



THE UNIVERSITY OF FIJI

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School of

Science

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&  
Technology

2015  
ISSUE

Newsletter

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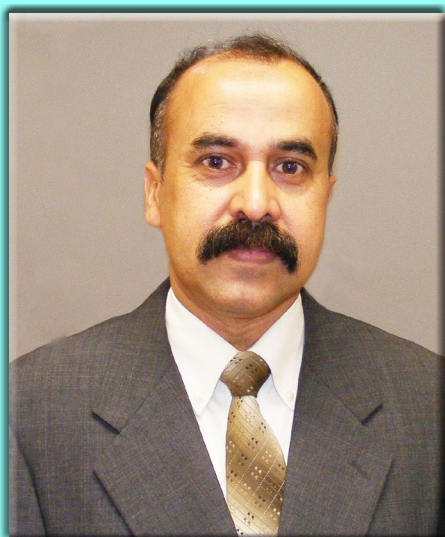
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Newsletter Designed & Edited by: **Ms. Shireen Nisha**, Assistant Lecturer, Dept. CS&IT

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## MESSAGE FROM THE DEAN OF SOST



**Professor ABM Shawkat Ali**

Welcome to the 2015 issue of the School of Science and Technology (SOST) newsletter .

This has been an exciting year for students engaged with SOST as we continue to grow and enhance our programs to maintain national interest. We are always committed to providing the best services to our student. As evidence, we can see our graduates are doing an excellent job in the industry. Besides the teaching we are working in parallel to promote our research.

In terms of recognition, we have received the largest amount of grants in UniFiji history from USAID to do research on Climate Change. We have provided equal weight to develop our community in conjunction with teaching and research.

We are the first to have conducted a real life survey in Fiji on worldwide views by the funding support of the French government. The survey broadcasts the Fijian views on Climate Change at The United Nations Framework Convention on Climate Change (COP21) in Paris by the end of this year.

***“The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn.” - Alvin Toffler***

Rapid advances in technology are constantly changing the way we lead our world. If you really like to be on the path of this leadership, then we encourage you, please move forward with us to learn the technologies which we are waiting to offer you. Please do not hesitate to contact me or any of our faculty members to pursue opportunities for collaborations.

*Dr. Jesmin Nahar : Senior Lecturer in CS/IT*

*Dr. Jesmin Nahar* joined the CS&IT department on March 1st 2015 as a Senior Lecturer. She has attained double Masters and PhD certificates. She completed her PhD in Information Technology from Central Queensland University (CQU), Master's by Research in Information Technology from Deakin University, PhD in Zoology and Masters of Science from the University of Rajshahi, Bangladesh.

Her experience in teaching and research comes from working in a series of academic institutions as a lecturer, course coordinator & researcher in the Department of Computer Science, and Engineering at CQU University; Department of IT at Deakin University and Department of Science at Monash University, Australia. In addition, she has worked for World Bank Project; Bangladesh National Science and Technology; Department of Zoology, Rajshahi University, Bangladesh Sericulture Research and Training Institute; Bangladesh.

Dr Nahar was a member of Australian Computer Society (ACS) from 2009 to 2014. She was the chair for Process Control, Robotics and Transportation System session during the International Conference on Computational Intelligence (IASTED), in August 2009 in Hawaii, during which she also presented a paper titled: Diagnosing Heart Disease Using an Association Rule Discovery Approach.

Her skills lie in data analysis, including computational and statistical analysis, management and interpretation of big data in the area of biology, biomedical, business, social science and environmental sciences. She is very much goal oriented, determined to achieve, able to complete progress on time within budget constraints. Dr Nahar attained the following awards: CQUniversity Postgraduate Research Award (UPRA), National Science and Technology Scholarship, Ministry of Science and Technology, Bangladesh, Rajshahi University Scholarship, Rajshahi University, Bangladesh, Secondary Scholarship, Jessore Board, Bangladesh.



**Dr. Jesmin Nahar**

## **Mr . Md. Tanzim Khorshed**

### **Lecturer & H.O.D , CS&IT**

*Mr. Md. Tanzim Khorshed*, Head of CS& IT Department, joined the department as a Lecturer on 1st February 2015.

He is a Ph.D. candidate at Deakin University, Australia and holds a Master of Computing (Networking) degree



*Md. Tanzim Khorshed*

from the University of Western Sydney, Australia. Mr. Tanzim has achieved Industry certificates including, MCSE, MCDBA, & ITIL Foundations. He is also a member of the IEEE Computer Society. Before starting his Ph.D. candidature, Mr. Tanzim was working with a top level systems administrator group in an enterprise cloud environment in Australia. He has also worked as a program committee member for the 18th IEEE International Conference on Parallel and Distributed Systems (ICPADS), Singapore, in 2012. Mr. Tanzim has been a reviewer for one of the top journals on Cloud Computing, namely,

Future Generation Computer Systems, Elsevier. His research interest includes Cloud computing, Network Security and Virtualization. His publications can be accessed from the following link:

<https://scholar.google.com/citations?user=asAskIgAAAAJ&hl=en>

## **Mr Neeraj A. Sharma**

### **Assistant Lecturer in CS & IT Department**

*Mr Neeraj A. Sharma* joined the CS&IT department as an Assistant Lecturer on 1st of July 2015. He finished his Bachelor's Degree in Information Technology (BIT) in November 2014 from the University of Fiji and received a Gold Medal for being the most outstanding student graduating in the BIT programme in April 2015. He is currently pursuing his Postgraduate Diploma in Information Technology from UniFiji and is expecting to complete in 2016.

After completion of his BIT programme and before joining CS&IT department, Mr Sharma has worked as a Trainee Programmer at Standss South Pacific and as a Software Developer at Jacks of Fiji. This is his first year in academics at UniFiji, where he previously was employed as a Student Mentor in 2014. He also attained a Trade Certificate in Electronics Engineering from Fiji National University in 2009. His research interests are Cloud Computing, Programming and Big Data.



*Neeraj A. Sharma*

## Mr Kunal Kumar

### Assistant Lecturer in CS & IT Department

*Mr. Kunal Kumar* joined the CS&IT department on 6th July as an Assistant Lecturer. He completed his Bachelor's Degree in Information Technology (BIT) in 2014, from the University of Fiji and is currently pursuing Postgraduate Diploma in Information Technology. His teaching areas are Networking, Software Engineering, Project Management and is also involved in research with interests in cloud computing, big data, network security and education.



*Kunal Kumar*

Prior to joining CS&IT, Mr. Kumar had worked as an Appraisal Officer under the Quality Assurance Department of the University of Fiji for a period of one year. He has also worked as a student lab assistant for UniFiji's IT Services section from May 2011 to November 2013 with the responsibility of monitoring student activity in the UniFiji general lab and reporting technical issues to IT Services in a consistent manner.

## Mr Mishal Prasad

### Research Assistant under CST (CS & IT Department)



*Mishal Prasad*

*Mr. Mishal Prasad* joined the Centre for Smart Technologies (CST) as a Research Assistant after finishing his Bachelors in Information Technology (BIT) from the University of Fiji in November 2014

and graduated in April 2015. Mr. Prasad aims to pursue further studies at PG level from 2016 by taking up Postgraduate Diploma in Information Technology from UniFiji.

## Mr Aaron Dutt

### Research Assistant under CST (CS & IT Department)



*Aaron Dutt*

*Mr. Aaron V. Dutt* joined the CST as a Research Assistant. He graduated with his Bachelor's in IT in April 2015 from UniFiji. He is currently pursuing his Postgraduate Diploma in IT from UniFiji and is expecting to complete in 2017. This is Mr. Dutt's first year as a Research Assistant. His research interests are Cloud Computing, Internet of Things, Education Technology and Big Data.

## Mr Danian Rajneel

### Teaching Assistant in Science Department

*Mr. Danian Rajneel Singh* joined the Science department as a Teaching Assistant in Biology and Chemistry



*Danian Rajneel*

on 27th Feb 2015. He has completed his Bachelor's degree in Biology/Chemistry in November 2014 and graduated with an outstanding student prize in his discipline.

Currently, Mr. Singh is pursuing his Graduate Diploma in Teaching (GDT) at UniFiji. His research interests are microbiology, marine biology, animal physiology, organic chemistry and climate change.

## Mr Jamesh Nand

### Part- Time Teaching Assistant in Science Department

Mr. Jamesh Nand joined the Science Department as part-time Assistant Lecturer in Semester 2, 2015 to teach Geography. Currently, Mr. Jamesh is based in A. D. Patel College in Ba as the Vice Principle.

## Ms Doreen Reddy

### Teaching Assistant in Science Department



*Doreen Reddy*

*Ms. Doreen Reddy* joined the Science department in March 2015 as a Teaching Assistant in Chemistry. She completed her Bachelor Science degree majoring in Biology and Chemistry in

2014. Currently, she is continuing with her Graduate Diploma in Education from UniFiji.

## In Memoriam

*Mr. Praveen Kumar Sarup* joined the department as a part-time Lecturer in Biology. With great sadness, we came to know that he had passed away on 29th August 2015. He was a great colleague and a wonderful, warmhearted person. He will be missed by his colleagues.

# DEPARTMENTS EVENT

ORGANIZED BY THE DEPARTMENT OF SCIENCE

A Day that we celebrated Water – World Water Day

*A drop of water is flexible.  
A drop of water is powerful.  
A drop of water is in demand.*

**W**orld Water Day is marked on the 22nd of March every year. This year, the Department of Science in collaboration with CCCEESD, organized World Water day celebrations at the University of Fiji on the 20th of May.

Mr. Seymour Vimlesh Singh from the Water Authority of Fiji was the chief guest for this event. Keynote speakers to this event included Mr. Bipendra Prakash from Fiji Meteorological Services and Prof. Shawkat Ali who is the dean of the School of Science and Technology of the University of Fiji. The speakers shone a spotlight on the theme for this year which is “Water and Sustainable Development” and highlighted how water links to all areas of development. The speakers emphasized that all areas of development have to be considered in light of the future that we want.

The event was attended by 14 secondary schools and activities such as Impromptu speech contest and video contest were organized for them, which added a lively atmosphere to the celebrations.

## Winners for the Competitions

### Impromptu Speech Contest

**Winner** - SSKMC, Nadi  
(Alumita Nasilasila)

**Runner Up** - Kamil Muslim College  
(Amirah Ali)

### Video Contest

**Winner** - Nadi Muslim College

**Runner Up** - Xavier College, Ba



*Mr. Bipendra Prasad from Fiji Meteorological Services delivering his keynote speech*



*Student taking part in the impromptu speech contest*



*Impromptu speech contest winner Alumita Nasilasila (middle) from SSKMC, Nadi*



*The Chief guest Mr. Seymour Vimlesh Singh from the Water Authority of Fiji & Prof. Narendra Reddy with the winners and the organizers of the event*

The University of Fiji facilitated the National Environment Oratory organized by the Department of Environment at its Saweni Campus on the 3rd of June, 2015. The main event for the day was the oratory contest on the theme "Sustainable Consumption and Production". Ms. Priyatma Singh, Lecturer of Science was the chief judge which engaged Prof. Ruth Irwin from the Department of Education as a guest for the contest.

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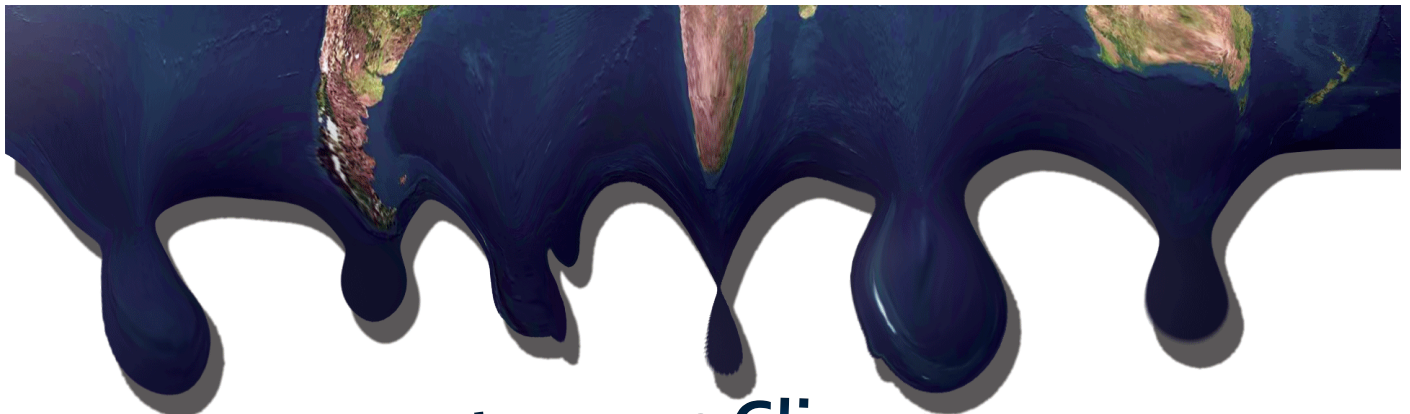
*Western  
Division National  
Environment Week  
Celebrations 2015*



*Judges with the Chief Guest, Ms. Priyatma Singh.*



*Students listen in to the presentations during the celebrations.*



# World Wide Views on Climate and Energy **A First for Fiji**

The University of Fiji and Project Survival Pacific (PSP) in collaboration with the United Nations Framework Convention on Climate Change (UNFCCC) and support of the French Government, organized a first-ever World Wide Views on Climate and Energy for Fiji on 6th of June, 2015 at the University of Fiji. World Wide Views on Climate and Energy is a global citizen participation project on global climate and energy.

The coordinating team from University of Fiji's Department of Science/CCCEESD (Centre for Climate Change, Energy, Environment and Sustainable Development) with a notable support from team members which comprised of staff volunteers worked together to facilitate one of Fiji's largest citizen consultation.

Indisputably, this worldwide views on climate change was the first for Fiji. This event witnessed 150 Fijian citizens of a diverse group from ages 18 and above, expressing their views which have irrefutably been recognized worldwide. The outcomes of the consultation will introduce the opinion of the Fijian citizens into the COP21 summit in France.

This colossal event offered Fijian citizens with a great opportunity and platform to voice their opinion on climate change, highlighting the issues pertaining to it and its repercussions in an island nation such as ours.

On the day of the event, The University of Fiji's then Acting Vice Chancellor, Professor Narendra Reddy officially welcomed the participants and applauded their efforts into making this summit a reality. The Project Manager for World Wide Views on Climate and Energy, Ms. Priyatma Singh shed light on citizens' consultation process, necessitating all Fijians to raise their voice on issues pertaining to climate change.

The University was gratified with the presence of the guest of honour for the day, Principal Agriculture Officer, Western, Mr. Vinesh Kumar, for gracing such an indispensable program for World Wide Views in Fiji Islands. Mr. Kumar too shared his thoughts on climate change adding it was indeed a buzzing issue in Fiji and across the globe, stressing everyone's responsibility to ensure we live in a sustainable world today and for posterity to come.



*The University of Fiji's Organizing Team.*



*Ms. Andreen helping participants during registration.*



*Discussion in process with facilitators ready to assist.*



*Lunch being served to participants.*



*Participants discussing during the consultation.*



*Participants discussing during the consultation.*



*Participants discussing during the consultation.*

To see more WW Views picture, follow the main WW Views flicker web link below:  
<https://www.flickr.com/photos/133908539@N03/>

# Insight from the Project Manager/ Head Facilitator of WWViews on Climate & Energy

*Written by Ms. Priyatma Singh*  
*Lecturer in Biology*  
*Department of Science*

I worked as the Project Manager/Head facilitator for the recently organized World Wide Views on Climate and Energy at The University of Fiji.

This event was organized in Fiji for the first time and it provided a unique opportunity to the citizens of Fiji to voice their opinions on Climate and Energy issues.

The WWViews is an ambitious, global citizen participation project on global Climate and Energy policies and actions and when I first came to know about it I was still lost in the nitty-gritty of the project.

However, when I realized that the project was initiated by UN-FCCC and supported by various French organizations and the French Government, I developed keen interest and liaised with my science colleagues who supported me at every step of the way.

The project required recruitment of 100 diverse citizens reflecting the demographic diversity of Fiji. This was an exigent task and after much deliberation we felt that we needed to expand our team and hence we invited other staff of the University to join in, which later proved to be a very efficient strategy.

Despite being unable to attend the training sessions at Paris, the webinars gave me a good insight on the project structure and purpose.

With the support of the technical project Manager, Mr. Ramendra Prasad, the WWViews facilitators and the senior management staff, we successfully managed to host the first ever worldwide views event in Fiji.

Everything was executed according to perfection. We also managed to recruit not just a 100 but 150 lay citizens of Fiji for the consultation process.

The positive feedback after the event from the participants and guests was overwhelming.

From my experience through this project I feel the following are a must for a perfect implementation of any project;

1. Keen interest and strategic planning
2. Strong Teamwork
3. Effective division of labor amongst the team
4. Clear communication
5. Constant deliberation and follow-ups.

I hope this article will be helpful to many who are having their deliveries as a Project Manager.



*Ms. Priyatma Singh*

# PACAM Project: Developing Base Maps of Tropical Aquatic Resources in the Pacific

**Background:** With a grant from the U.S. Agency for International Development's (USAID), Pacific – American Climate Fund (PACAM), the University of Fiji together with the University of South Florida aims to carry out a project which will involve the mapping and monitoring of two coastal ecosystems at Votua area in Ba and Votua village near Maui Bay in Nadroga.

**Team Members:** The team members for this three-year project from the University of Fiji include the Department of Science staff and Prof. Shawkat Ali, the Dean of the School of Science and Technology.

**PACAM Launch:** Building resilience for Votua communities through coastal mapping. The project titled “Developing Base Maps of Tropical Aquatic Resources in the Pacific” was launched on the 13th of April, 2015 and attended by His Excellency, President Ratu Epeli Nailatikau and U.S. Ambassador to Fiji, Judith Cefkin.

Winston Bowman, USAID's Global Climate Change Advisor for the Philippines and Pacific Region, Pro-Chancellor, Mr. Anil Tikaram, University of Fiji, Director Climate Change, Mr Peter Emberson, Prof. Narendra Reddy, Acting Vice-Chancellor University of Fiji, MC Peter Collier, Chief of Party, Pacific-American, senior diplomats from the US Embassy, USAID and PACAM officials and University of Fiji staff and students.

The project will see over US\$404,000 being given towards the mapping of the two Votua area and the resulting maps will illustrate relationships between local resources and human activities.



From left is **Mr. Winston Bowman**, USAID's Global Climate Change Advisor for the Philippines and Pacific Region; **Mr. Anil Tikaram**, Pro-Chancellor, University of Fiji; **His Excellency Ratu Epeli Nailatikau**, Chancellor, University of Fiji; **Ms. Judith Cefkin**, U.S. Ambassador; **Ms Roselyn Naidu**, Project Manager, The University of Fiji; **Prof Narendra Reddy**, Acting Vice Chancellor, The University of Fiji and **Mr. Peter Emberson**, Director of Climate Change, Ministry of Foreign Affairs.



From left is **Prof. Ali**, UoF; **Dr. Kilgas**, UoF; **Mr. Prasad**, UoF; **Ms. Singh**, UoF; **Ms. Naidu**, UoF; **Mr. Winston Bowman**, USAID's Global Climate Change Advisor for the Philippines and Pacific Region; U.S. Ambassador, **Ms. Judith Cefkin**; **Ms. Charan**, UoF; **Ms. Kiran**, UoF; **Mr. Peter Collier**, Chief of Party, PACAM; **Mr. Peter Emberson**, Director of Climate Change, Ministry of Foreign Affairs and **Ms. Praveen Lata**, Regional Fund Manager, PACAM.

## Signing of the Grant Agreement - Project officiated.

The Grant Agreement between USAID Pacific American Climate Fund and The University of Fiji was signed on 15th of April, 2015 and as per the grant agreement, the project has officially started from 15th April, 2015 and projected to finish by 14th April, 2018.

## Achievements – Project activities get underway

The first milestone that was the submission of the work plan and the second milestone which was the submission of the monitoring and evaluation plan have been completed. To help the project team, a new employee has been hired part-time as the project student assistant, Ms Kirti Ram and the search and hiring of a GIS technician has commenced.

The Research Agreement has been signed between The University of Fiji and University of South Florida on 9th June, 2015. We are now in the process of kicking off with another activity under Objective 1 (Build local capacity to derive land and submerged habitat classification maps, including processing large volumes of regional satellite imagery of island territories) which is the coordination meeting between the University of Fiji and University of South Florida.

The project's Principal Investigator Ms. Roselyn Naidu will leave for the United States on the 5th of July to receive training from our partner University, University of South Florida for 6 weeks and on her return conduct an in-house training to apprise other team members of the information gathered through her venture.



Visit by PACAM team members to the project site in Coral Coast

# ***Xavier College emerged as the Winner of the UniFiji - McDonald's Eco-Contest***

**Organized by Department of Science in collaboration with CCCEESD and Proudly Sponsored by McDonald's Fiji**

The University of Fiji's Department of Science and its Centre for Climate Change, Energy, Environment and Sustainable Development (CCCEESD) organized a Quiz competition for secondary schools in the Western division sponsored by McDonald's Fiji. This was part of McDonald's Global Environmental Commitment to reduce solid waste, conserve and protect natural resources. This contest has helped to create "*Youth Ambassadors of Natural Resources and Environment*" among our secondary school students.

The competition got underway through the *Elimination rounds* on the 12th of June with 18 western schools participating. These rounds were held at A. D. Patel College, Nadroga Arya College and the University of Fiji. The written elimination test was for 1 hour and will took place from 3 – 4 pm simultaneously at three venues: A.D.Patel College in Ba, Nadroga Arya, Sigatoka and the University of Fiji Hall, Lautoka.

After a successful Elimination Round, top 8 schools were selected to proceed to the next round (Pool round) of verbal quizzes on the 13th of July.



*Students doing their elimination test at The University of Fiji.*

The School of Science and Technology (SOST) would like to congratulate the following schools for making it to the Pool rounds.

<b>Pool A</b>	<b>Pool B</b>
Penang Sangam High School	A.D.Patel College
Kamil Muslim College	Sangam S.K.M College (SSKMC)
Natabua High School	Pundit Vishnu Deo Memorial College
Sabeto College	Xavier College

Semi Finalists	Finalists	Winner
Penang Sangam High School Vs Sangam S.K.M College (SSKMC)	Xavier College Vs Sangam S.K.M College (SSKMC)	Xavier College
Xavier College Vs Sabeto College		

**UniFiji - McDonald's Eco-Contest Winner**



*Winner of UniFiji- McDonald's Eco-Contest 2015, Xavier College Team Members take a pose with The Organizing Committee Team Members at The University of Fiji.*

**CCCEESD meets with CSTD**

University of Fiji's Centre for Climate Change, Energy, Environment and Sustainable Development (CCCEESD) met with the Fiji National University's Centre for Sustainable Technology and Development (CSTD) to discuss possible collaboration between the two Centres. The meeting centred its discussion on possible joint activities, coincidental areas of research interest and cooperative organization of international/local conferences that can be undertaken by both Centers.

# INTERNATIONAL COLLABORATION



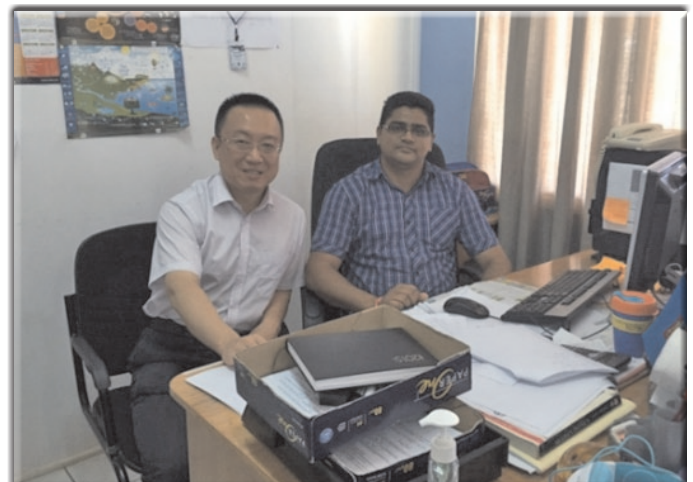
Professor Dr. Li Tao, of the Global Navigation Satellite System (GNSS) Research Center of Wuhan University in China, visited UniFiji from 7th September – 11th September, 2015 with the view of installation of GNSS antenna and receiver system. This was part of the MOU between the University of Fiji and GNSS research Centre, Wuhan University.

He is a member of CPGPS (International Association of Chinese Professionals in Global Positioning Systems). His research interest lies in Imaging Geodesy, Deformation monitoring by GNSS and Remote Sensing (earthquake, subsidence and landslide), InSAR data processing and GNSS data processing. He also gave two presentations:

1. Introduction of GNSS Research Center in Wuhan University;
2. Beidou System Development and GNSS Precise Positioning Application in China.



*Professor Li poses with (Left-right; front) Dr. Priit, Ms Dhrishna, Ms Priyatma, (Left-right;back) Mr. Ramendra, Mr Aman of Science Department.*



*Mr. Ramendra takes a pose with Professor Li during their discussions in his office.*



*Mr. Aman and Mr. Ramendra discuss the solar system inverter mechanisms with FEA Staff.*



*Mr. Ramendra shows the solar panels installed on roof of the B-Block Building.*

# Proposal to Establish CORE

Proposal to establish Centre for Renewable Energy (CORE) was sent to the University of Fiji Senate. The establishment of this centre is part of an international collaboration with the University of Alicante, Spain and University of Papua New Guinea, PNG. The establishment would be part of **ACP-EU, EDULINK II project: Renewable Energy in Pacific Islands: Developing Skills and Capacity.**

## Field Trips

### PHY212 Fiji Meteorological Services (FMS) Fieldtrip

The field trip included visitation to the site and presentations on the following: Instrumentation, services of FMS, Weather forecasting, and Climate change division.



*Staff and Students gathered outside the FMS office.*



*Meteorologist explaining on how climate observations and outlooks are made for the country and the some other Pacific Islands.*

### Kula Eco Park



*Year two biology students interacting with a Fijian Island Boa doing their trip to Kula Eco Park.*

## Nanukuloa, Ra

Year two students on a trip to Nanukuloa, Ra to celebrate The International Forestry Day on the 21st of March where they engaged in tree planting along the hillsides to reestablishment forest cover



*Students and staff pose during their field trip.*



*Students and staff walking downhill.*

## Sigatoka Research Station



*Staff and students at the Sigatoka Research Station, Valley Road, Sigatoka.*



*Research officer explaining students the activities carried out at the Sigatoka Research Station trip.*

## Sigatoka Sand Dunes Heritage Park



*Tour guide assisting a student up the dunes at the Sigatoka Sand Dunes Heritage Park, Sigatoka*



*Students at the Sigatoka Sand Dunes Heritage Park.*

# FELLOWSHIP EXPERIENCE IN MOSCOW

## UNESCO/ISED DC CO-SPONSORED FELLOWSHIP PROGRAMME

### Topic: Efficient use of Energy Resources

*From October 5th to 30th, 2015*

Written by **Ms. Dhrishna Charan**

Assistant Lecturer in Physics

Department of Science

My fellowship in Moscow, Russia focused on developing capacities of fellows on the topic of “efficient use of energy resources”. A total of 19 fellows from 13 different countries took part in this fellowship, which was organized into three sessions spread over a period of 4 weeks. My fellowship was divided into several training sessions:

- i. Classes at the Peoples Friendship University of Russia (PFUR), Ecological department – Lectures were delivered on several topics ranging from energy management to low carbon development.
- ii. Classes at the ISEDC (International Sustainable Energy Development Centre) – A few classes (3 days) were taken at the centre which comprised of face to face and online lectures.
- iii. Field trips to institutes, conferences and exhibitions – 7 days of our training was utilized on trips to places where work was being done on energy related projects and innovations.

The structure of the fellowship programme began with formal lectures at the PFUR, Ecological department, where we were introduced to global energy issues during the first two weeks of our training. The lectures took us through the energy situation in many parts of the world, which pointed the diversity of issues that exist.



*Ms. Dhrishna Charan*

The third week began with classes at the International centre for sustainable energy development. The lectures, for me, became more specific – we moved from exploring issues at a global scale to discussing how to apply what we had learned at a household, residential and industry level.

Field trips were organized at different institutes during the third and fourth week.

We made trips to the Moscow State University, Joint institute for higher temperatures, Institute for electrification of agriculture, REENCON and open innovations. REENCON (International Congress. Renewable Energy XXI century: energy and economic efficiency) was an international conference where we heard from representatives of many different countries such as Germany, Kazakhstan, Russia and many different international organizations such as IRENA (The international Renewable Energy Agency) and IFC (International Finance Corporation). The forum and technology show – Open innovations was a forum where new and state-of-the-art technologies were displayed. There was an incredible display of new projects and products.

As a teacher, I’m very eager to pass on what I have learnt on to my students and I will definitely ensure that these components will be part of our existing courses on renewable sources of energy.

### Classes Begin.



*During the first day at the People's Friendship University of Russia, Ecological department.*



*Presentation by the United Nations Development Programme at ISEDC International Center for Sustainable Energy Development.*

**Field Trip Photos.**



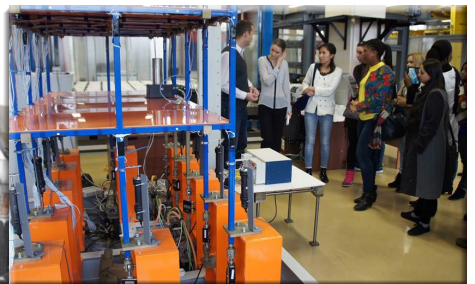
*The Earth Science Museum at Moscow State University (The Museum of Natural History).*



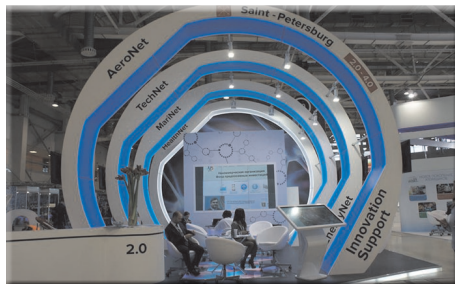
*Joint Institute for High Temperatures, Russian Academy of Sciences.*



*The All-Russian Scientific Research Institute for Electrification of Agriculture.*



*Moscow State University of Civil Engineering*



*Forum and Technology Show Open Innovations.*



*Presentation at the PFUR Ecological department*



*Graduation Ceremony.*

# Research Grants

## 1. “A Pilot Study of Freshwater quality and its biotic communities in Lautoka/Nadi area”

Principal Researcher: *Mr. Aman Deo*  
Team members: *Mr. Ramendra P, Ms. Priyatma S, Ms. Dhrishna C.*  
Fiji Higher Education Commission, University of Fiji Competitive Research Fund

*Duration: 15 months*  
*Grant Amount: \$4250.00*

## 2. “Assessment of Carbon Footprint at the University of Fiji, Saweni Campus-Proposed Green Campus Initiative”

Principal Researcher: *Mr. Ramendra Prasad*  
Team members: *Ms. Dhrishna Charan, Ms. Priyatma Singh, Mr. Aman Deo.*  
The University of Fiji Research Committee Grant

*Duration: 15 months*  
*Grant Amount: \$4000.00*

*Status: Commencing in January, 2016*

## 3. “Community structure and behavioural ecology of birds in forest fragments of VitiLevu, Fiji”

Principal Investigator: *Dr. Priit Kilgas*  
Fiji Higher Education Commission, University of Fiji Competitive Research Fund

*Grant Amount: \$4250.00*

## 4. “Climate Change Adaptation – Women’s coping mechanisms in Ba District, Western VitiLevu, Fiji Islands.”

Principal Researcher: *Ms. Priyatma Singh*  
The University of Fiji Research Committee Grant

*Grant Amount: \$4000.00*

*The research will be conducted in collaboration with Manpreet Kaur from the School of Humanities and Arts – November, 2015*

## SUMMER CLASSES

**Mr Nikleshwar Dutt**, Assistant Lecturer from the Mathematics department took MTH406, Integral Transforms and its applications this summer between 7 -18th December 2015 for the students residing in the Ba/Tavua district. A total of 12 students enrolled for this course.

# DEPARTMENTS EVENT

## ORGANIZED BY THE COMPUTER SCIENCE AND INFORMATION TECHNOLOGY DEPARTMENT

### **10th International Conference on Green, Pervasive and Cloud Computing (GPC 2015)** **Plantation Island, Fiji** **4th - 6th of May 2015**

GPC 2015 set up a high-standard world forum for researchers and developers to share their excellent ideas and experiences in the areas of green computing and communications in the broad context of pervasive computing and cloud computing. It featured a special publication model: in addition to the publication in Springer LNCS proceedings (EI, Scopus indexed), a number of top ranked papers were directly published in a Special Issue of IEEE Systems Journal (SCI indexed). Professor ABM Shawkat Ali, Dean SOST, The University of Fiji was one of the three General Chairs of the conference.



*Professor Shawkat Ali, Dean SOST and Conference General  
Chair Introduction Speech.*

*Conference Participants from around the World.*



*Professor Shawkat Ali, and CS & IT H.O. D Mr Tanzim Khorshed had a busy day at conference registration.*

### **Professor Yi Qians visit to UniFiji and CST Lab.**

Professor Yi Qian from the Department of Electrical and Computer Engineering , University of Nebraska, Lincoln –USA visited UniFiji and CST Lab.



*Prof. Ali, Dean SOST, H.O.D CS&IT Mr. Tanzim, Dr. Nahar  
(CS&IT), Mr Aaron & Mr. Mishaal (CST) pose with Prof. Yi Qian in  
the CST Lab.*



*Prof. Ali, Mr. Tanzim & Dr. Nahar (CS&IT), pose with  
Prof. Yi Qian.*



# Centre for Smart Technologies (CST) 2015 Report

The CST research outcomes provide high innovative research that will encourage recruitment of high-quality Graduate students and Postdoctoral Fellows from the general public, industry sectors and also internationally.

CST opened in 2014 under the Directorship of Professor ABM Shawak Ali and has been running successfully ever since. It opened up a new era for graduates to make use of their skills and talents for the greater good.

This centre facilitates to exchange well known research idea for the UniFijis research community and highly involves exploring ICT education for those who never got an opportunity to explore modern ICT equipments.

The centre has been working hard and has come up with many projects throughout the year. The CST team has been involved in a lot of activities and projects which includes the development of:

- **The University of Fiji Web Enrollment System**

URL: <http://enrollment.unifijicst.net:8086/>

\* *Developing, hosting and maintenance of the site.*

- **UniFiji Course Finder website**

URL: <http://www.unifijicst.net:8084/>

\* *Developing, hosting and maintenance of the site.*

- **UniFiji Staff Profile website**

URL: <http://www.unifijicst.net/staffprofile/>

\* *Developing, hosting and maintenance of the site.*

- **APWC on CSE 2015 Conference website**

URL: <http://www.unifijicst.net/apwconcse2015/>

\* *Organizing and conducting all aspects of the conference.*

- **TruthSearch**

URL: <http://www.unifijicst.net:8081/>

\* *This was a project of two Masters Students, Ms Shireen & Mr Nawazish, who have also delivered a conference paper from this work at ICT4M 2014.*

\* *CST made these students work available for access by others by taking up the hosting and maintenance of TruthSearch Site from here on.*

Moreover, the listed systems can be viewed through the CST website which was developed by the CST members and are hosted from the CST lab cloud servers. In addition, the team has also been involved in research and was able to produce three conference papers in collaboration with some other staff and it was accepted and presented at the APWC on CSE 2015 Conference at Shangri-La, Fiji. CST is also involved in the changes and updates made to The University of Fiji Website and the making of The University of Fijis 2016 HandBook and Calendar.

# Centre for Smart Technologies

## 2015 Short Courses

The Centre for Smart Technologies (CST), established in 2014 engages in research, consultancy and delivery of short courses. The short course conducted through CST runs in different sessions throughout the year in respond to the increasing demand for short courses in the IT skills. In 2015, CST offered 2 short courses namely; Graphic Design Using Adobe Photoshop (GDAP) and Introduction to VB.NET conducted by Assistant Lecturers, Ms Shireen Nisha in May 2015 and Mr. Alvin Prasad in June 2015 respectively.

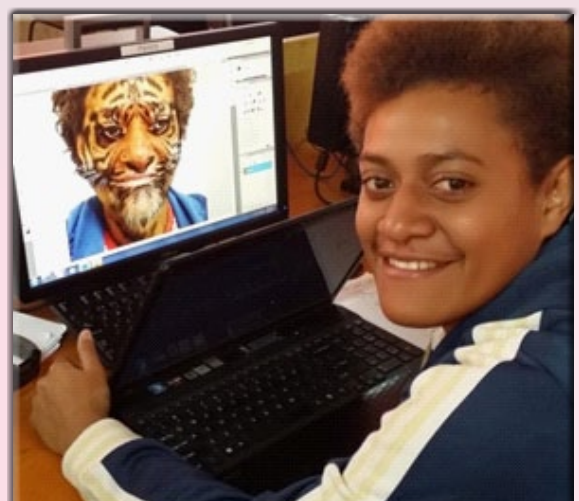
GDAP, a 30 hour, design-led hands-on practical course, commenced on 4th May and finished off on 16th May. This course is suitable for individuals such as computer teachers, IT professionals, secondary school and university students, who wish to acquire Photoshop knowledge to start, shake-up or set their careers soaring.

Introduction to VB.NET was a two-day course where we attracted secondary school computer teachers from western schools (Rakiraki, Tavua, Ba, Sigatoka and Lautoka). A lot of interest has been shown by the teachers for the course and we are planning to offer the course in central and Northern division shortly.

The hands-on practical approach during classes give students a dynamic and exciting experience in the different fields. Be it graphic design, programming or networking we develop the course according to the industry demand. In addition to the knowledge gained, each student is awarded a certificate upon successful completion of the course.



*GDAP Class of May 2015; students from left to right, Asinate (Suva), Chhaya (Lautoka), Ashitosh (Lautoka), Shirly (Solomon Islands), Zoya (Ba) & Dakshita (Lautoka).*



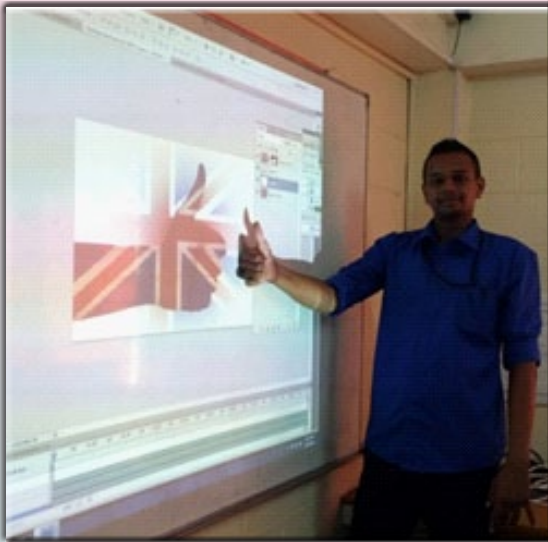
*Asinate hard at work manipulating her image using morph effect.*



*Hard working GDAP students take a picture pose.*



*Course Instructor Mr. Alvin Prasad busy demonstrating VB.NET code to teachers*



*Ashitosh demonstrates displacement map technique*



*Certificate awarded to Asinate by course instructor Ms Shireen Nisha.*



*Proud achiever, Chhaya is all smiles as she takes a pose with her certificate.*



*Certificate awarded to Mr. Ritesh Chand by the Director of CST Prof. ABM Shawkat Ali*



*Certificate awarded to Ms. Kirti Mala by the Director of CST, Prof. Shawkat Ali.*

# **2015 APWC on CSE**

## **Theme: Advancing Technologies for Humanities**

### **Shangri-La Fijian Resort, Fiji**

### **2nd - 4th of December 2015**

<http://www.unifijicst.net/apwconcse2015/MainPage.aspx>

UniFiji hosted the 2nd IEEE Asia Pacific World Congress on Computer Science & Engineering from 2-4 December at Shangri-La Fijian Resort on Yanuca Island. This conference aims to bring researchers, academics, scientists, and industry people in a common platform on a yearly basis for presenting and discussing new innovative technologies in the area of Computer Science and Engineering. This year experts from Australia, Bangladesh, China, Fiji, Ireland, Japan, Pakistan, New Zealand, Nigeria, Saudi Arabia, United Arab Emirates, United States attended the conference.

There were 9 tracks, namely, Big Data, Biomedical Engineering, Cloud Computing, Information Systems, Multimedia, Networking & Security, Applications in Business and Social Sciences, Robotics and Software Engineering. The opening ceremony went very well as the Chief Guest, Dr Richard Terry Ung Wah, the Executive Chairman of Fiji Higher Education Commission, delivered his opening speech and acknowledged the researchers who have had great impact for our modern society. Its main sponsors were the IEEE Computer Society, The University of Fiji and iLabs Australia.

The keynote speakers come from prominent research backgrounds:

- Professor E. Kita (Big Data and Agriculture) (Japan)
- Professor J. Gammack (A programming language for Humanity) (UAE)
- Professor K. Yada (Human behavior and Marketing) (Japan)

CS&IT Departments Staff Contributions:

- Professor AMB Shawkat Ali, Dean of SOST was the conference General Co-Chair.
- Dr. Nahar, Senior Lecturer in CS & IT was the Session Chair for Bio-Medical Engineering.
- Neeraj Sharma, Assistant Lecturer in CS & IT was the web coordinator for the event.
- Aaron Dutt and Mishal Prasad from CST assisted in the organizing of the conference.

In addition to the above, the following papers were presented by the Dr. Nahar, Neeraj Sharma and Aaron Dutt at the conference.

- Nahar, Jesmin and Imam Tasadduq and Tickle Kevin and Garcia-Alonso Debora "Medical Knowledge based Data Mining for Cardiac Stress Test Diagnostics" 2nd Asia Pacific World Congress on Computer Science & Engineering, December 2015, IEEE (Accepted).
- Khorshed M. Tanzim and Sharma Neeraj and Dutt Aaron, and Ali Shawkat and Xiang, Y., "Real Time Cyber Attack Analysis on Hadoop Ecosystem Using Machine Learning Algorithms" 2nd Asia Pacific World Congress on Computer Science & Engineering, December 2015, IEEE (Accepted).
- Khorshed M. Tanzim and Sharma Neeraj and Kumar Kunal and Prasad Mishaal and Ali Shawkat and Xiang, Y., "Integrating Internet-of-Things with the power of Cloud Computing and the Intelligence of Big Data Analytics – A Three Layered Approach" 2nd Asia Pacific World Congress on Computer Science & Engineering, December 2015, IEEE (Accepted).
- Kumar Kunal and Sharma Neeraj and Prasad Ramendra and Deo Aman and Khorshed M. Tanzim and Prasad Mishaal and Dutt Aaron and Ali Shawkat, "A Survey on Quantum Computing with Main Focus on the Methods of Implementation and Commercialization Gaps" 2nd Asia Pacific World Congress on Computer Science & Engineering, December 2015, IEEE (Accepted).

The event closed with great excitement as awards and prizes were given. The Chief Guest, Professor Prem Misir, the Vice Chancellor of The University of Fiji delivered the closing address. He also presented a token of thanks to the Keynote speakers and the best paper award to Dr. Y. Kaneko for his excellent work. All accepted papers will be store in the world renowned digital repository IEEE Xplore. Few top quality papers will be selected for the following journal special issue:

- Concurrency and Computation: Practice and Experience, John Wiley & Sons Inc, Germany
- The Review of Socionetwork Strategies, ISSN 1867-3236, Springer
- Journal of Computers, ISSN 1796-203X, Academy Publisher, UK
- Journal of Software, ISSN 1796-217X, Academy Publisher, UK



*Mr Aaron Dutt receiving keynote speakers, Professor J. Gammack (left), Professor E. Kita (2nd from right) and one of the Session Chairs Dr Yi Zuo (right)*



*Organizing Committee and Participants of APWC on CSE 2015.*



*Dr Richard Terry Ung Wah, Chief Guest of the first day of conference addresses the group.*



*Professor E. Kita delivers his Keynote Address.*



*Professor Katsutoshi Yada delivers his Keynote Address.*



*Professor AMB Shawkat Ali, Dean of SOST and conference General Co-Chair addresses the conference delegates.*



*Dr. Nahar introducing the Chief Guest, Professor Prem Misir, Vice Chancellor of UniFiji.*



*Mr. Neeraj Sharma presenting his paper at the conference.*



*Dr. Yuta Kaneko received the Best Paper Award.*



*Chief Guest, Professor Prem Misir delivering his address to the conference delegates.*



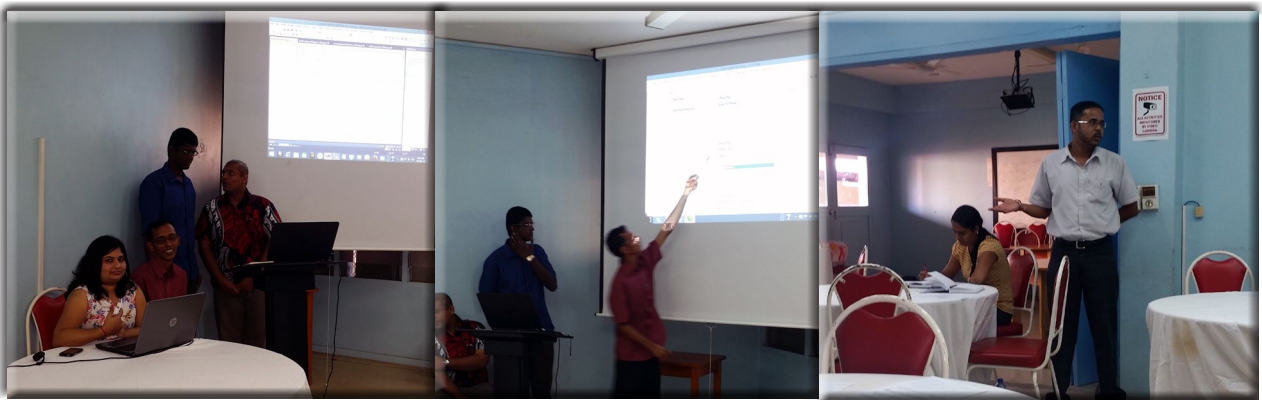
*UniFiji Vice Chancellor, Professor Prem Misir and SOST Dean at the closure of the conference.*

## **ITC307 Students Presentation**

As part of their final year, and in partial fulfillment of graduation requirements, undergraduate students in the CS & IT Department need to carry out a final-year project (FYP) as part of a requirements for the full coursework based 300 level unit, ITC307 - IT Project which was conducted on 2nd November, 2015. There was one group comprising of four students who worked together, under the guidance of Course Coordinator Ms Shireen Nisha on developing a combined Payroll and Human Resource System for Fiji Sugar Cane Growers Fund.

The Finance Accounts Officer, Mr Deepak Singh and the Finance Clerk, Ms Prithi Devi from Sugar Cane Growers Fund accepted the invitation and represented the stakeholders during the presentation of the final product.

The invited guests were impressed by the amount of work the students have done. Mr Singh went on to comment that the students have achieved 90% of what the stakeholders had required and were happy to take this software to implementation level after necessary adjustments had been made. Afterwards, everyone enjoyed tea, cake and other snacks organized for morning tea.



*ITC307 Students, (left -right), Sheetal, Shavneel, Avish and Saiyad taking turns to demonstrate their prototype during the presentation.*

*Mr Deepak Singh enlightens CS&IT staff on the impressive work done by ITC307 Students.*



*Staff & Students Enjoy Morning Tea.*

*CS & IT Staff take a pose with ITC307 students and invited guests after the presentation.*



# THE UNIVERSITY OF FIJI

## The School of Science & Technology

# Seminar series

The School of Science and Technology began its Seminar Series in the month of September 2015. The SOST Seminar Group (SSG) is responsible for conducting the series. SSG comprises of 3 members; team leader, Ms Priyatma (Dept. of Science), members, Ms Shireen (Dept. of C&IT) and Mr Nikleshwar Dutt (Dept. of Maths).

Series 1 saw a session by Professor Li Tao, on 7th September at the University of Fiji, Saweni Campus.

**Dr. Li Tao** is a Professor at the Global Navigation Satellite System (GNSS) Research Center of Wuhan University in China. Prior to this, he was a visiting researcher with the CSC foundation of the School of Civil Engineering and Geosciences at Newcastle University and Glasgow University's School of Geographical and Earth sciences. He is a member of CPGPS (International Association of Chinese Professionals in Global Positioning Systems).

Dr. Tao opened the seminar with a detailed introduction of the GNSS Research Center in Wuhan University. The University which has more than 120 years of history and well over 80,000 students and 8,000 staff had included the GNSS Research Centre under its wing in 1998. Over the years, this centre has flourished and seen its fair share of improvements and progress. Currently, it has over 40 staff, over 100 master students and 40 PhD candidates. its main focus is GNSS system development and engineering applications. It looks into GNSS data processing, GNSS system and signal testing, GNSS precise orbit determination and positioning apps, GNSS receiver design and developing, SAR and InSAR deformation monitoring, GNSS navigation chip and terminal technology, POD of LEO satellites and gravity field modeling.

Dr. Tao enlightened the audience on the BeiDou Navigation Satellite System (BDS) is China's global navigation satellite system which has been developed independently by China and recently opened for regional navigation. BDS operation conditions and its positioning precision have

been tested by GNSS Research Center in the past year and the result shows BDS to have similar precision performance as GPS. The current operational assemblage of 16 satellites has enabled BDS to offer services to the Asia-Pacific region since December 2012 with plans of serving globally by 2020. The Chinese government has constructed GNSS network infrastructure for crustal movement monitoring, city real time network RTK service, meteorology research and many more.

Series 2 saw a session by Professor ABM Shawkat Ali, on 10th September on the UniFiji, Saweni Campus.

**Professor ABM Shawkat Ali** is the Dean of SOST, Professor in CS & IT, Director for Centre for Smart Technologies (CST), UniFiji. Prior to this Prof. Ali was a Senior Lecturer in the School of Engineering and Technology, CQUniversity and Lecturer in the School of Computing & IT, Monash University, Australia. Professor Ali obtained his Masters and MPhil degrees from the University of Rajshahi and PhD from Monash University with a thesis on Automated Support Vector Learning Algorithms.

Professor Ali enlightening staff and students on the topic: Computational Intelligence-An Effective Tool for Big Data Analysis to Extract Knowledge on September 10th 2015. ICT offers an alternative approach and can serve any work in an intelligent manner to the community at large. As we can see 24/7 huge amount of data is being generated. He placed emphasis on research more in terms of data analysis. He encouraged staff to look in their community and collect research based data as it's in abundance all around us. Prof. Ali urged attendees to look at their cultural limitations and bring the data so that ICT tools can be used to compute meaningful information from it. To look at our environment, lifestyle and food and pick up limitations, it all adds as data.



*Professor Li Tao delivers his presentation.*



*Professor Shawkat Ali delivers his presentation.*

# **SOST MARKETING AND COMMUNITY ENGAGEMENT**

## **2015 UNIFIJI MARKETING TRIPS TO SECONDARY SCHOOLS**

### **1. Drasa Secondary Schools (DSS) Maths and Physics Week.**

***SOST Representative: Mr. Nikleshwar Dutt (Dept. of Mathematics)***

Mr Nikleshwar Dutt from the Department of Mathematics represented SOST during the Maths and Physics Week held at Drasa Secondary School on 5 June 2015 to speak on the importance and the demand for Mathematics and Physics in an attempt to motivate students to take these subjects seriously in schools.



*Mr. Dutt Delivering a Motivational Speech to DSS Students.*

### **2. Marketing Trip to Tavua and Rakiraki Schools.**

***SOST Representative: Mr. Nikleshwar Dutt (Dept. of Mathematics)***

Mr Nikleshwar Dutt also represented SOST for the marketing trips to Tavua and Rakiraki schools during the study week of from Tuesday 26th to Thursday 28th May 2015. In Tavua 4 schools were covered while 5 schools were visited in Rakiraki.

### **3. Drasa Secondary Schools (DSS) Science Fair**

***SOST Representative: Ms. Priyatma Singh (Dept. of Science)***

Ms Priyatma Singh was the Keynote Speaker at Drasa Secondary school for their Science Fair week on 3rd July, 2015. Ms Singh believes that events like this creates a platform to grow as a person, providing students with confidence and unfolds the talents hidden in them. The theme for their science week; Conserve Life; Ensure Continuity was appropriate to the rapidly changing world we are living.



*Ms. Singh Delivers her Keynote Address.*

Moreover, Ms Priyatma Singh was invited by the Drasa Secondary School to conduct a Professional Development session on Climate Change and Education. She facilitated the session with Professor Ruth Irwin from School of Humanities and Arts – November, 2015.

#### 4. Drasa Secondary Schools (DSS) Science Fair

**SOST Representative: Mr. Alvin Prasad (Dept. of CS & IT)**



*Mr Alvin Prasad*

Mr. Alvin Prasad was the Guest Speaker at Drasa Secondary school for their Computer Week on 24th July, 2015. He deliberated on the significance of Computer Studies as an eye opener to create the much needed trust in the students upon the study of Computer Science. It is paramount as technology continues to grow day by day and is becoming more of a necessity for people.

#### 5. Marketing Trip to Schools in Sigatoka District.

**SOST Representative: Ms. Sangeeta Menon (Dept. of Mathematics)  
18th September 2015**

A total of three schools, Loma-Arya School and Sigatoka Valley were visited and an address was made to 13 students with the intention of filling the application forms and to UniFiji.



*Ms. Sangeeta Menon*

wai Secondary School, Nadroga School in the Sigatoka district made to the year 12 and year of guiding the students in filling the completed forms back

### 2015 UNIFIJI MARKETING TRIPS TO TSLB ROAD SHOWS

#### 1. Swami Vivekananda College (SVC), Nadi.

**SOST Representative: Mr. Aman Deo (Dept. of Science)**

The TSLB Board organized Road Show in Nadi was at SVC on Wednesday 18th November, 2015. Mr. Amit P. and Mr. Aman D. represented UniFiji in the event together with representatives of the other universities and institutes. In the morning session, SVC students and Staff were in attendance for the event. A presentation was made for the programs and courses offered at the University and a question and answer session was opened to the students for getting clarification on the offerings and about the University. TELS also encouraged students that they recognize the university programs and support the students enrolled at the University. The afternoon session was a short session as a small group of students from various schools around Nadi attended and we again presented and answered their questions. The event closed at about 3.00pm.



*Mr Aman Deo*

## **2. Penang Sangam High School, RakiRaki.**

***SOST Representative: Mr. Ramendra Prasad (Dept. of Science)***

There were six schools who participated in this road show. Overall the trip was successful in presenting the University of Fiji to the students of Ra province. Student responses in terms of questions asked about our offerings is an indication of UoF's strong impact on students' choices for tertiary education.



*Mr Ramendra Prasad*

## **3. Xavier College, Ba.**

***SOST Representatives: Ms Shireen Nisha (Dept. of CS & IT)***

***Mr Nikleshwar Dutt (Dept. of Mathematics)***

Ms Shireen Nisha from the Department of CS & IT and Mr Nikleshwar Dutt from Mathematics Department represented UniFiji during the TSLB organized Road Show at Xavier College Hall in Ba on 18th November, 2015. It was a full day event and had the coverage of secondary schools in the Ba and Tavua Districts.



*Ms. Shireen Nisha*

There were a total of 12 schools who participated in this road show. Session 1 was from 9.30am to 12 noon in which we did presentations and discussions with students from 5 schools, namely, Khalsa, DAV, Ba Sanatan, Ba Sangam and Xavier College. Session 2 was from 12.30pm to 3.30pm which saw 7 schools attending; Ba Methodists, Tavua College, Tavua District, Balata High, Nilsen High, Nadarivatu High, and Nukuloa College. Overall the trip was successful in representing the University of Fiji to the students of Ba and Tavua.

## **3. SOSTs Contributions to UniFiji Open Day.**

***Date: 2 - 3 July 2015***

As done in previous years, this year's Open Day was a great success with many prospective students and their families/friends attending to find out what studying Science, Mathematics, Computer Science and IT at UniFiji is all about. All SOST staff contributed towards the preparation and the setting up of their designated booths. Some students' also volunteered to help in the setting up and demonstration of the displays.

# Some Glimpses of Open Day 2015



CS & IT Department on Day 1 of 2015 Open Day.



Science Department Staff explaining setup to high school students



Dr. Nahar from CS & IT Department briefing students.



Mr. Alvin Prasad (left) and Mr. Mohammed Farik (right) talking to students about the program of study offered by the CS & IT Department.



Mr. Alvin Prasad (left) and Ms. Shireen Nisha (right) take turns to demonstrate the games programming done by Year 3 CS & IT students.

# SOST STAFF FAREWELL & NEW APPOINTMENTS

Just as 2015 saw a couple of new staff intakes, it also had its share of farewells and goodbyes.

1. Mr. Sarnesh Deo, Assistant Lecturer with CS&IT Department left the department for another job opportunity. The department organized a small farewell lunch on 11th June to thank him for his 7 years of service to the university.
2. December 2015 saw three farewells. After Board of Studies meeting on 1st December, SOST had a farewell lunch organized to bid bon voyage to:
  - Mr. Mohammed Tanzim Khorshed, HOD and Lecturer with the CS&IT Department who was leaving this December to be with his family in Australia. Mr. Mohammed Farik, Lecturer will be the HOD for CS&IT as of 1st February, 2016.
  - Ms Andreen Kiran, Lab Assistant with Science Department, who would be also, leaving in December.
3. On 11th December, a morning tea session was held by SOST to farewell Dr. Priit Kilgas, HOD and Senior Lecturer with the Science Department. Dr Priit has been with the SOST family for the last 3 years and is now going back to his homeland Estonia to be closer to his family. Ms. Priyatma Singh, Lecturer in Science is the successor to the HOD position of the science department as of December 2015.



*CS & IT Staff together with HOD Maths & Science at farewell lunch for Mr Sarnesh Deo.*



*Prof. Ali presents a token to Mr Sarnesh Deo.*



*Mr Deo displays his token for the camera.*



*Dr. Priit, (HOD Science) & Ms Sangeeta Menon, (HOD Mathematics) present a token to Mr Tanzim Khorshed.*



*Prof. Ali presents a token to Ms Andreen Kiran.*



*Prof. Ali, Ms Sangeeta Menon (HOD Mathematics) & Ms Priyatma Singh present a token to Dr. Priit Kilgas.*



*TEAM SOST 2015*



*Mr Khorshed displays his token for the camera.*



*Dr. Priit displays his token for the camera.*

# Participation in Workshops/Seminars/Symposium and Publications by SOST STAFF

## Conferences / Workshops / Seminars & Other Presentations

- WWViews on Climate and Energy

The University of Fiji through its Centre for Climate Change, Energy, Environment and Sustainable Development successfully hosted the first ever World Wide Views (WWViews) on Climate and Energy in Fiji. The event was a huge achievement with a turnout of 149 lay citizens for the citizens' consultation process. The event was funded by the French Government and was supported by UNFCCC.

A formal report has been published and disseminated to Fiji delegates to COP 21. The report was also distributed to French Embassy in Fiji, organizers of the WWViews event, relevant local government ministries, NGO's and local media. Fiji was the only South Pacific Island to participate in the WWViews Climate and Energy and was earnestly invited to partake in the WWViews side events at the **COP 21 – October, 2015**.

- **Ms. Roselyn Naidu** attended a workshop on Report and Proposal Writing from 15th -16th of June, 2015 & a training on Project Management from 17th -19th of June, 2015 at the University of the South Pacific, Suva.

## Local Conference

- **Professor ABM Shawkat Ali** attended and was one of the General Chair for the 10th International Conference on Green, Pervasive and Cloud Computing (GPC 2015) held at Plantation Island from 4th - 6th of May, 2015.
- **Prasad, Ramendra** (2015), "Climate Change Adaptation and Sustainable Energy projects and developments at UoF". Fiji National Stakeholders' Consultative Workshop Programme: 1st – 3rd July, 2015, ICT Centre, USP, Fiji. (Oral presentation).

- APWC on CSE 2015

Four conference papers were presented by CS & IT Department and CST Staff at the 2nd IEEE Asia Pacific World Congress on Computer Science & Engineering held at Shangri-La Fijian Resort on Yanuca Island from 2-4 December, 2015.

- Nahar, Jesmin** and Imam Tasadduq and Tickle Kevin and Garcia-Alonso Debora "Medical Knowledge based Data Mining for Cardiac Stress Test Diagnostics" 2nd Asia Pacific World Congress on Computer Science & Engineering, December 2015, IEEE (Accepted). (**Presented by Dr. Nahar, CS&IT**)
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- iv. Kumar Kunal and Sharma Neeraj and Prasad Ramendra and Deo Aman and Khorshed M. Tanzim and Prasad Mishaal and Dutt Aaron and Ali Shawkat, "A Survey on Quantum Computing with Main Focus on the Methods of Implementation and Commercialization Gaps" 2nd Asia Pacific World Congress on Computer Science & Engineering, December 2015, IEEE (Accepted). (**Presented by Mr. Aaron Dutt, CST**). Habiba, Mansura and Islam, M. Rafiqul and Ali, ABM Shawkat and Islam, Zahidul (2015), "A New Approach to Access Control in Cloud", Arabian Journal for Science and Engineering, Springer, PP. 1-16.
- v. Habiba, Mansura and Islam, M. Rafiqul and Ali, ABM Shawkat (2015), "Access Control Management as a Service for NoSQL Big Data", 2nd IEEE Asia Pacific World Congress on Computer Science & Engineering, December, (Accepted).

- **Abstracts accepted at local conference.**

**Higgins Vincent** and Singh Priyatma and Kilgas Priit, "South Asian Diaspora and the Diabetes Pandemic", *Diasporas of the Pacific*, 22-25 April 2016, Anchorage Resort.

## International Conference

- **CLEAN & RENEWABLE ENERGY CONFERENCE:**

"Up-scaling Sustainable Energy: In Partnership with the Higher Education" from November 10 -11th 2015, Waigani Campus-UPNG, Port Moresby, PNG. The participants were Ramendra Prasad and Aman Deo. This conference was initiated through a project known as "Renewable energy in Pacific Islands: Developing Skills and Capacity (EPIC)" which is coordinated by African, Caribbean and Pacific Group of States (ACP Group) under the EDULINK II programme of which UPNG, UniFiji and University of Alicante are partners. This provided an excellent opportunity for the academic and research institutions to establish partnerships with government agencies, donors, the private sector and NGOs in PNG. Furthermore, government agencies and partners presented proposed energy-related research, plans, policies and bills. Lastly, the conference offered academic and research institutions, the private sector, government agencies, donors and NGOs to showcase ongoing projects, proposed projects, products and services.

Mr. Ramendra P. and Aman D. of the department of science attended the conference organized by the University of PNG sponsored under the EPIC project; the managing partners of the project from the University of Alicante also attended the conference. Two presentations were made by the UniFiji Participants:

- i. "World Wide Views on Climate and Energy: Opinions from Citizens of Fiji" Aman D., Priyatma S., Ramendra P., Dhrishna C., Andreen K., Sanjay S., Priit K., and ABM Shawkat A.
- ii. "Renewable Energy Incentives in Fiji" Ramendra Prasad, Amit Prakash, Aman Deo.

- **Abstracts accepted in Australia conference.**

- **Prasad Ramendra** and Kumar Sushil "Differential code bias and geomagnetic disturbances effects on GPS VTEC at a low latitude station in the South Pacific Region" , 15th Australian Space Research Conference (ASRC, formerly the Australian Space conference or ASSC), Canberra at the UNSW Campus located within the Australian Defense Force Academy (ADFA), (Accepted).
- **Singh, Priyatma** and Kaur Manpreet, "Fijian Women's role in Disaster Risk Management - Climate Change." 2015 Australia and New Zealand Society for Ecological Economics (ANZSEE) Conference, held at the University of New England, Armidale, NSW – October, 2015, (Accepted).

# Published/Accepted Journal Papers

## Published Papers in ISI Journals

- Habiba, Mansura and Islam, M. Rafiqu and Ali, ABM Shawkat and Islam, Zahidul (2015), "A New Approach to Access Control in Cloud", Arabian Journal for Science and Engineering, Springer, PP. 1-16.
- Naznen, Tahmina and Islam, M. Rafiqu and Ali, ABM Shawkat (2015), "Steganographic Approach in RGB Color Image with Attack Detection", International Arab Journal of Information Technology (IAJIT), (Accepted)
- Ghani, Syed and Deo, Aman (2014), "Synthesis and characterization of N2S2 - Tin macrocyclic complexes of Co(II), Ni(II), Cu(II) and Zn(II)", Main Group Metal Chemistry 37: 137-142.
- Deo, Aman and Ghani, Syed (2014), "Synthesis and Characterization of Silver Cluster particles in Hydrogels". Journal of Polymer Engineering AOP, DOI: 10.1515/polyeng-2014-0184.
- Kilgas, Priit. (2014), "Sources of variation in the basal metabolic rate of Laughing Doves (*Spilopelia senegalensis*)". Ornithological Science 13: 109 – 116.

## Published Papers in Peer Reviewed Journals

**Mr. Mohammed Farik** finished his Masters in Information Technology (MInfTech) in 2014 and was promoted to Lecturer position in 2015. He published 3 journal papers from his Master's Thesis. In semester 2, 2015, Mr. Farik coordinated ITC491: Advance Research Methodology and published 5 more journal papers together with his students.

- **Farik, Mohammed** and Ali, ABM Shawkat (2015), "Recurrent Security Gaps in 802.11ac Routers". International Journal of Scientific and Technology Research (IJSTR)", Vol 4, Issue 9, pp 329-334. ISSN:2277-8616. URL: <http://www.ijstr.org/final-print/sep2015/Recurrent-Security-Gaps-In-80211ac-Routers.pdf>
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*Best Wishes for an Amazing 2016, Happy New Year from Team SOST.*