This is the first issue of *Ucwaningo @ DUT* which is aimed at sharing research news, events and successes. We hope you enjoy reading it and send your news items to be featured and shared with the rest of the University community. I wish you all a restful break and God bless.

**ANNUAL RESEARCH FORUM (March 2012)**

Research and Postgraduate Support Directorate held a Research Forum aimed at encouraging staff who are involved in research to contribute to the university’s research strategic goals of meeting the targets set by the DHET.

Both the Vice Chancellor and Principal, Professor AC Bawa and the Deputy Vice Chancellor (TIP), Professor FAO Otieno, addressed the forum on the need to create and increase the research base at the university.

A research working group was formed to look at what the university should do in order to create an enabling environment for Research and increase productivity levels for researchers and supervisors. Recommendations from this working group will be forwarded to both the DVC(TIP) and VC for consideration.

**WEB OF SCIENCE PRODUCT TRAINING**

The training was held on the 8th of March 2012 at ML Sultan and Steve Biko Libraries. This training was facilitated by Ms Melissa Badenhorst from Worldwide Information Services: Agent Thomson Reuters.

**Web of Science** is an online academic citation index provided by Thomson Reuters: It is designed for providing access to multiple databases, cross-disciplinary research, and in-depth exploration of specialized subfields within an academic or scientific discipline. As a citation index, any cited paper will lead to any other literature (book, academic journal, proceedings, etc.) which currently, or in the past, cites this work. In addition, literature which shows the greatest impact in a field covered by Web of Science, or more than one discipline, can be selectively obtained. For example, a paper's influence can be determined by linking to all the papers that have cited it. In this way, current trends, patterns, and emerging fields of research can be assessed. Web of Science has indexing coverage from the year 1900 to the present. The DUT Web of Science database now dates back to 1994. See [http://apps.webofknowledge.com/UA_GeneralSearch_input.do?product=UA&search_mode=GeneralSearch&SIF=P1b9G E1nC4NKN&preferencesSaved=](http://apps.webofknowledge.com/UA_GeneralSearch_input.do?product=UA&search_mode=GeneralSearch&SIF=P1b9G E1nC4NKN&preferencesSaved=)
This workshop was held at EMakhosini Boutique Hotel from 21st – 23rd May 2012, facilitated by Prof. Johann Mouton who is the Director of CREST (Stellenbosch University). CREST stands for the Centre for Research on Evaluation, Science and Technology. He is also the Director of the Africa Doctoral Academy at the University of Stellenbosch. The workshop was well attended by DUT supervisors. The following topics were covered at the workshop.

- The changing face of university research: The Gibbons thesis
- Doctoral studies in SA today: Facts and figures
- The difference between the PhD and Masters degrees
- The supervisor: Roles and responsibilities
- Supervisory styles
- The student: Roles and responsibilities
- The supervisory process: Key tasks
- The doctoral research proposal
- Reviewing the literature
- Criteria of a good literature study
- A smart technique for searching the literature (Computer Laboratory Session).

The workshop helped participants develop systems, skills and tools to supervise effectively.

**DST-NRF INTERNSHIP PROGRAMME 2012**

The DST-NRF Internship programme provides an opportunity for skills training opportunities to unemployed graduates (see www.nrf.ac.za). The RPS Directorate welcomes two DST-NRF interns who will assist with RIMS and NRF administration work for 2012 assistant interns for 2012.

Mr Reuben Manele holds a Bachelor of Social Science degree. Reuben is currently employed by the National Research Foundation (NRF) through the Department of Science and Technology (DST) programme, Reuben currently works in the Faculty of Management Sciences. His duties include administration of the M.Tech and D.Tech: Business Administration. He also assists in filling of appropriate evaluation forms and documentation before it serves at FRC, sending of relevant e-mails to postgraduate students, setting up meetings between the students and their supervisors for commencement of their research, filing of permanent files with the information about the students, keeping and updating postgraduate student files and supporting postgraduate students through the registration process. His liaison role involves liaising with the students on matters affecting their studies or queries.

Mr Nkululeko Qwabe,

A highly motivated NRF - Research Information Management Systems (RIMS) Intern. He holds a Bachelor of Science (Computer Science and Information Systems). Nkululeko says that DUT has proven to be a good environment for him to grow and sharpen his skills. I have been given an opportunity to network and learn new technologies and working environments. I aspire to be researcher and working in the TIP office will help steer my career in the right direction. The staff are friendly and everyone has been willing to help. I have a great mentor in Nicole Muller. She is exposing me to all sorts of office environments and roles. I learn a lot everyday I’m at work. The office infrastructure is good as well. I really enjoy the challenges that come with this position, as they are helping me grow and stretch my wings. I trust I will make a valuable contribution in the TIP office and the University at large during the time that I’m contracted here and willing to learn all that’s available for me here.
POSTGRADUATE INDUCTION

The Research and Postgraduate Directorate held the postgraduate induction on the 8th June 2012 from 10:00-13:00 in the Conference Room D-Block, 7 Floor, ML Sultan Campus. It was the first time for 2012 that the forum was meeting to address the post graduate students. The induction meeting was well attended. The purpose of the meeting was to also introduce students to various support departments, library resources and facilities available at DUT. It also included information sharing on external funding opportunities, research capacity building initiatives for students.

The following individuals addressed the forum:

1. The guest speaker for the Induction was Mr Aluwani Nemukula from the Department of Biotechnology and the Institute for Water and Wastewater Technology.
2. Ms Indira Khiramen from Student Housing who dealt with concerns around accommodation issues raised.
3. Ms Shirlene Neerputh from the Library (Postgraduate support staff: Ms Avenal Finlayson and Ms Sara Mitha). A special vote of thanks went to the library from the outgoing Postgraduate Forum committee to the library for their service provision and support.
4. Ms Rowena Pankhurst represented all the faculty officers.
5. Professor Dee Pratt addressed the forum on the Research Capacity Development initiatives that the Research and Postgraduate Support Directorate offers.
6. Ms Charmaine Naidoo from the Research & Postgraduate Support addressed the forum on grant processes for scholarships, NRF online application processes, BTech and MTech block grants, grant and funding opportunities etc.
7. Mr Blessing Mncube, the Chairperson of the outgoing postgraduate forum, addresses the postgraduate students on broader issues which challenged postgraduate students in taking their studies seriously and thinking outside the box as future leaders and entrepreneurs.

The forum identified some challenging issues around adequate and suitable accommodation for postgraduate students, time taken to complete proposals for students registered, the additional time added through the ethics requirements and the inadequate number of supervisors.

MEET THE NEW TEAM WHO WILL SERVE ON THE PG FORUM 2012

Front row from left: Mr Freedom Vesi - Secretary, Mr Tsefang Mohale - Deputy Chairperson, Ms Thandiwe - Chairperson: Back row from left: Mr Shonelo Mbamo - Residence Student Rep - Mr Thabani Khumalo - Faculty of Art & Design rep, Mr Nduduzo Ngxongo – Liaison Office, Mr Evans Dodge – Project Officer.

SCHOLARSHIP UPDATE
Thuthuka Program – call for Research Proposals for funding in 2012, internal closing date has been extended to 9th July 2012.

1. Applications should be submitted electronically on the NRF Online Submission System at https://nrfsubmission.nrf.ac.za/nrfmkii/ For more information please view the attached documents or visit the NRF website at www.nrf.ac.za.

2. NRF: B Tech/Honours Block Grant Bursaries. Please note that we have 40 new bursaries available in the Scarce Skills category for students in Science and Engineering, Tourism, Technology, etc.

   - Scarce Skills Areas: Accounting, Actuarial Sciences, Agricultural Sciences, Auditing, Biotechnology, Chemistry, Computer Sciences, Demography, Engineering (all fields), Financial Management, Geology, Information Communication Technology, Mathematical Sciences, Physics, Transportation studies, Tourism and Statistics. 

   Closing date: 27th July 2012.

   - This block grant is exclusively for South African Citizens. Applicants must be registered full time for the year of study. It would be appreciated if B Tech students for 2012 can be informed. All applications must reach the Research Office by Friday, 27th July 2012 at 4pm. If you require any clarity or need any assistance please contact Charmaine Naidoo, Tel: 031 373 2423 or Charmaine@dut.ac.za
INSTITUTIONAL RESEARCH DAY

The Institutional Research Day Committee (IRDC) invites submission of abstracts for oral and poster presentations from staff, independent researchers, postgraduate students and postdoctoral fellows. B Tech students are encouraged to send abstracts for poster presentations ONLY. Abstracts will be reviewed by the IRDC which reserves the right to accept and allocate abstracts for either poster or oral presentations. Authors of accepted abstracts must attend Research Day.

Prizes will be awarded as follows:-
- Best poster per faculty
- Best oral presentation per faculty

Oral Presentations
- Oral presentations must be in English.
- Duration: 10 minutes plus 5 minutes for questions / discussion

Poster Presentations
Posters will be displayed in a prominent position throughout the day. Full details for the preparation and display of posters will be included in the Abstract Acceptance Letter.

Guidelines for Abstract Submission – follow example of abstract attached in pdf format
- Abstracts must be clear and grammatically correct and typed in single spacing, Times New Roman, font 12.
- Abstracts must be submitted in English.
- Indicate name and affiliation of author/s (surname and initials only). Underline name of main author/presenter only.
- Where appropriate, the abstract may be structured as follows:
  - Introduction or objectives: State clearly the purpose of the study
  - Methods: Clearly state how your study was conducted, sample selection, tools and instruments used
  - Results: Present your results in a logical sequence
  - Discussion/Conclusions: Emphasize new and important aspects of your study and conclusions drawn from them.

- Abstract must be between 200 – 250 words with 6 – 8 keywords. Please email your abstract to vanesh@dut.ac.za.

Please note: The method of submission is strictly by email. No faxed or delivered hard copies will be accepted. Abstract submission deadline is Monday, 20 July 2012. Institutional Research Day will be held on the 20th September 2012

WISA CONFERENCE 2012

Civil Engineering, IWWT and Chemical Engineering students attended the WISA conference which took place in Cape Town from the 6-10th May 2012.

PAPERS PRESENTED AT THE CONFERENCE
1. Paper title: Utility problems conference aggravated by unaccounted for water: case study SWA. by Ntombi Mhlongo Department of Civil Engineering PMB.


5. Paper title: Rule-Based Agents for 7-Days-Ahead Forecasting of Chemical Dosages. By Dr Bloodles Dzwairo, Post Doctoral Fellow department of Institute for Water and Wastewater Technology.

6. Paper title: Comparison of FISH and quantitative PCR to study the distribution of Nitrobacteria spp. In two full-scale wastewater treatment plants. By Nishani Ramdhani department of Biotechnology

FORTHCOMING EVENTS:

1. Writing for publication workshop facilitated by Dr Kathy Nokes.
   Date: 11th July 2012,
   Time: 09:00 – 11:00
   Venue: Research Boardroom, Gate 1 Tromso Annexe

2. Research Article-writing for Publication” workshop facilitated by Dr Graham Bake and Dr Elisabeth Lickendorf
   Date: 4th July 2012
   Time: 08:30 – 16:00   Venue: Chancel chamber,
EMERGING RESEARCHERS PROGRAMME @ DUT

The Emerging Researchers Programme (ERP) at DUT aims to identify young and early career researchers showing potential and who need to be mentored by more well established faculty members or mentors identified outside the university. To this end the university is in the process of formalizing the Emerging Researchers Programme that will focus on identifying researchers in this category and following up with relevant discipline specific capacity development programmes. Included in this will be the necessity to also identify appropriate one-one support with established senior scholars. The university has already begun to see an increase of this group of researchers participating in various initiatives including the increased rate of Thuthuka applicants since 2011. This group is also specifically targeted to participate in publication writing workshops which are faculty based as a driving tool to ensure the younger researchers and postgraduate students contribute to the research outputs and gain experience in writing journal articles while interacting with well established researchers in their respective fields of research. Included here as well is support for grant writing and incentives that include seed funding for research for new faculty members.

PROFILES FOR THE ERP PROGRAMME

(Dr OA Ijabadeniyi – Senior Lecturer: Department of Biotechnology and Food Technology)

Dr Oluwatosin Ademola Ijabadeniyi has a PhD in Food Science from University of Pretoria. His area of specialization is food safety and preservation. He has published 6 articles in recognized peer reviewed journals. Oluwatosin has also attended and presented a number of papers in both local and international conferences. His current research focus is microbiological safety of spices and vegetables and novel food preservation with high pressure treatment. In 5 years time, Oluwatosin wants to have become one of the leading researchers in food safety and novel food preservation in South Africa. On support from DUT, he believes that the university should better support research visits for emerging researchers. Research visits will encourage collaborations with established researchers outside the country.

Hobbies: Reading, writing, blogging, training, mentoring and motivational speaking.

Most Recent Journal Publications:


(Dr B Dzwairo – Postdoctoral Fellow: Institute for Water and Wastewater Treatment)

Dr Bloodless Dzwairo completed her DTech in Civil Engineering specializing in Water Resources Management at Tshwane University of Technology. She has published 7 articles in international journals over and above additional conference proceedings and publications in local journals. Her current research focus area is on Raw Water Quality Modelling and associated processes. Dr Dzwairo currently holds an NRF postdoctoral fellowship. Her research plan over the next 5 years includes the following:

1. Supervising a minimum 15 Postgraduate students in the 5th year and beyond.
2. Built a vibrant and well-funded research cluster group for the Vaal and Umgeni basins to influence and support policy and sustainable environmental management.
3. Published a minimum 10 articles in DHET accredited journals.
4. Teaching main streaming modules and conducting research methodology courses.
5. Offering services to Industry and Government for Environmental Systems Analysis, Modelling and Auditing.

When asked on how DUT can better support the ERP programme, Dr Dzwairo identified the need to help establish a culture of research at the institution by conducting research block clinics which have guaranteed journal article outputs at the end of each clinic, the need to engage with industry in so far as offering to provide research students and supervisors for research on industry-oriented issues and to promote strong research groups including assisting with applying for adequate funding.

Most Recent Journal Publications:

EMERGING RESEARCHERS Continues

Dr A Adeyemo – Senior Lecturer: Department of Civil Engineering

Dr Adeyemo obtained his DTech in Water Resources Engineering at Tshwane University of Technology. His current research focus area is in Water Resources Management. His five year research plan includes becoming an NRF rated and established researcher. Dr Adeyemo would like to see the university create an enabling environment including the simplification of registration of postgraduate students, a unified way of registering postgraduate students, increased DUT resources in supporting postgraduate students in the form of scholarships, conference sponsorship, support for specialisation technical training for staff and students and allocation of office spaces to full-time postgraduate students apart from the only spaces available in the library.

**Most Recent Journal Publications:**


Dr Nokuthula Sibiya – Senior Lecturer: School of Postgraduate Nursing

Dr Sibiya is Head of Nursing Department which comprises the undergraduate programme (UG) that is located at Indumiso Campus and postgraduate programme (PG) which is offered in Durban. She is also the co-ordinator of postgraduate (PG) studies in the Nursing Department and she co-ordinates PG workshops that are offered to all new PG students in the department. For the past two years, she has been vigilant in marketing the PG studies. In 2012, the department registered 30 new M Tech students and three (3) DTech students. In April 2011, she graduated one M Tech student and in April 2012, she graduated four (4) M Tech students. She is also involved in interdepartmental PG supervision. In 2011, she published a book chapter on cervical cancer. Her area of specialty is primary health care (PHC) and women’s health. Dr Sibiya is also involved in a collaborative intervention research study to enhance cervical screening uptake in South Africa. In 2007, Dr Sibiya was funded through Skills Development to attend a seminar on Grounded Theory in the Institute of Grounded Theory in US. She has been facilitating a series of workshops on the use of this approach.
EMERGING RESEARCHERS Continues

(Dr Parvesh Singh - Research Fellow: Department of Chemistry)

Dr Singh is a Research Fellow in the Department of Chemistry who has published over 13 accredited Journal articles since 2011 including a book Chapter in 2012. He was profiled as an NRF Emerging Researcher in 2011 and is hosted by Prof K Bisetty in the Department of Chemistry at DUT. He obtained his PhD form Guru Dev University in Amritsar (India) specializing in synthetic organic chemistry and computational chemistry. He has published 1 international book in 2012 and 24 Journal Articles. His Research Focus Area is on the applications of different computer programs to understand the three dimensional (3D) structures of biologically active peptides responsible for their physiological and medicinal actions, Drug-protein interactions using Capillary Electrophoresis (CE) and docking techniques, Reaction mechanism studies using quantum mechanics and molecular mechanics approaches. Dr Parvesh’s 5 year Research Plan involves studying the Cancer and TB problem. Cancer is a problem of global proportions, and despite intensive research the biochemical mechanisms underlying carcinogenesis are not fully understood, limiting the potential to develop efficient anticancer drugs. We are planning to focus specifically on anticancer peptides obtained from different sources (plants and animals) to better understand their 3D structures and mechanisms of action so that novel and potent drugs could be designed based on that information. Moreover, in collaborations with our International partners, we are also targeting the design of more potent anti-malarial, anti-bacterial and anti-TB molecules. Other important targets includes writing new research proposals for funding, both local and international collaborations and the recruitment of more doctoral and Masters Students in research. In next 5 yrs, I would like to see myself as a well established researcher with constructive contributions in the fields of research and academics. The availability of adequate funding, research skills and research facilities are very important factors behind the success of any institution. Thus far, we have constructively used the available resources to drive our research successfully at DUT. However the career security has always been one of my major concerns. Also, apart from our current computational work at DUT, it is my strong desire to extend our research in the field of synthetic and medicinal chemistry for drug design/synthesis at DUT. The requirement of expensive instrumentation and new lab facilities, however, are primary obstacles in this direction. Hence, any support regarding these few concerns would be highly useful.

Most Recent Journal Publications:


To be profiled in the next newsletter please email the following information to Ms Zanele Shandu: zaneles@dut.ac.za

(i) Name, title, department, faculty or focus area.
(ii) Research focus area plus your five year research plan.
(iii) Recent publications from 2011 – 2012.
(iv) A comment on how you think DUT can support emerging researchers to excel in their careers and contribute to postgraduate supervision and outputs.

Articles in this issue compiled by Zanele Shandu. If you have any news you want featured on ucwaning @DUT please e-mail: zaneles@dut.ac.za or call: 031 373 2577