manjunath, Prof. & HOD of Mathematics, Dr. L Venkat Reddy, Assoc. Prof., Dr. N P Chandrashekar, Assoc. Prof., Dr. Leena N Shenoy, Assoc. Prof., Dr. A Pranesh Shetty, Assoc. Prof., Dr. D Sree Lakshmi, Asst. Prof., and Daisy Singh R, Asst. Prof., have published their research papers in reputed National and International Journals, presented their research papers in National and International Conferences during the year 2018.

STUDENTS ACHIEVEMENT

- IPL students of II semester ISE have presented a paper entitled “Impact of Urbanization on Physico-Chemical Parameters of an urban water body of Bellandur Lake in Bangalore City”, in International Conference on “Green Methods: Separation, Purification and Nanomaterial Synthesis”, in Jain University, Bangalore during 23rd & 24th April 2018 under the guidance of Dr. Prathibha B S, Assoc. Prof., Department of Chemistry, BNMIT.

Brief Biography - Stephen William Hawking

Professor Stephen William Hawking was born on 8th January 1942 in Oxford, England. His parents' house was in north London but during the Second World War Oxford was considered a safer place to have babies. At the age of eleven, Stephen went to St. Albans School and then on to University College, Oxford (1952); his father's old college. Stephen wanted to study mathematics although his father would have preferred medicine. Mathematics was not available at University College, so he pursued physics instead. After three years and not very much work, he was awarded a first class honours degree in natural science. In October 1962, Stephen arrived at the Department of Applied Mathematics and Theoretical Physics (DAMTP) at the University of Cambridge to do research in cosmology, there being no-one working in that area in Oxford at the time. His supervisor was Dennis Sciama, although he had hoped to get Fred Hoyle who was working in Cambridge. After gaining his PhD (1965) with his thesis titled 'Properties of Expanding Universes', he became, first, a research fellow (1965) then Fellow for Distinction in Science (1969) at Gonville & Caius College. In 1966 he won the Adams Prize for his essay 'Singularities and the Geometry of Space-time'.

Stephen moved to the Institute of Astronomy (1968), later moving back to DAMTP (1973), employed as a research assistant, and published his first academic book, *The Large Scale Structure of Space-Time*, with George Ellis. During the next few years, Stephen was elected a Fellow of the Royal Society (1974) and Sherman Fairchild Distinguished Scholar at the California Institute of Technology (1974). He became a Reader in Gravitational Physics at DAMTP (1975), progressing to Professor of Gravitational Physics (1977). He then held the position of Lucasian Professor of Mathematics (1979-2009). From 2009, Stephen was employed as the Dennis Stanton Avery and Sally Tsui Wong-Avery Director of Research at DAMTP. Professor Stephen Hawking worked on the basic laws which govern the universe. With Roger Penrose he showed that Einstein's general theory of relativity implied space and time would have a beginning in the Big Bang and an end in black holes (1970). Professor Stephen Hawking received thirteen honorary degrees. He was awarded CBE (1982), Companion of Honour (1989) and the Presidential Medal of Freedom

(2009). He was the recipient of many awards, medals and prizes, most notably the Fundamental Physics prize (2013), Copley Medal (2006) and the Wolf Foundation prize (1988). He was a Fellow of the Royal Society and a member of the US National Academy of Sciences and the Pontifical Academy of Sciences.

In 1963 Stephen was diagnosed with ALS, a form of Motor Neurone Disease, shortly after his 21st birthday. In spite of being wheelchair-bound and dependent on a computerised voice system for communication Stephen continued to combine family life with his research into theoretical physics, in addition to an extensive programme of travel and public lectures. Thanks to the Zero-G Corporation, he experienced weightlessness in 2007 and always hoped to make it into space one day.

<http://www.hawking.org.uk>

Moon, Mars and beyond!

It all started from the BIG BANG. It is believed that at some point in the past, space and time began when the singularity started expanding. Singularity is assumed to be the infinite mass that contained the universe prior to the BIG BANG. It is due to the BIG BANG that various galaxies, stars, planets and other celestial bodies were formed.

Man came into existence very much after the BIG BANG. He was like any other animal who was constantly on his feet in search of food and shelter. It was when man learnt how to produce his own food that he settled down and started living together. It was agriculture that made man more civilized and started living together. This gave rise to civilizations. Since then man started understanding his surroundings and began to question and reason the cause for everything that he saw around. The inquisitive nature of man made him open up his mind and this led to numerous discoveries. He wanted to know as to what lies beyond the skies and this gave rise to space exploration. Space understanding and space technology has risen to great heights from the past. Man now wants to venture deep into space and explore the cosmos. He started launching rockets and space crafts into space so that he could study

the other celestial bodies. One such project, CHANDRAAYAN-1 helped man discover the existence of water on the lunar surface at its poles. With the discovery of water he started to believe that there are possibilities for existence of life. Man now wants to build colonies on the lunar surface. With the advancements in space technology space agencies like our very own space and research agency ISRO, is dreaming big and wants to construct permanent settlements (similar to the Antarctic outposts) on the lunar surface. ISRO is planning to use the lunar soil itself and construct igloos with the help of 3-D printers. The concept of space station is going to be obsolete in the near future. These permanent settlements on the lunar surface are going to be used as halt stations for space crafts which will help them venture deeper into the universe. Space agencies like NASA, Space X and Virgin Galactic (Space Tourism Company) are planning to facilitate easy transportation between the Earth and moon and vice-versa. NASA is also developing the ORION (multi-purpose crew vehicle) that will be used to carry astronauts for human exploration of Mars. These permanent settlements on the lunar surface and ideas of setting up colonies on the Martian surface are being seen as alternatives for the Humans as a place of living in the future as we humans, though being quite intellectual are also foolish, as we are slowly deteriorating out environment and as a result Earth. Due to this man needs another suitable habitat. He thinks the Moon and Mars are his best and viable options for the future of mankind.

All we can do is just to sit, wait and watch how, when and what man will do to sustain his survival on Earth. Finally I can say one thing that for now, space travel and living on the Moon and Mars is still a distant dream to be achieved!!!

Aditya Sunku

I Sem ME

Time travel with tachyons:

Can anything travel faster than the speed of light?



Yes the tachyons can.

Tachyons are a putative class of particles which are able to travel faster than the speed of light. They were first proposed by Arnold Sommerfeld which meant

'speedy' in Greek.

If it can travel faster than light, it also has possibility of escaping the interior of a black hole!! Special relativity says that nothing that is moving initially slower than the speed of light can be accelerated to exceed the speed of light. But there's a possibility of disproving it. Several experiments have been conducted to detect tachyons. If these fantastic particles exists, will interact with ordinary matter and give the means to communicate with past. Isn't that fascinating?

Say if we had gone back into the past and prevented many wars and crisis like that of Hiroshima and Nagasaki then the people today had not been suffering. This is just a gist of tachyons and time travel. If further inventions are made regarding this, humans can actually rewrite the history.

Deeksha. R
II Sem ECE

Have Scientists REALLY Proven That Life After Death Exists?

Bright lights, warmth, detachment from the body, life flashbacks, encounters with spirits; these are all things that thousands, perhaps even millions of people have reported when they approach (then return from) death. These so-called near-death-experiences (NDEs) are widely recognized phenomena, but they have been met with considerable scepticism among the medical and scientific community and many consider them to be merely hallucinatory or illusory in nature.

Despite the considerable number of anecdotal reports on NDEs, which seem to be increasing in frequency because of developments in cardiac resuscitation techniques, very few objective studies into these experiences exist. But now, researchers have just completed a four-year international study on over 2,000 cardiac arrest patients, and it's given us a fascinating insight into this eerie topic.

As described in Resuscitation, the AWARE (awareness during resuscitation) study set out to examine the broad range of awareness and mental experiences associated with cardiac arrest. They tested the validity of the reported experiences using objective markers to determine whether the claims corresponded to actual events or hallucinations.

Of the 2,060 patients enrolled in the study, 330 survived and 140 were able to complete structured interviews about their memories of the event. They found that 39% of these individuals described some awareness of the time preceding resuscitation, i.e. when their hearts had stopped beating. The majority of these patients, however, did not have specific memories of the event, suggesting that many people do indeed have mental activity during cardiac arrest, but lose their memories after recovery. This could be due to brain injury or sedative drug.

For example, ketamine — a dissociative anaesthetic used for sedation and general anaesthesia — has been known to make users feel a strong sense of detachment from their bodies and a sense of peace or joy. The induced state is often described as similar to that of near-death experiences. A previous study that examined the brain activity of seven critically ill patients removed from life support found a spike of neural activity at or near the time of death. The lead author of the study reported that seizures in the memory regions of the patient's brain could be responsible for NDEs. Although the patients in the current study could not recall specific details, many had memories with specific themes. According to the National Post, 20% said they felt peaceful and almost one third felt that time had either slowed down or sped up. Some had tranquil experiences and saw bright lights and animals, whereas others felt fear and even recounted the feeling of being dragged through deep water. Interestingly, 13% of these individuals felt separated from their bodies, we know the brain can't function when the heart has stopped beating. But in this case conscious awareness appears to have continued for up to three minutes into the period when the heart wasn't beating, even though the brain typically shuts down within 20-30 seconds after the heart has stopped. Although only 2% of patients could explicitly recall 'seeing or hearing actual events, because the details were consistent with verified events, it is impossible to discredit them at this stage and more work is needed.

Source: iflscience.com

Darshith Karthikeyan
II Sem ECE

Glow variant, Feel different – Life under UV rays

Majority of the people are very much fascinated about “Things that Glow” especially in the dark. In fact, animals, birds and few other small friends like insects are also attracted. These ‘Things that Glow’ are in

practice for several reasons like attraction, protection and so on.

This ‘Glow’ is technically termed as

Luminescence. They are classified as follows:

- Photoluminescence
- Chemiluminescence
- Crystalloluminescence
- Electroluminescence
- Mechanoluminescence
- Thermoluminescence
- Radioluminescence



Normally we observe Glowing materials in party costumes, reflectors and shoe variants under UV light. So why do these things glow? This is mainly due to the presence of materials called **phosphors**. These phosphors are usually made with a suitable host material with added activators. Activators sometimes can also be referred to voids in the structure of those materials.

The resulting substance will glow under UV light and this phenomenon is called as **Fluorescence** which falls under the category of Photoluminescence. As UV light is incident on the materials, the atoms present absorb the energy by that particular wavelength. As energy is absorbed, the excited atoms start vibrating. When molecules are considered, the vibrations will be in excess. Naturally as energy is absorbed, it should be emitted. But here the same energy is not emitted. Due to the vibrations, certain energy is lost and the remaining energy is emitted. Now, the wavelength corresponding to this energy level is detected by our eyes and which we find to be ‘glowing’. When wavelength belonging to UV region is absorbed and few part of the energy is lost, the spectrum shifts towards visible region and as a result we can see them glow. The intensity of glow depends on the energy absorbed by the materials and the vibrations caused resulting in apparent energy release. Similarly, our teeth also glow under UV light. Since the toothpaste we use contains certain compounds, it is responsible for the glow. Considering toothpaste aside, our nails too glow due to presence of 18 elements in them especially phosphorous and sulphur in them.

When the phrase ‘Luminescence’ is heard, it is not implied only for the above mentioned things. There are also plants and few fungi which exhibit this phenomenon.

Scorpions are freaky under UV light!

Scorpions are normally active in the night. They prefer dark places. The interesting thing is that, when UV light is used against a scorpion it starts glowing bright blue-green. They have a special layer called as **hyaline layer** which consists of few fluorescent proteins. This layer is absent in the young ones and starts developing as the scorpion grows. As mentioned earlier, this 'glow' in them is used as a sort of protection. Our eyes are not capable of seeing UV radiations but dogs, cats, reptiles, owls and many more have the ability to see the UV light. The glow in the scorpions cautions the predators many a time. Also, this layer is found existing in fossils of scorpions. There are also few spiders which have these F-proteins which imparts yellow, blue and green colours when exposed to UV light.

As always said, everything we need to learn and develop is from the nature. Sighting this, advancements are made where in **fluorescent proteins** are used in the **treatment of cancer** where fluorescent imaging is done.



Also they are used in **genetically encoded biosensors**.
Source: Internet

Vignesh Nandavar
II Sem ME

I 'am spying on you

For decades we have been trying to understand the wonders of nature. How does an animal live in the wild? That is the basic question that we ask from our childhood. We have been taken for virtual tours of nature by many wild life experts through television, BBC Earth, geography channel, discovery you name it and you have it. For decades, Sir David Attenborough and his television descendants have been creeping ever-closer to the natural world to show it off to viewers in all its glory.

But the thing was we have taken a step further when BBC decided to introduce animatronics spy creatures to go under cover. In the show we can see life-like animals from baby crocodiles to adult orangutans



infiltrate the jungles, deserts and grasslands of the planet, in an attempt to assimilate into wild families. And understand how they live explore how animals display love, intelligence, misbehaviour and friendship across species: or, as one programme-maker described the latter, "whether the Lion King could be true". May be there was inraction of animals belonging to different species.

The technique of making and operating life like robots, typically for use in films or other entertainment is called animatronics

We are not new to animatronics. Long before digital effects appeared, animatronics was making cinematic history. Who can forget the scare of the Great White coming out of the water in "Jaws"? Or the tender other worldliness of "E.T."? Through the precision, ingenuity and dedication of their creators, animatronics creatures often seem as real to us as their flesh-and-blood counterparts. There is a detailed designing that takes place to make sure that the robots look exactly like the animals and behave like them to reduce the suspicion of the animals. When I was watching the show I could see some monkeys pulling the hair from the spy monkey to see if it was a part of them or not and then there was a display of mourning when the spy monkey played dead. It shows how precisely the animatronics monkey was created.

Most of the animatronics dinosaurs used in "Jurassic Park III" are new. For example, the Velociraptors were redesigned to more closely resemble what palaeontologists think a Velociraptor looked like. The Tyrannosaurus Rex was redone too, but is no longer the star of the franchise. The distinction now passes to Spinosaurus, a monster that dwarfs even the mighty T. Rex. This is the largest animatronics creature SWS has ever built, even bigger than the T. Rex that Winston's team built for the original "Jurassic Park"!

Source: Wikipedia

Akshatha Pramod
II Sem ECE - A

Innovative Project Lab Summer - 2018 Competition for I Year BE students

The Best Project Award of Rs.5000/- was awarded to Brahma S P, Abilesh M, Chinmai L and Akhilesh M of I semester Information Science and Engineering for their project entitled "Balance Mate".



IPL winners during their project presentation

BNMIT SCIENCE FORUM

Poster Presentation Competition for I Year BE students



Dr. S.P. Basavaraju, Retd. Prof., Dept. of Physics, BIT, Bangalore, Dean Dr. M. S. Suresh, BNMIT, Dr. J. Thipperudrappa, Prof. & HOD, Physics along with winners and faculty incharge

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Dr. Shanmuga Priya K, Assistant Professor, Department of Chemistry

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