



AAR MAHAVEER NEWSLETTER

*A quarterly publication of A A R Mahaveer Engineering College, Hyderabad
Issue No.20, October 2015*

From the Editor's Desk

The new buildings of the college are nearing completion and electrical and plumbing work is in progress. New lab equipments and computers of latest genre have been added and several new faculty members have joined the college. Engineering colleges in the State are facing financial crisis. The faculty members should rise to the occasion, supervise themselves and spend every minute of their time in equipping themselves to become better teachers. A lot of useful information is available on the net and YouTube in the form of lectures and open courseware. The first B.Tech classes started in August. New students have been enquiring about placements. They will get placements if and only if they focus fully and do well in studies. Parents should add substantially to the efforts being put in by faculty and management by insisting on honesty and discipline from their sons and daughters. Those students who follow short cuts and unfair practices can not hope to get selected in job interviews. TV and newspapers are reporting the evil practice of ragging in other colleges. By constant surveillance through CCTV as well as by frequent movement of Anti-ragging squads, we have successfully made our campus ragging free. "Educate yourself, gain knowledge on campus and enjoy what you do in life," is the advice given to students by popular writer Yandamoori Veerendranath. "Ragging is a heinous act committed by people with an identity crisis. Do not be slaves to such perverse acts as they can destroy your life," Mr. Veerendranath told the students. "I had failed in class 5 and 6 but it was my father who instilled a sense of discipline in me. I never looked back since then, and passed CA in three years" he recalled. On the importance of maintaining good health and mental fitness, he said, "Anger, fear and tears are the three elements that can disturb your mental health. If you can control these, then you are in control," he said. He also advised students to be performers rather than being passive listeners.

Pot hole filling by Mr. Tilak of Hyderabad was featured on BBC *Outlook* programme on 13.8.15. You will notice that the same item was included in our Newsletter dated January 2015, proving the newsworthiness of the item. Venkataraman Ramakrishnan, President Elect of the Royal Society, was mentioned in our Newsletter of April 2015. He was featured in Discovery programme of the BBC on 8.9.2015.

– Dr. Balakrishna Palanki

***Strong minds discuss ideas, average minds discuss events, weak minds discuss people –
Socrates (469 – 399 BC)***

Stand for what is right, even if it means standing alone – The Vigilant Christian

In this issue

We first present the *Pride of Mahaveer*. Photographs from Orientation Day are next. Dr. C. K. Rani, principal stresses on gender parity as a tool for economic progress. New teachers bubbling with enthusiasm follow. In the Independence Day celebrations, Secretary, Mahaveer Educational Society has given a special prize to the little VIP. There is a natural way to deal with diabetes. Women are in driver's seat at last. FDPs are the specialty of Prof. Balakrishna. T. Sivaprasad, Asst. Professor ECE was felicitated in a brief function on Teachers' Day. Manjula is our woman-achiever. Radhika expresses her feelings through a poster from the net. Santoshi presents apple carvings. The college bids farewell to the founder principal Dr. Balakrishna Palanki, after a stint of five years. The last, but not the least is ***From Far and Near***.

Pride of Mahaveer



Dr. V. Gunasekhar Reddy, Professor (ECE) MIST has been elected as Council Member, Institution of Electronics & Telecommunication Engineers (IETE) for 2015-18. This was through online voting in July 2015 by 25000 members of IETE. He has polled the largest number of votes among all council members. In the first Council Meeting of IETE held at Kolkata on 25.9.2015, he was elected as Vice President of IETE, New Delhi, for 2015-16. Dr. Reddy retired as Deputy Inspector General of Police and Additional Director, Police Communications, AP. He served as UN Police Officer in 2003-04. He also served as Chairman, IETE, Hyderabad Chapter 2008-10. He was consultant for *Secure Communications, VSNL, BEL and UPTRON*. He was Member, Executive Committee, Broadcasting Engineers' Society of India, Hyderabad.

ASTROSAT, India's first space observatory



A few days after it celebrated the successful completion of a year around the Red planet by its first inter-planetary mission - the Mars Orbiter, the Indian Space Research Organisation (ISRO) on 28.9.2015 launched its first dedicated multi wavelength space observatory into space, besides six satellites for Canada, Indonesia and the United States.

ASTROSAT carries the following five payloads:

- (1) The Ultraviolet Imaging Telescope
- (2) Large Area X-ray Proportional Counter.
- (3) Soft X-ray Telescope.
- (4) Cadmium Zinc Telluride Imager
- (5) Scanning Sky Monitor

- source: the HINDU

Orientation Day, 12.08.2015



Orientation Day programme begins with Prayer



F. Neha, III CSE (MIST) presenting bouquet to Chairman



Dr. C. K. Rani, Principal AARM lighting the lamp on Orientation Day



Secretary briefing the audience on the history and growth of the colleges under MES



Chairman exhorts the newcomers to put in their best effort from Day 1



1st year students, parents and faculty members listen with attention

Gender Parity and Development

Nature has evolved with gender parity. That is, for every 1000 males of any species, there will be 1000 females. However, in the prosperous state Haryana, there are only 830 females for every 1000 males. This is believed to be due to female foeticide, infanticide and low priority for female nutrition and health care. Lured by the shortage, trafficking of girls into the state is now big business.

Statistics show that the higher ranks in any competitive examination go to women. In several cases, a part of man's income goes into drinking and other vices. A woman's income goes to meet food and educational needs of her family. Yet, when it comes to work force in business and industry, the presence of women is not up to the mark. They seem to be restricted to mostly low level and under paid jobs. Women professionals in 25 to 34 age group are most susceptible to stress, according to a study. This tendency is attributed to marriage and relationship related issues, followed by individual factors and work related stress. Suicide rates of working women have been high, and they do not seem to be getting enough support in coping with the dual tasks of handling work and family life. The temporary phase of baby and child care takes several women out of economic active service forever. Liberal paid maternity leave, baby crèches and flexible working hours will mitigate the situation. The Delhi High Court has recently ruled that women too are eligible for the grant of permanent commission in Indian Navy. So far they were being given short service commission of 14 years with no pension benefits. Now they will be able to serve till the age of 54 years. There is a need for men to give up traditional bias and accept women in positions of authority in the armed forces and the police.

Christine Lagarde, Managing Director, International Monetary Fund said: "If the number of female workers were to increase to the same level as the number of men, GDP in the US would increase by 5%, by 9% in Japan and by 27% in India. Women's empowerment is not just a moral cause, but an economic necessity." "Women are increasingly seen as the dynamic promoters of social transformations that can alter the lives of both men and women. Girls' education is probably the single best investment a county can make," Ms. Lagarde said, quoting economist Amartya Sen. Our own state had taken long ago, a big step forward by reserving one third of seats for girls in educational institutions.

- Dr. C. K. Rani, Principal (sources: BBC World Service and the HINDU)

New Faculty: Electrical & Electronics Engineering



J.Swetha (Lab Technician), V. Sudha Rani (Associate Prof), S.V. Siva Reddy (Associate Prof), Ravi Gugoloth (Associate Prof), A. Muneiah (Associate Prof), Sudheer Kumar (Asst. Prof)

New Faculty: Electronics & Comn. Engineering



G.Bhargavi (Lab Technician), B. Radhika Yadav (Asst. Prof), G. Ramya (Asst. Prof), V.Harshitha (Asst. Prof), P. Jyothi Prakash Reddy (Asst. Prof), S.Rajesh (Asst. Prof), T. Naga Teja (Asst. Prof), B. Krishna (Associate Prof), M. Rajesh (Asst. Prof), U. Merikishore (Lab Technician), G. Upender (Lab Technician)

New Faculty: Computer Science and Engineering



D.Swathi, Shubhangini V.Khadse, D.Krishna Madhuri, T. Anupama, D.Soujanya, A.Vasavi Sujatha, T. Kavya, K. Ravali, E.Sushma, K. Lalithakumari, M. Umadevi, U.Naresh, Md. Dastagir, B.Mallaiah, R. Govardhan Reddy, Syed Arshadullah Hussain, R.Jethya, R.Nithin (All Asst.Prof)

New Faculty: Humanities & Sciences



From left: 1) Srinivas Reddy Associate Prof 2) Sai Kishor Kumar Asst. Prof, 3) Naresh Reddy Asst. Prof and 4) Priyadarshini, Asst. Prof

New Faculty: Mechanical Engineering



Ratnakishore (Teaching Asst.), Vykuntam (Lab technician), Vaitharani (Asst.Prof)

Independence Day 2015



Principal, Secretary & Chairman at the lamp



Chairman hoists the flag



Secretary summarizing achievements and outlining future plans



Prize distribution by Mrs. Sri Vidya



Prize distribution by Dhanunjay Reddy



Prize distribution by Principal



Shoeb Shafiuddin III B.Tech (Mech) 2nd prize winner in Elocution

Special Prize awarded to a Very Special Person



**Aiman Fatima Yezdani, UKG, Ababeel Preschool,
(daughter of Mrs. Ameena Begum, Asst. Prof. MBA), dressed up as Bhagat Singh**

***“The best way to predict the future is to design it”
– Buckminster Fuller, the inventor of fullerene (1895-1983)***

Reversing diabetes, naturally!

Diabeticians make a lot more money than Dieticians! So they are eager to prescribe medicines for diabetes such as metformin and even insulin injections. People say that pharma producers, doctors and hospital managements are hand in glove to promote usage of more and more medicines. The medicine is effective initially, but over a period of time the effectiveness decreases. The doctors promptly increase the dose. The diabetes continues and so do the associated problems such as deterioration of sight. On the other hand, a lot of studies showed that diabetes can be reversed by following a few simple rules:

1. A little food gets converted to energy. Any thing more gets converted to fat and blood sugar. Three square meals a day make one round. Control your food intake to much less than your capacity so that your body weight goes down and stays there. Do not go by the wall clock for lunch, eat only when really hungry. Eat small portions once in two hours instead of heavier meals once in four hours. Fast whenever possible, as it gets rid of stored excess fat in the body. Being half hungry is a sure way to lower blood sugar.
2. Reduce carbohydrates in your diet as these easily become blood sugar. Increase fibre, proteins and minerals. Minimize rice and wheat. Whole grains and hand pounded rice are better than polished ones, though contributing carbs. Maximize leafy vegetables and fruit. Bitter gourd (Kakara), Fenugreek (Menthulu) and Cinnamon (Dasini Chekka) are proven sugar inhibitors.
3. Avoid sugar, potatoes and minimize salt. Avoid processed foods and sugary drinks altogether.
4. Exercise and walk at every opportunity available. Use staircase instead of the elevator when only two or three floors are involved.
5. The goals are: Fasting Blood Sugar < 100 mg/dl, Post Lunch < 140 mg/dl and HBA1C (glycated hemoglobin) < 6.5. The 1st and 2nd give current picture. The third represents average over ~3 weeks.

- M. Gopi, HOD ECE (sources: the HINDU, Jason Fung, Joel Wallach and Neal Barnard on the You Tube)



- inserted by Vasudha D, Asst. Prof., ECE



- inserteby M. Lavanya, Asst. Prof. ECE

“The greatest discovery of my generation is that a human being can alter his life by altering his attitudes” - William James (1842-1910)

***“Adopting the right attitude can convert a negative stress into a positive one”
– Dr. Hans Selye***

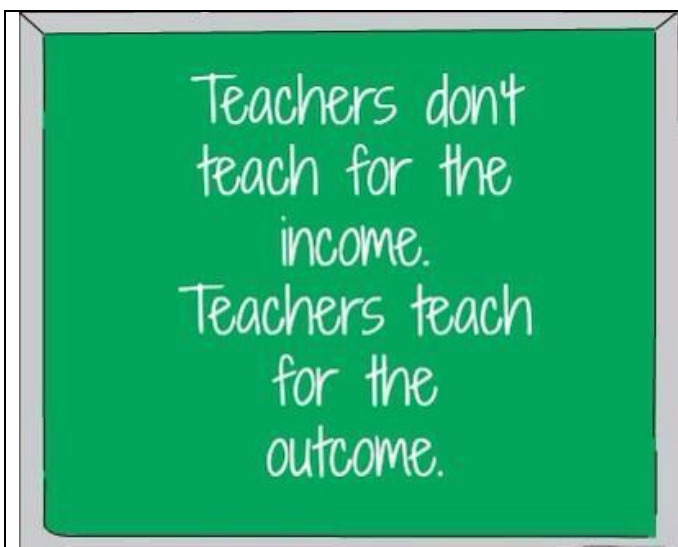
***“Many people die at 25 and are not buried until they are 75”
– Benjamin Franklin (1706-90)***



Dr. Balakrishna Palanki

Faculty Development Programme on 4.9.2015

A three hour interactive session was held for the new teachers of AARM and MIST on 4.9.2015 with the theme, “Teaching Methodologies in Engineering Education.” The topics included the demand for industry ready graduates in an environment of increasing complexity, competition and information explosion, the expectations of multiple skilled, soft skilled, flexible, life long learning, team playing, analytical and creative engineers, understanding student differences, Bloom’s taxonomy, Maslow’s needs, proven methods for developing creativity, tips for student engagement, technology aided and web enabled teaching, the conversion of stress into a useful motivator, the need for integrating physical and emotional fitness with the curriculum, the expanded role of the engineering teacher as per the Indian National Policy on Education, etc. The Programme Director was Dr. Balakrishna Palanki.



Mr. T. Sivaprasad, Asst. Professor ECE being felicitated on Teachers’ Day



Ms J Manjula has been appointed as Director General of Electronics & Communication Systems (ECS), Defence Research and Development Organisation wef 07 September, 2015. She is the first lady to occupy this position. She has designed and realised fast signal acquisition receivers, high power RF systems, responsive jammers, controller software etc for various systems inducted in Army, Navy, Air Force and Paramilitary. An alumna of Osmania University in ECE, Manjula is a recipient of DRDO award for 'Performance Excellence' and 'Scientist of the Year 2011'

After the game, the king and the pawn go into the same box – Italian proverb.

Strong people do not put others down..... They lift them up – Michael P. Watson (b.1965)

*“The longer we dwell on our misfortunes, the greater is their power to harm us”
– Voltaire (1694-1778)*

	ఒక ఆకు రాలుతూ చెప్పింది - ఈ జీవితం శాశ్వతం కాదని
	ఒక పువ్వు వికసిస్తూ చెప్పింది - జీవితం ఒక్కరోజైనా గౌరవంగా జీవించమని
	ఒక మేఘం వర్షిస్తూ చెప్పింది - చేదుని గ్రహిస్తూ మంచినీ పంచమని
	ఒక మెరుపు మెరుస్తూ చెప్పింది - ఉండేది ఒక్క క్షణమైనా ఉబ్బలంగా ఉండమని
	ఒక కొవ్వొత్తి కరిగిపోతూ చెప్పింది - చివరి వరకు పరులకు సాయపడమని
	ఒక వృక్షం చల్లగా చెప్పింది - తనలాగే కష్టాల్లో ఉన్నా ఇతరులకు సుఖాన్ని ఇవ్వమని
	ఒక ఏరు బలబలా పారుతూ చెప్పింది - తనలాగే కష్టసుఖాల్లో చలించకుండా సాగమని
	జాబిల్లి వెలుగుతూ చెప్పింది - తనలాగే ఎదుటి వారిలో వెలుగు నింపమని

- Inserted by B. Radhika, Senior Attender



Think differently - inserted by Santoshi Anantoju (2010-14 ECE)

Farewell to Dr. Balakrishna Palanki 30.6.15 & 1.7.15



From Far and Near

You can not hear an owl flying!

Unlike other birds, owls are able to suppress the noise of their flapping wings. Researchers are trying to understand the mechanism for possible application in reducing the noise of jet engines. October 2014 issue of this newsletter informed that researchers at I I Sc Bangalore came up with a new design of aircraft jet engine nozzle that is less noisy than the conventional nozzle. In the conventional cone shaped nozzle, the exhaust is released with massive momentum, carrying huge energy and creating noise. But the new nozzle, (shaped like petals) allows the exhaust to spread and get assimilated quickly into the cold atmosphere. The device makes the aircraft quieter and engine performance better.

No need for captain, no need for sailors!

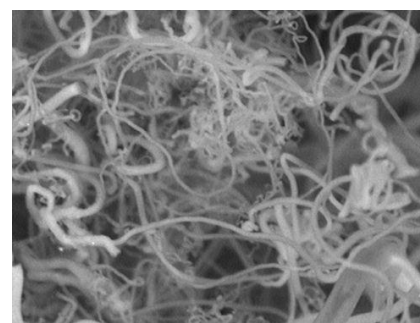
Hamburg scientists are running tests with the help of a high tech simulator for developing an autonomous ship. Most maritime accidents are caused by human error. With the right system of sensors and smart computers on board, autonomous ships would be able to recognize potential dangers early on and avoid them more effectively than a human could.

Hot, hotter, hottest!

According to US scientists, July 2015 was the hottest month averaging 16.6 °C, since records began to be maintained in 1880. This is 0.08 °C higher than the previous record, set in July 1998, a significant margin in weather records. The increase in temperature has increased the dissolution of carbon dioxide in sea, lowering its pH and in turn reducing the skeleton strength of coral life that is structured on calcium carbonate. Corals are the habitat for a diversity of life, for example, sharks lay their eggs in corals. The rate of melting of polar ice caps has been found to be much higher than the rate of snow formation. The rising sea levels threaten the lives of millions of poor people living in coastal areas. For the first time in history, the Pope and Islamic Leaders have called for reduction of use of fossil fuels to save the planet.

Out of thin air - Carbon fibres!

US scientists have found a way to take carbon dioxide from the air and make carbon nanofibres, a valuable manufacturing material. Their solar powered system runs a small current through a tank filled with a hot, molten salt; the fluid absorbs atmospheric CO₂ and tiny carbon fibres slowly form at one of the electrodes. It could even have an impact on CO₂ emissions. Carbon nano fibres are used in electronic components and batteries. If costs come down, they could be used for improving the strong, light weight carbon composites used in aircraft and car components, for example.



Super bugs? No problem!

Superbugs are micro organisms (bacteria, viruses or fungi) that can not be killed by any of the known antibiotics. German researchers have developed a dye that generates under natural light a highly reactive form of oxygen that kills germs. Used as a component of a spray coating, it could disinfect door handles or light switches or mobile phones. The bacteria are negatively charged and attach themselves to the positively charged dye particles and get destroyed in seconds.



Plastic balls save water!

Los Angeles Department of Water and Power has released 96 million black polyethylene balls to float on 90% surface of the 175-acre Los Angeles Reservoir in a drought relief project. The 100 mm diameter blow molded balls are made heavy enough not to drift away but provide a floating cover. Evaporation losses are reduced as both surface area and temperature of water are reduced. The floating balls also halt the production of dangerous chemicals that can form as a result of reactions triggered by sunlight in chlorinated water. The shade balls also deter wildlife from contaminating the reservoir, shield the water from wind-blow dust and discourage algae from forming on the water's surface.

Just a pinch of salt please!

Salt is used to preserve food where refrigeration is not available and for de-icing of roads in cold countries. Persons affected by dehydration are administered saline orally or intravenously. *Salaria* in Italian means salt or of salt. The word salary originated from salt as soldiers were paid in salt, which was once a very precious commodity. Salt was the main source of revenue for governments. Several rebellions were provoked by increase in tax on salt which affected the common man. Mahatma Gandhi led the Dandi march to defy a ban on salt making by people. The Sanskrit word for salt is *Lavanam*. The glow of freshly cleaved salt crystal is the basis for the feminine name *Lavanya*. In Arabic, a beautiful woman is referred to as being 'salty'. In 2500 BC, fatal strokes were found to be due to excessive salt intake. Limit to 3 g per day per person. Instead of just sodium chloride, a little potassium iodide is beneficial to health. As water is going to be the most scarce resource shortly, desalination of sea water economically is the need of the hour. Nature uses distillation (evaporation and condensation) process for desalination. However for man to adopt, distillation which involves phase change is energy intensive and hence expensive. *Reverse Osmosis* is an economical alternative. The salt content being ~ 3.5% in sea water, high pressures (60 bar) are used which the membrane has to withstand. RO plants are in regular use at both AARM and MIST.

Let there be background light!

When lights are off in the night, one must not view the hand phone which is very bright in a dark surrounding. Even the television or pc monitor should not be watched in darkness. The strain on the eye is considerably reduced when the background illumination matches that of the screen

- compiled by Dr. Balakrishna Palanki (sources: BBC, VOA, DW TV, the HINDU)

Visit www.aarm.ac.in or www.scribd.com for other issues of the newsletter

Mahaveer Educational Society

Chairman: Sri. S. Sudershan Reddy garu, Secretary: Sri. S Surender Reddy garu.

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Committed to Education, Emancipation and Empowerment