



# MARIAN moments

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Trivandrum Latin  
Archdiocesan Institution

A Bimonthly bulletin of Marian Engineering College

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M. Tech Inaugural Ceremony



Release of Marian Moments



**Marian Engineering College** has started M.Tech in Signal Processing (Dept. of Electronics & Comm.), M.Tech in Thermal Science (Dept. of Mechanical Engineering) and M.Tech in Computer Science & Engineering (Dept. of Computer Science & Engineering) for the first time in the history of the college. Most respected Dr. P. Krishnamurthy Iyer (Retd. Prof & HOD, EEE - CET), one of the most senior professors of Engineering Department has lit the lamp to the second step of Marian success on August 16th, 2012.

At the 11th year of success in Academics & Culture, the 'Marian Engineering College', has introduced the very first news bulletin 'Marian Moments', which nutshells the bimonthly activities of student & faculty activities of all departments. The first volume of 'Marian Moments' was released on August 10th, 2012 by Very Rev. Msgr. Eugene H. Pereira, Vicar General along with S1S2 (2012-2016 batch) inauguration.

## SANTHWANAM MARIAN

It was a good initiative taken by Santhwanam Marian to build a house for a family at Fathimapuram (Ward adopted by Marian) with the collected money. The first installment of Rs. 25000/- was given on 1<sup>st</sup> July'12 at the Platinum Jubilee Celebrations of the Archdiocese and was handed over to Hon'ble Minister Sri. K. M. Mani.



## Third Rank

Ms. Parvathy B. S  
(2008 - 2012 AEI)  
University of  
Kerala



Ms. Vinitha (2005 - 2009 ME)  
First Lady Lieutenant Cadet of Trivandrum



*You guided us when we were lost.... You supported us when we were weak.....  
You have enlightened us all through.....*

## ➡ **Marian Centre for Research and Development (MCERD)** ⬅



**Marian Centre for Research and Development (MCERD)** inaugurated by Dr. A.P.J Abdul Kalam has carried out the following major activities for encouraging UG and PG students to develop an aptitude for research in multi-disciplinary area:

- Major project proposals are invited from departments for consideration by the Executive Committee. The selected project proposals will be taken up with appropriate Central/State Government agencies for pursuing further.
- Students' projects are being scrutinized by CGPU for forwarding to MCERD. Depending on the merit of the projects, M.Tech students will be given an opportunity for further studies with support.
- A microsatellite for monitoring school of fish is under configuration design. On obtaining approval and possible financial assistance from ISRO, detailed design will be taken up.

## ➡ **Areas of Research in Computer Science** by Ms. Sheeja Agustin ⬅

Research means systematic process of collecting, analyzing and interpreting data in order to increase our understanding of a phenomenon we are interested in. Research is needed, to face a challenge, to solve a problem, to serve the society etc. The research areas in Computer science include Artificial Intelligence, Computers in Education, Databases and Information Retrieval, Image Processing, Software Engineering and Theoretical Computer Science. The research under Image processing includes development of functional imaging tools in oncology; structural and functional MRI in neurology; MR cardiac perfusion, lossy compression of medical images, analysis of bone shape and structure; and PET image processing software development etc.

Image processing is any form of signal processing for which the input is an image such as photograph or video frame, the output of image processing may be either an image or parameters related to the image. Image processing usually refers to digital image processing. Digital image processing is the use of computer algorithms to perform image processing on digital images. Medical imaging is the technique and process used to create images of the human body for clinical purpose or medical science including the study of normal anatomy and physiology. Different Imaging technologies are:-Radiology, Magnetic resonance imaging (MRI), Nuclear medicine, Photo acoustic imaging, Breast thermography, Tomography and ultrasound imaging. In image processing segmentation algorithms constitute one of the main focuses of research.

Image segmentation is the process of partitioning an image into multiple segment or set of pixels used to locate object and boundaries. Each of the pixels in a region is similar with respect to some characteristics such as color, intensity or texture. Different applications of image segmentation are Medical Imaging, Locate objects in satellite images, Face recognition, Fingerprint recognition, Traffic control systems etc. In the field of Image analysis segmentation of medical images is a challenging problem due to poor resolution and weak contrast of medical images.. Medical image segmentation means Segmentation of known anatomic structures from medical images. Structures of interest include organs such as cardiac ventricles or kidneys, abnormalities such as tumors and cysts as well as other structures such as bones, vessels, brain structures etc. Now-a-days Medical image analysis has played more and more important role in many clinical procedures and in detecting different types of human diseases.

## ➡ **TEACHERS DAY SPECIAL** ⬅

***"The best teacher is the one who suggests rather than dogmatizes  
And inspires his listener with the wish to teach himself"***

Teachers Day is a dedication to Dr. Sarvepalli Radhakrishnan, who was a staunch believer of education and was one of the most well known diplomats, scholar, president of India and above all a teacher. As a tribute to this great teacher, his birthday has been observed as teachers' day all-around India. This celebration is homage to the hard work, teachers render all through the year. In India teachers day is celebrated on 5th of September. This day is just a mere reflection of Dr. Sarvepalli Radhakrishnan's love for and attachment to the teaching profession. Teachers have an influencing role in the life of every student. They are like beacons of Light, guiding us in the formative years of our life. Teachers mould us and in the process shape our future. What we learn from our teachers remains with us, throughout our life. However, very often, we fail to show our appreciation and gratitude for their selfless service. Teachers do need encouragement and support from the students to feel that their efforts are being recognized. To serve the purpose, Teacher's Day is celebrated throughout the world, year by year. By celebrating National Teacher's Day, we thank our teachers for providing us their invaluable guidance. The students of CS / IT departments took the initiative to honour the teachers of the departments on 5th sep 2012. It was a very good initiative on the part of students. The staff members were felicitated and the event was memorable.

The Teacher's Day is really an important day for the nation. Everyone should realize the importance of this day. If we can know how to respect the teachers, we will do the yeoman's service to country.







## INTERNATIONAL AWARD WINNER

The Principal, Management, all the Head of Departments, and whole of Mariante family members congratulate our honored Prof. Dr. M.R. Gopalakrishnan Nair for achieving this Unique title of **"Sir Isaac Newton Scientific Award of Excellence for 2012"**. We are proud enough to work with such a famous personality amongst us.

Prof. M.R. Gopalakrishnan Nair (Head of the Dept., Chemistry) – has been selected by the American Biographical Institute to be the recipient of the SIR ISAAC NEWTON SCIENTIFIC AWARD OF EXCELLENCE FOR -2012. As per the Institute, "it would be extremely rare to see its likeness as fewer than 50 individuals who demonstrated effectiveness and distinction in their field may be honored internationally each year."

"The Institute is one of the globe's leading international researchers that focus on prominent individuals in many professional arenas. The SIR ISAAC NEWTON SCIENTIFIC AWARD has been established to recognize those who have dedicated themselves to an honorable discipline that makes a difference in the enlightenment of others to the progress of humanity."

Dr. Nair retired from Government Service as Professor from the College of Engineering, Trivandrum. He is at present Professor and HOD of the Department of Chemistry, Marian Engineering College, Trivandrum. He holds a Bachelors degree in Chemistry from the University of College, Trivandrum, a Masters degree in Analytical Chemistry from the Department of Chemistry, Kerala University and also Ph.D from Kerala University. He joined as Lecturer in the College of Engineering, Trivandrum and rose to the position of Professor. He has served the most as a faculty member in the Department of Chemistry, at the College of Engineering, Trivandrum. Meanwhile he became FIC and was awarded the status of "Chartered Chemist".

He is a leading consultant and researcher in the area of Analytical Chemistry. He developed a novel technique "Peaceful Pyrolysis" for the estimation of the metal content in explosive metal perchlorate complexes of organic ligands. The result was published in the international journal of Analytical Chemistry, Talanta, U.K (1981). Since this is a rapid, convenient and accurate method it has been accepted as a standard method in Analytical Chemistry and is very widely used by researchers for the last thirty years. Peaceful Pyrolysis is now being used for the manufacture of Nanoceramics.

## Dr. A.P.J. Abdul Kalam's Address at Marian Engineering College

### Technology leads to nonlinear growth

I am delighted to address and interact with the students and faculty members of Marian Engineering College, Trivandrum. My greetings to all of you. I am happy that Marian Engineering College is concentrating on developing the four virtues of competence, confidence, commitment and compassion among all the students. Today, when I am with you friends, I would like to share few thoughts on the topic "What I will be remembered for?"

Friends, during my education an important milestone was the final year project. I would like to narrate the technique used by my professor to inject urgency in completing our task in time.

### Learning integrated system design

I was assigned a project to design a low-level attack aircraft together with six other colleagues. I was given the responsibility of system design and system integration by integrating the team members. Also, I was responsible for aerodynamic and structural design of the project. The other five of my team took up the design of propulsion, control, guidance, avionics and instrumentation of the aircraft. My design teacher Prof. Srinivasan, the then Director of MIT, was our guide. He reviewed the project and declared

my work to be gloomy and disappointing. He didn't lend an ear to my difficulties in bringing together data base from multiple designers. I asked for a month's time to complete the task, since I had to get the inputs from five of my colleagues without which I cannot complete the system design. Prof. Srinivasan told me "Look, young man, today is Friday afternoon. I give you three days time. By Monday morning, if I don't get the configuration design, your scholarship will be stopped." I had a jolt in my life, as scholarship was my lifeline, without which I cannot continue with my studies. There was no other way out but to finish the task. My team felt the need for working together round the clock. We didn't sleep that night, working on the drawing board skipping our dinner. On Saturday, I took just an hour's break. On Sunday morning, I was near completion, when I felt someone's presence in my laboratory. It was Prof. Srinivasan studying my progress. After looking at my work, he patted and hugged me affectionately. He had words of appreciation: "I knew I was putting you under stress and asking you to meet a difficult deadline. You have done great job in system design".

Through this review mechanism Prof Srinivasan, really injected the necessity of understanding the value of time by each team member and brought out engineering education has to lead system design, system integration and system management. I realized that if something is at stake, the human minds get ignited and the working capacity gets enhanced manifold. That's what exactly happened. This is one of the techniques of building talent. The message is that young in the organization, whatever is their specialization, be trained to systems approach and projects, which will prepare them for new products, innovation and undertaking higher organizational responsibilities. Friends, you should get ready to acquire knowledge in an integrated way for using multiple disciplines towards product development and its management, right from the undergraduate engineering programme.

Dear friends, now let me take you to the type of society we are entering and challenges

*(to be contd. on next issue...)*

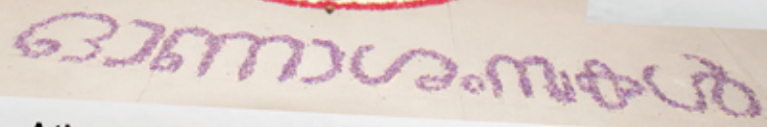




Athappoo First Price - S7 ECE



Athappoo First Price - S7 ECE



Athappoo Second Price - S3 ME



Group Song First Price - S5 CSE







# ONAM

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Onam, is the biggest festival celebrated by malayalees all over the world irrespective of religion, caste and creed. It unifies all the Malayalees to come back to their native place popularly known as 'God's own Country' from whichever part of the world they are in .

Marian family greeted the month of August with flowers, games & thoughts of prosperity. Onam at Marian was celebrated on 24th August 2012, where all the staff and students from the 6 departments gathered in the college auditorium. The respectful Manager and Bursar addressed the students wishing them and their family, prosperity throughout life. The students came in the traditional style where the boys wore white dhoti, and girls wore kerala sari.

Athapookalam competition was conducted for the students followed by traditional songs ( Onapattu) and Thiruvathira dance by the girls.

1<sup>st</sup> prize for Athapookalam was awarded to S7 ECE , 2<sup>nd</sup> prize for S3 ME and 3<sup>rd</sup> prize for S7 AEI. The prizes for group song were given to S5 CSE (1<sup>st</sup> position), S3 ME (2<sup>nd</sup> position ) and S7 ECE (3<sup>rd</sup> position).

Students were thrilled and over whelmed to participate in the crowd puller event namely vadamvali ( tug-of-war).

The whole celebrations came to an end with a grand Onam Sadhya for all Marianites.





## ELECTRONICS & COMMUNICATION / APPLIED ELECTRONICS & INSTRUMENTATION



Ms. Safiya Salim, presented paper on 'Extraction & FSI Modelling of Coronary artery structure from Medical Images' on August 10th, at College Of Engineering, Trivandrum for the 13th National Conference. She was given the "Best Paper Award".

The S5 students of ECE were given training program by TIME GM Mr. Reghu, on Interview Excellence & Mock Test.

As part of 'Alumini Interaction Session', the former student of EC Dept., Mr. Abin N.A (2001-2005), Team Leader of Nest Technologies has given a talk to the students of Third Semester (T,A) on the "need for developing interest in Academics".

The S3 students of ECE & AEI were given orientation program classes by Rev. Fr. Joy James (Rector, Loyola Institutions) and Mr. Sebastian Britto (Asst. Administrator, Loyola Extension Services).

### 'REVELS 2K12' - Intercollegiate technical fest & symposium Organised by Communication Engineering Students Association

Our present final year students of S7 EC - Vijin D'cruz, Vishnu K.L, Alex Joseph, Reynu S. Gomez participated in REVELS 2K12 were awarded the second place for BEST PROJECT (ECE) organized by CESA at UKF College of Engineering and Technology, Parippally, Kollam.

Classes for M.Tech in Signal Processing has started from August 16th with a completely filled batch of 18 students

## CIVIL ENGINEERING

The Civil Engineering Association 2012-13 was inaugurated by Prof. Jyothis Thomas, HOD Civil Engineering Department, College of Engineering, TVM on 13th August 2012. The inaugural session was followed by seminar on the topic 'Road Safety, Issues, Concepts and Solutions' by Prof. Ashalatha R., Associate Professor, CET. The seminar gave an insight to the various design aspects of road safety for the participants.



Mr. Anoob. R.V, Presented a paper on "Estimation of runoff using Fuzzy Logic and ANFIS models", in "National Conference on Technological Trends", College of Engineering Trivandrum, 10th - 11th August 2012.



Mr. Abhijith R.P., Presented a paper on "Experimental Investigation on the Influence of Coir geotextiles on Adherence Property of Bituminous Mixes". The aim of this paper is to analyze the adherence property of pavement section when using coir geotextiles as interlayer. The results confirmed that the best adherence between layers is obtained for CCM 400 Coir geotextiles, with tack coat content of 0.9kg/m2.



Ms. Neethu Prakash, Published a paper on "Impact of Bus Stops on Traffic Flow Characteristics of Urban Roads", in the proceedings of 2012 ITE Midwestern District Conference + TRB 4th Urban Street Symposium, "My Street, Your Street, Our Street- Developing Livable Transportation Solutions", Transportation Research Board, 24th -27th June, Chicago, Illinois, USA.  
Presented a paper on "Effect of Bus Stops on Traffic Flow Characteristics of Urban Roads", in "National Conference on Technological Trends", College of Engineering Trivandrum, 10th - 11th August 2012.

## COMPUTER SCIENCE AND ENGINEERING / INFORMATION TECHNOLOGY

IBM has conducted a four days Certification Workshop on Lotus Domino for the staff and students of CS/IT department from 20/07/2012 to 23/07/2012. The main Certification was held on 11/09/2012. Sixty Five students and two faculty members attended the exam and 100% result was obtained.

A faculty lead training program on DB2 9.7 was conducted by the faculty of CS/IT department from 13/08/2012 to 15/08/2012 for the students of CS/IT. A total of forty seven students participated in the training.



Ms. Reesha S L presented a paper on "Role Based Access Control Mechanism in Cloud Computing using CSAR" (ICICN '12) at Vins Christian College of Engineering, Chukkankadai.

### Scholars engaged in Research



Ms. Keerthi Krishnan



Ms. Sheeja Agustin

### Welcome



Dr. E. Baburaj

CS/IT students honored the members of faculty and staff in a memorable meeting arranged on Teacher's Day, September 5th.

## MECHANICAL ENGINEERING

One day workshop for S7 students - A workshop on "Algorithms used in CAD systems" was conducted by CADD CENTER, Trivandrum on AUG 2012. Industrial Visit by S5 students - Students and staff visited NTPC, Kayamkulam and PETROPIL Industries Pvt. Ltd, Kollam on 12th and 13th JULY 2012.



Seminar for M-Tech students - Prof. Krishnakumar from CET, Trivandrum has conducted a seminar on "Application of Finite Different Methods on Heat Transfer Problems" on 7th SEP 2012.

Second Prize in Paper Presentation- Roshan Thomas George of S7 ME has presented a paper on "Life Cycle Exergy Analysis of Power Plants" and secured 2nd prize in DRISHTI 2012, conducted by CET, Trivandrum

Mr. C. Anoopkrishna, presented a paper "Investigations of N-Heptane/Ethanol mixture combustion kinetics in a diesel engine operation condition environment" in NCTT 2012, conducted by CET, Trivandrum.

Mr. R. Madhavan presented a paper "Process development for Adhesively bonded composite structures and evaluation of load carrying capacity" in "Innovation in Engineering" sponsored by DRDO at Anna University, Madurai.

Mr. Vaisakh.Y, presented a paper "Thermo elastic analysis of Disc brake using Finite Element Analysis" in TCME 2012, conducted by SACS M.A.V.M.M. Engineering College, Madurai.

Vaisakh.Y



C. Anoopkrishna

M-Tech - Thermal Sciences classes started with 16 students under coordination of Prof. S.Chandran



# OUTREACH PROGRAM

*A teacher takes a hand... opens a mind... And touches a heart.  
You are one such teacher for me. Thanks for being there!*

## THANAL

Wise men are instructed by reason; men of less understanding, by experience; the most ignorant, by necessity; the beasts, by nature. Social Forestry is one of the means to address environment problem. Govt. has proposed farm forestry, community Forestry, Urban forestry etc. The objective of this programme is to give our students an insight in to the depth of the problem and make them a part of the solution. All first year students of 2012 - '13 had planted a tree in our college campus. This was inaugurated on 9th mar '12 in connection with the Decennial Year celebrations by our former student Mr. Shameer Thaha. This was continued by planting 20 more trees by the students and staff on 28th jun '12 in connection with the APJ Abdul Kalam visit. Kalam sir handed over the plant to our principal and together with the manager & bursar, it was planted.



## KADINAMKULAM PANCHAYAT WARD

**"Until we love, we really do not know who we are."** Marian Engineering College has adopted Ward Ten of Kadinamkulam Grama Panchayath which is situated in front of the campus. The college extends service to those areas finally for uplifting them as part of out reach program. The newly build house by the Marianites to Mrs. Dorthy comes in this ward.

## SANTHWANAM

### STUDY KITS WITH ALL STUDY ARTICLES



### STUDY KITS WITH ALL STUDY ARTICLES

**"Charity begins at home and justice begins next door."** A charitable society has been formed by the college staff members & students to help the poor & needy. The committee provides many activities like cloth drives and donating money to the deserving ones. It was inaugurated on 9th Mar '12 by giving an amount of Rs. 8000/- to a heart patient, residing at Puthenthope. Also, this group visited a mental hospital on 4th April '12 and spent time with the affected ones. Students take up similar charitable activities in the campus and now we bring all charitable activities under one umbrella - "Swanthanam - Marian".

### STUDY KITS WITH ALL STUDY ARTICLES



### STUDY KITS WITH ALL STUDY ARTICLES

## TECHNOLOGY TO COMMON MAN

For the first time Marian Engineering College has started Vacation class for 10th/12th students on Apr/ May 2012. This 2 month vacation class was conducted for computer course and surveying course. Almost 30 students participated and was a great success. Prof. Crystal Flory is in charge of the whole program. In addition to this, separate sessions for personality development, Motivational classes, and Communicative English classes were also handled by Rev. Fr. John, Rev. Sr. Stella and Mr. Jose Hormese. The course was completed with the tireless efforts of the nonteaching staff members of the Computer Science and Civil departments. Course completion certificates were distributed to the students on 30th May '12. The program will be continued in the for coming years.

## JESUS YOUTH

**"I will place no value on anything I have or may possess, except in relation to the kingdom of Christ."** A strong group of young minds have been formulated by the college to participate in the Jesus Youth activities. The key man of this group is Mr. Joseph K. M. who organizes retreats for our students frequently. Grace '12 was conducted from 2nd- 4th Mar '12. Almost 50 students participated in this retreat. Rev. Fr. Daniel Poovananthil from Kodumon Malankara Catholic Church, Adoor preached through out the retreat. Confession and Adoration was given much importance which helps the students to perform better in their lives.





# TOUR DE MARIAN

