Beloved Readers,

Our heartiest congratulations to the newly elected office bearers of the university. Under their guidance, the highest traditions of excellence in academic and non-academic areas are sure to be maintained.

It is the beginning of a new academic year and while we ensure that this is a seamless and enjoyable transition for the freshers, we also look forward to the creative ideas and energy that they will bring to our campus. The choice to come to this university is the first step towards a successful career in their chosen field. The knowledge and experience gained here will prepare them for the many exciting opportunities and challenges that await them in workplace, community and in life.

*Bridges* is celebrating its 9\textsuperscript{th} anniversary and as a part of it, we are happy to announce our anniversary competitions. We invite students, staff and faculty members to participate and win prizes.

Let us stay connected…

Sheela Ravinder S.  
Editor-in-Chief

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Dear Editor,

It is only evident, from the well-structured depiction of the happenings around this esteemed institution, that *Bridges* newsletter is being handled with high standards. Going ecofriendly only bolsters this fact.

Reading *Bridges* is a prescription per se, as it gratifies the mind, body and soul.

Appreciate the team's commendable efforts to compile and produce, every month, such a complete package of the university in a nutshell.

Dr. A. Venkateswaran  
Senior Lecturer, Dept. of Orthodontics

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**Memories**

Dept. of Pharmacology conducted a CME on 'Selective Estrogen Receptor Modulations' by Prof. C. B. Tharani, Director, Institute of Pharmacology, MMC, Chennai in 2005.
**Happenings**

Dept. of General Surgery and the Indian Association of Gastrointestinal Endo Surgeons (IAGES) conducted the 2nd Fellowship Course on Advanced Laparoscopic Surgery for Abdominal Wall Hernia - FALS HERNIA 2017, from 8th to 10th Jun. Dr. B. Krishna Rau, Chief Advisor, IAGES, Chennai was the guest of honor. 65 delegates from all over India attended.

Dept. of Public Health Dentistry, Faculty of Dental Sciences celebrated the World No Tobacco Day on 31st May. A skit was enacted by the students highlighting the ill effects of tobacco to the outpatients. Carbon monoxide levels among smokers were analyzed using a breath analyzer and counseling was given. 300 patients benefited. A short film directed by the students was released on this occasion.

Dept. of Psychiatry observed the World Schizophrenia Day on 31st May. The activities included:
- Distribution of best caregiver award
- Brochure distribution
- Video presentation
- Psycho-education by consultant psychiatrist
- Villupattu by social work trainees from other colleges
- Drawing competition
250 faculty members, staff & students participated.

SRU observed the International Yoga Day on 21st Jun. Prof. V. Chockalingam, Former HOD, Cardiology, MMC and Dr. K. Ananda Kannan, Former Vice-Chancellor, The Tamil Nadu Dr. MGR Medical University were the guests. The events included:
- Lecture on ‘Mind your Heart’ by Prof. V. Chockalingam
- Five day workshop - 60 faculty members benefited
- Mass yoga demonstration - 800 participants

Dept. of Oral Medicine & Radiology organized Oral Cancer and Precancer Camp to commemorate World No Tobacco Day on 31st May & 1st Jun. 56 patients attended, of whom five patients had oral cancer, 10 had oral precancer and five had tobacco related oral lesions. All patients were educated about the harmful effects of tobacco/betelnut.

Depts. of OBGYN & Community Health Nursing organized the 1st State Workshop with the theme, 'Objective Structured Clinical Examination in Nursing’ on 20th May. Prof. Rajeswari Siva, HOD, Community Health Nursing, College of Nursing, CMC, Vellore was the chief guest. 50 faculty members across Tamil Nadu attended.

Dr. S. Madhan Kumar, Assoc. Professor, Dept. of Prosthodontics, Faculty of Dental Sciences received the 'Best Dental Educator 2017' award from the International Award of Excellence in Dentistry, London on 19th Apr.
Interns participated in the National BDS Students Convention in Oral Medicine and Radiology organized by the Dept. of Oral Medicine and Radiology, Karpaga Vinayaga Institute of Dental Sciences, Tamil Nadu.

**Best Symposium Award**
- Ms. Keerthana M.
- Ms. Nanndhini Surian A/P Aramugam
- Ms. Lokamithra R.
- Ms. Nathera Jabeen N. A.

**Quiz – 1st Place**
- Ms. Nathera Jabeen N. A.
- Ms. Preetha K.
- Ms. Veena Sathish
- Ms. Lakshmi V. K.

31.05.'17 CME on 'Schizophrenia – Talking to Family' by Dr. Rangarajan N., Consultant Psychiatrist, PSYMED Hospital, Chennai

05.05.'17 Guest lecture on 'Hospital Information System' by Mr. U. K. Ananthapadmanabhan, Director, Tenxhealth Technologies Pvt. Ltd., Coimbatore

19.04.'17 World Dental and Oral Health Congress held at London, UK

& **Paper presentations**
- Prof. N. Shanmuganathan – ‘Prosthodontics’
- Dr. S. Madhan Kumar, Assoc. Professor – ‘Management of Endodontically Treated Teeth’
- Dr. J. Karthigeyan, Reader – ‘Influence of Teaching Strategies and its Order of Exposure on Pre-Clinical Teeth Arrangement – A Pilot Study’

**Sports**

The students of Medical College won the Winners and Runners-up Trophies in THULIR '17 – an inter medical tournament conducted by Stanley Medical College, Chennai from 14th to 18th Jun.

**Men Team**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Name</th>
<th>Events</th>
<th>Place</th>
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<tbody>
<tr>
<td>1.</td>
<td>Mr. S. Muthu Kumar, III yr.</td>
<td>Swimming 50 mts – Back Stroke, 25 mts – Butterfly, 50 mts – Individual Medley</td>
<td>Silver</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Silver</td>
</tr>
<tr>
<td>2.</td>
<td>Mr. B. Rangesh Kumar, II yr.</td>
<td>Javelin Throw</td>
<td>Bronze</td>
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**Women Team**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Name</th>
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<th>Place</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Ms. Ujjvala Kalluri, II yr. &amp; Ms. P. Lakshmi, I yr.</td>
<td>Chess</td>
<td>Winner</td>
</tr>
<tr>
<td>2.</td>
<td>Ms. Ujjvala Kalluri, II yr. &amp; Ms. P. Lakshmi, I yr.</td>
<td>Table Tennis</td>
<td>Runner-Up</td>
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Global Positioning System (GPS) on Android is incredible for many reasons. It is commonly used for navigating one’s way through hiking trails, especially because GPS works even when the device is not connected to the internet. But with GPS, an Android device could also be used for tracking. It does come with some limitations, but it can get the job done. The method to locate a person or an object using the device is given below:

**Tracking with native features**
Most Android devices released in 2014 or later have a built-in feature called Android Device Manager. This service constantly pings the device’s location back to Google’s servers so that Google knows where the device is. Google’s web interface can be used to see where the device is at any given time. A Google account is needed to use this feature.

**Enabling Android Device Manager**
- Navigate to Android’s Settings
- Under Personal, tap Security
- Under Device Administration, tap Device Administrators
- Tap Android Device Manager
- Tap Activate

In order to activate this service, user needs to allow three permissions: The ability to erase all data, the ability to change the screen-unlock password, and the ability to lock the screen. The nice thing about Android Device Manager is that it is not just a tracker — it lets the user control the device from afar in these ways.

**How to use Android Device Manager?**
Once enabled, the user needs to launch a web browser, navigate to the Android Device Manager dashboard, and sign into their account (the same one associated with the device). Click the Locate Device button for said device and it will show its last known location. It is fairly accurate, but can be off by up to 20 meters in areas with poor GPS visibility.

**Tracking with Android apps**
Instead of Android Device Manager, the user can always resort to one of the many third-party alternatives available on the Play Store.
- **Lookout** — Lookout is more of an all-in-one solution where device tracking is just one of the many features. The device can be used even if it lacks a good antivirus app.
- **Prey** — In practical usage, Prey is very similar to Android Device Manager. The one big advantage is availability across multiple other platforms, including Windows, Mac, Linux and iOS, enabling tracking of the device from anywhere.
Believe it or Not
Harvest Drinking Water from Dry Air?

A new device - the size of a coffee mug can generate drinkable water from desert air using nothing but sunlight. “With this device, you can harvest the equivalent of a Coke can’s worth of water in an hour,” says cocreator Omar Yaghi, Chemist, University of California, Berkeley. “That’s about how much water a person needs to survive in the desert.” Though that may not sound like much, its designers say the current device is just a prototype. But the technology could be scaled up to supply fresh water to some of the most parched and remote regions of the globe, such as the Middle East and North Africa, they say.

Previous attempts at low-energy water collection struggled to function below 50 percent relative humidity (roughly the average afternoon humidity of Augusta, Ga.). Thanks to a special material, the new device pulled water from air with as low as 20 percent relative humidity, Yaghi and colleagues report in Science.

Drinking water supplies cannot keep up with the rising demands of a growing human population, and shifts in rainfall caused by climate change are expected to exacerbate the problem. Already, two-thirds of the world’s population is experiencing water shortage. One largely untapped water source is the atmosphere, which contains more than 5 billion Olympic-sized pools’ worth of moisture in the form of vapor and droplets.

Getting that moisture out is easy when the air is saturated with water. But humid regions are not where the water-shortage problem is, and drawing water from the drier air in parched areas is a greater challenge. Spongy materials such as silica gels can extract moisture from the air even at low relative humidity. Those materials, however, either amass water too slowly or require lots of energy to extract the collected water from the material.

The new device uses a material that avoids both problems. Evelyn Wang, Mechanical Engineer, MIT, Yaghi and colleagues repurposed an existing material composed of electrically charged metal atoms linked by organic molecules. This metal-organic framework, christened MOF-801, creates a network of microscopic, sponge like pores that can trap such gases as water vapor. At room temperature, water vapor collects in the pores. As temperatures rise, the water escapes.

The team’s prototype includes a layer of MOF-801 mixed with copper foam. Left in the shade, this layer collects water vapor from the air. When moved into direct sunlight, the layer heats up and the water vapor escapes into an underlying chamber. A condenser in the chamber cools the vapor, converting it into a potable liquid. This entire process takes around two hours.

The device’s ability to produce water at low relative humidity is a breakthrough, says Krista Walton, Chemical Engineer at Georgia Tech in Atlanta. “No one else is using MOFs like this today. As for the cost of scaling up, the ingredients used in the device’s metal-organic framework aren’t exotic. Producing large amounts of the material would definitely be possible if the demand was there”, Walton says.


Reach Out

Depts. of Clinical Nutrition and Community Medicine conducted an Outreach Program on the theme, ‘Prevention of Malnutrition’ at RHTC, Vayalanallur on 3rd May. A skit and video presentation on general hygiene practices and importance of nutrition were done. Posters on balanced diet, hazards of junk food, nutritional management in various lifestyle diseases were displayed. Nutritive food display was also a part of the program. 135 people benefited.
Participants in this dialogue:

**Roald Hoffmann (RH)** Distinguished Professor of Psychobiology, Emeritus, at Bowling Green State University, Ohio.

**Jaak Panksepp (JP)** H.T. Rhodes Professor Emeritus of Humane Letters at Cornell University. A Nobel Laureate in Chemistry, he is also a poet, playwright and philosopher.

**Peter Matthiessen (PM)**

**JP:** Yes. Here I think we need to bring the concept of the **sublime** and the **beautiful**.

**PM:** Sublime, beautiful? What's the difference? I'm kind of intrigued.

**RH:** Thanks Jaak. Well, as Peter was saying, I'm kind of intrigued to think what would be the scientists' take on the relevance of the sublime compared to what artists and philosophers have been thinking and saying. You know it was the 18th century British philosopher Edmund Burke who evoked the idea of “a sort of delightful horror, a sort of tranquility tinged with terror” at the root of the sublime.

**PM:** “Delightful horror, tranquility with terror?” Doesn’t it sound like an oxymoron?

**RH:** It does, I guess. I’ll explain it by saying how the sublime is approached by scientists. They’re continuously confronted with astounding novelty, emerging from experiment or theoretical contemplation, agreed?

**PM:** Agreed, but where’s horror in it, or terror?

**RH:** Wait a minute. How and where is wonder voiced? You’ll agree that our stock-in-trade, the scientific article, that ossified, neutered, and ritualized way the ‘new’ is communicated certainly does not allow that.

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**Global News**

**ISRO launches 104 satellites from a single rocket**

ISRO created a world record with the successful launch of 104 satellites in one go from a single rocket on 15th February 2017, a feat that has not been achieved by any other country so far. The country that comes second is Russia, who had launched 37 satellites in one single go, something it had achieved in 2014 using a modified intercontinental ballistic missile. So Russia remains way behind in terms of the number of satellites launched at the same time, followed by USA’s NASA which has launched 29.

While there are talks about India’s record being broken, it seems highly unlikely that any other country would plan to attempt such a feat in the future. This was only the 15th space mission the ISRO has conducted and has had an extremely good success rate as none of its programs has failed since 2010. This was India’s first space mission of 2017 and the most complicated one yet, considering the sheer number of satellites it carried.

This satellite launch will go on to be known as one of the most successful space programs ever devised and implemented by mankind. Of the 104 satellites that go into space, the PSLV-C37 rocket also carries a Cartosat-2 satellite which will be used to produce high-resolution images of India. This will help in security and warn us against natural disasters. The XL version of the PSLV (Polar Satellite Launch Vehicle) that was used on 15th February 2017 for the satellite launch is known to have a 100% success rate. It had earlier been used in India’s Mars Orbiter Mission (MOM) after it had debuted in 2008 in India’s first attempt to reach moon, Chandrayan-I. It must also be noted that the launch countdown of 28 hours was the shortest in all the PSLV missions so far.

India had earlier made a national record in June 2016 after it had successfully rocketed 20 satellites at one go, including 13 from the United States of America. The PSLV-XL carried the Cartosat 2 for earth observation. It weighed 714 kg. Add the 103 nanosatellites into the mix and the entire launch carried by the PSLV-XL had a satellite mass of about 1,378 kg. India has received widespread recognition for the success of its space programs such as the Chandrayan and Mission Mars. The ISRO has managed to conjure up some of the most productive missions which have also been cost-effective as compared to our western counterparts.

It is true that India was late according to global standards, in putting its foot in space and wander amongst the vastness of the universe, but the success rate and the achievements it has pulled off in the last few years with the Chandrayan and Mission Mars have put India right up the ladder with the elites. India might not yet be on par with the NASA or Roscosmos, but it surely is catching up and it is doing so at a good velocity.

Alumni Corner

Ms. V. M. Vidhya (Alumna, M.Sc., Biotechnology 2009-2010) was one of the team members of Madras University, Guindy Campus who had discovered a surface protein in the bacteria which was a key to antimicrobial resistance. These results have been published in Royal Society of Chemistry Advances and Federation of European Biochemical Society.

Dr. V. Praveen Kumar (Alumnus, MBBS 2003-2004, MD Radiology 2010-2011), Assistant Professor, SRU was awarded the Fellow of Royal College of Radiologists, UK in May 2017.

The 76th Bridges Monthly Book Review was held on 28.06.’17

Book: Rudali
Author: Mahasweta Devi
Reviewed by: Dr. Akshay Singh, III yr., M. D. Psychiatry

Forthcoming Bridges Monthly Book Review
July 2017: The Inheritance of Loss by Kiran Desai
Reviewer: Ms. Vilashini M., II yr., MASLP