

**Institutional Standard Assessment Application**  
**(ISAA- January 2016)**

**SUPPORTING MATERIAL**

**SM-4.1.4.**  
**Annual Research Report**



جامعة ظفار  
Dhofar University

Academic Year 2014-15



The Department of Research

# 7<sup>th</sup> ANNUAL RESEARCH REPORT





**H. M. SULTAN QABOOS BIN SAËED**

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**Legend:**

<b>AY</b>	Academic Year
<b>CAAS</b>	College of Arts and Applied Sciences
<b>CCBA</b>	College of Commerce and Business Administration
<b>CE</b>	College of Engineering
<b>DU</b>	Dhofar University
<b>DVC</b>	Deputy Vice Chancellor
<b>FURAP</b>	Faculty mentored Undergraduate Research Award program
<b>IC</b>	Incentive Claim
<b>IT</b>	Information Technology
<b>ORG</b>	Open Research Grant
<b>QA</b>	Quality Assurance
<b>R.O</b>	Rial Omani
<b>SG</b>	Seed Grant
<b>STFDG</b>	Short Term faculty Development Grant
<b>TRC</b>	The Research Council
<b>URB</b>	University research Board
<b>VC</b>	Vice Chancellor



## *A Foreword by Vice Chancellor*

I am pleased to present the 7<sup>th</sup> Annual Research Report of Dhofar University for AY 2014–15. Ten years ago we set ourselves a goal to achieve greater impact and greater engagement towards research. It has strongly shaped the intellectual identity of the university and, today, research expenditure is a significant component. This report highlights the significant increase in research activity over past few years and we are committed to support our students and staff in future.

I wish to thank our students and staff for their immense efforts and commitment for raising the University's research profile by doing quality research work to support our vision as formulated in DU's Strategic Plan 2014-19.

Last but not the least I would like to express my gratitude to Board of Trustees (BoT) for their continuous encouragement and support in promoting research. I would also like to thank The Research Council (TRC) for their substantial contribution and assisting DU to fulfil our mission to attain a position as an internationally renowned research intensive University.

**Best Regards,**

**Dr. Hassan Said Kashoob**



*A Foreword by  
Deputy Vice Chancellor for Academic Affairs  
and Research*

I have an immense pleasure in presenting the Dhofar University's 7<sup>th</sup> Annual Research Report that is an evidence of DU seeking to achieve the highest levels of distinction in the discovery and transmission of knowledge and understanding. The AY 2014-15 has been a busy year not only on the competitive grants side, it has also been busy in terms of research excellence, with good research projects pertaining to problems specifically related to Oman. It was a pivotal year on the path of scientific research where DU started fulfilling its new strategy 2014-19 by attracting faculty of the highest quality and has continued to provide them with state-of-the-art facilities and research infrastructure. The allocated budget for the University has been significantly increased to initiate this phase of expansion.

This AY 2014-15 saw enormous growth in academic and research activities. The number of academic events including workshops, seminars, lectures, symposia almost doubled. There was also a steady rise in the number of publications and scientific presentations, a trend that will undoubtedly accelerate as the many new research projects units move from an establishment phase to full research activity.

I would like to express my utmost appreciation to everyone involved in DU research and training activities, and in particular to Board of Trustees, our national and international collaborators, funding bodies like TRC and industry partners. I believe that sooner DU will be recognized as a hub of quality research activities not only in Dhofar region but all across the Sultanate.

**Best Regards,**

**Prof. Mohamed Limam**



*A Foreword by*  
*Director, Department of Research*

The past year was successful for Dhofar University. Research support from The Research Council (TRC) was significant and we managed to secure funding for various projects. There are several projects which are under review. The activity of the University Research Board (URB) was exceptional receiving well over 70 internally applications. Dhofar University is looking to establish itself into the main Research Hub within the Dhofar region and offer a wide range of Consultancy Services.

I wish to thank the entire faculty for their work in the past year and I hope that we maintain the momentum and achieve further success for the next academic year.

**Best Regards,**

**Dr. Israr Ul Hassan**



## **1. Explanatory Notes:**

The Seventh Annual Research Report presents the 'Research output' of faculty members of Dhofar University (DU) from July 2014 to June 2015. Please note that:

- In the Publications' list, DU faculty members are indicated with bold letters.
- Only published or presented papers are listed. Manuscripts accepted but not yet published shall appear in the next annual research report.
- All listings are listed in alphabetical order by College's name, department's name and faculty's first name.
- For each author, most recent publications are listed first.

## **2. Members of the University Research Board (URB):**

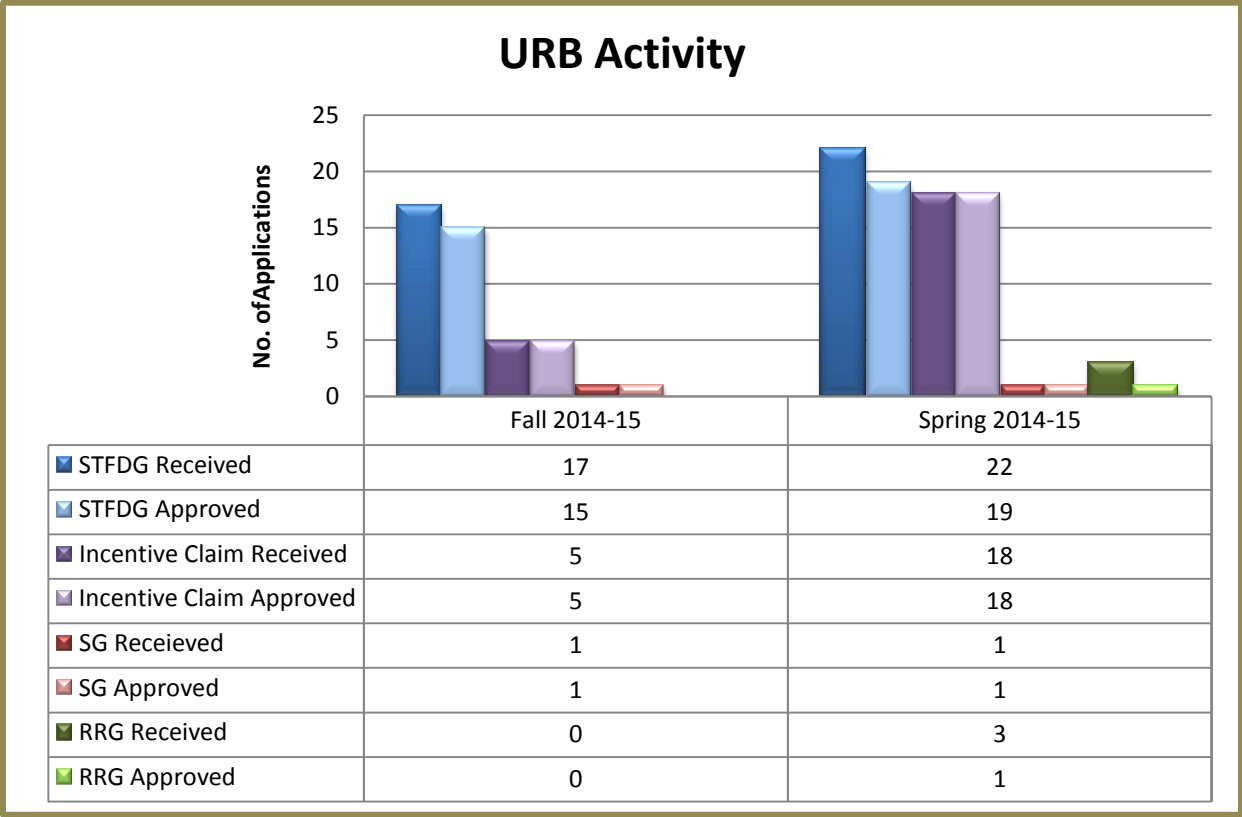
1. Dr. Israr Ul Hassan, **Director for Research, Chairperson URB**
2. Dr. Muhammad Asif Gondal, **College of Arts and Applied Sciences**
3. Dr. Vijay Singh Thakur, **College of Arts and Applied Sciences**
4. Dr. Shouvik Sanyal, **College of Commerce and Business Administration**
5. Dr. Mawih Al Ani, **College of Commerce and Business Administration**
6. Dr. Fethi Abbasi, **College of Engineering**
7. Dr. Manaf Zghaibeh, **College of Engineering**
8. Mr. Shahid Bashir, **Foundation Program**

## **3. URB Activities for the Academic Year 2014-2015:**

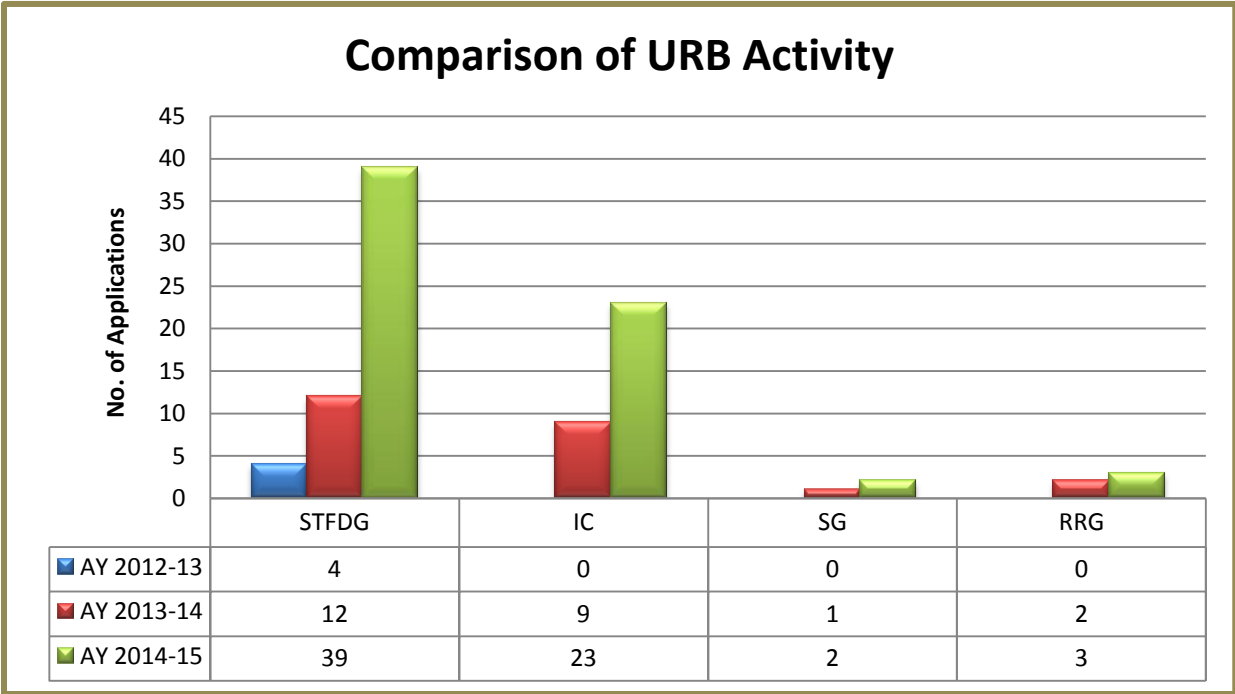
During the Academic Year 2014-15, URB received a total of:

- 39 applications for Short Term Faculty Development Grant (STFDG)
- 2 for Seed Grant (SG)
- 3 for Regular Research Grant (RRG)
- 21 applications for the Incentive Claims (IC)
- 4 for the distribution of questionnaires, and,
- 1 application for approval of request for interview with DVC for research purposes

25 STFDG applications were successful, 2 were approved for leave only and 4 were approved to attend workshop in Muscat along with 3 applications for visit to TRC, while, 4 STFDG applications were rejected and 1 was cancelled. 2 SG and 1 RRG application was approved while 2 RRG applications are still in process, whereas, 21 IC applications were approved unanimously by URB, DVC and VC (For details refer to Appendix A and B). Figure 1 summarizes the URB activity during AY 2014-15 while figure 2 shows the comparison of URB activity over last three years i.e. from AY 2012-13 to AY 2014-15.



**Figure 1: URB activity during AY 2014-15**



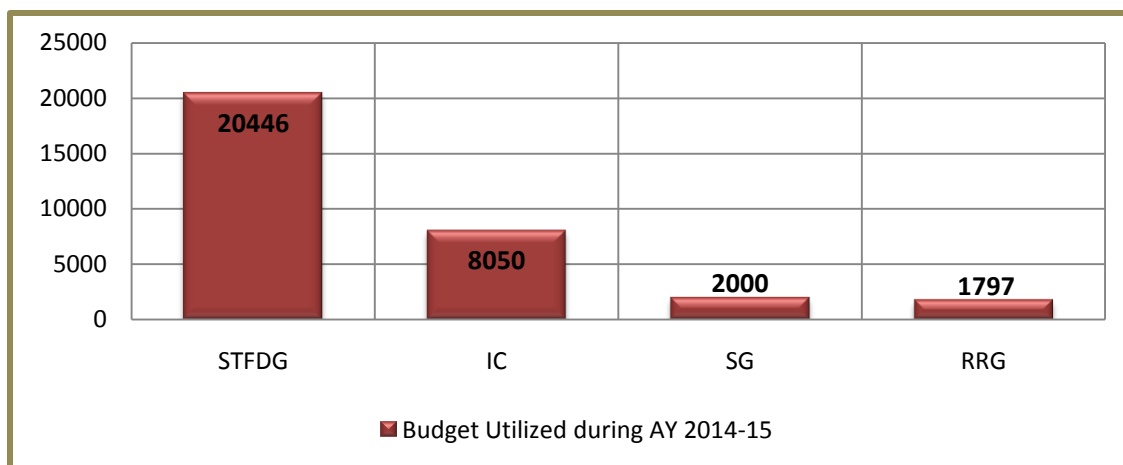
**Figure 2: Comparison of URB Activity from AY 2012-13 to AY 2014-15**

### 3.1. Turnitin Renewal:

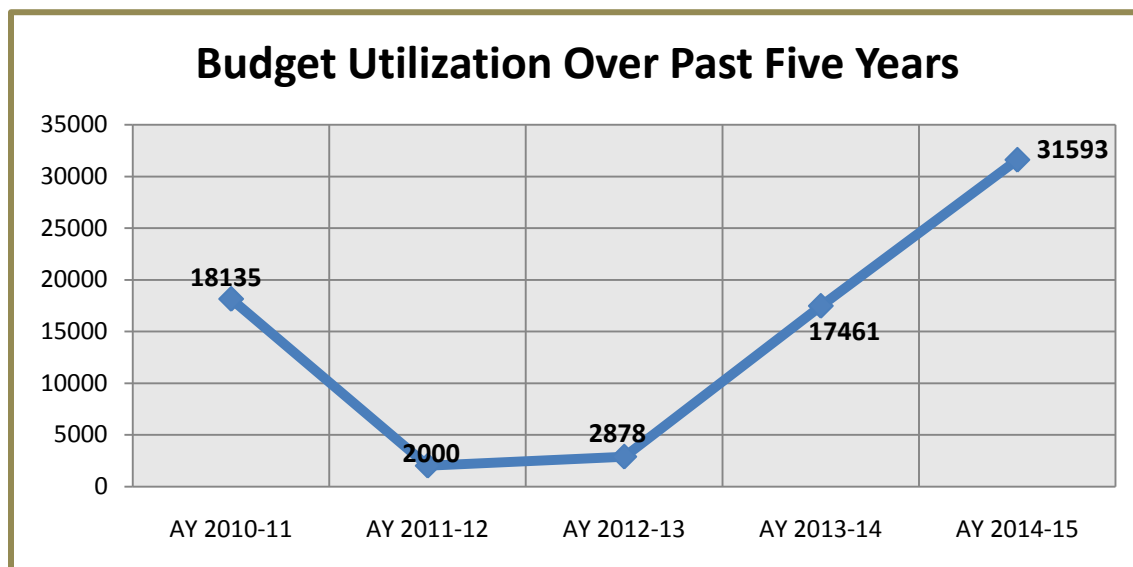
The annual subscription of the Turnitin software was renewed during fall semester of AY 2014-15 by the department of Research.

### 3.2. Budget Utilization:

Total allocated budget for grants for this academic year was 30,000 R.O. Due to overwhelming number of application received; URB exceeded the budget allocated and utilized an amount of 31,593 for the approval of internal grants. For the next academic year i.e. AY 2015-16, the expected budget to be received is 50,000 R.O. Figure 3 shows the budget utilization for the AY 2014-15 while figure 4 shows comparison of budget utilization over the period of 5 years.



**Figure 3: Budget Utilization for AY 2014-15**



**Figure 4: Budget Utilization over Past Five Years**

### 3.3. SCOPUS Indexed Publications:

During the Academic Year 2014-15, 24 publications in Scopus indexed journals have been published until June 2015. Beginning from the last academic year, the URB in coordination with DVC suggested incentives for research to encourage faculty members at DU to engage in quality research activities. Faculty members who publish their research work in Scopus or Web of science were awarded an amount of 350 R.O. Following is the detailed analysis of Scopus publications over period of 5 years. Table 1 summarizes the publications in Scopus indexed journals since 2010 while table 2 shows the detailed breakdown of such publications, whereas, figure 5 shows the number of papers published in Scopus over a period of 10 years i.e. from 2005 to 2015.

**Table 1: Scopus Indexed Publications from 2010- June, 2015**

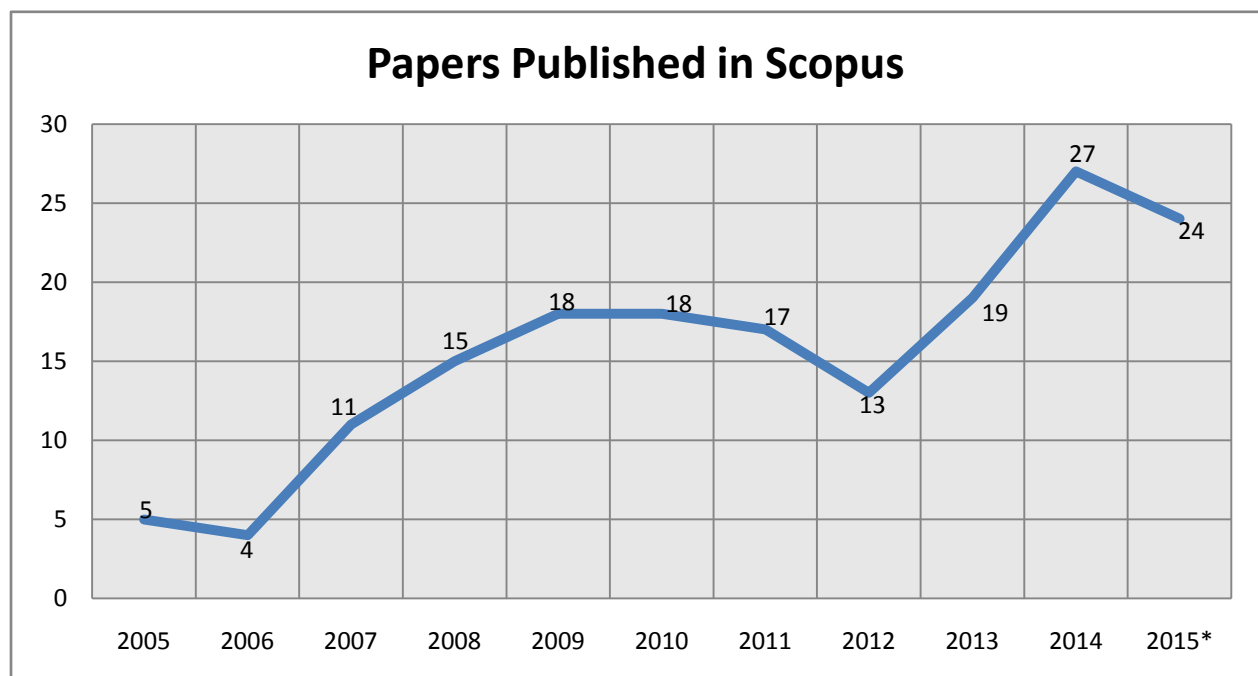
Academic Year	Papers published in SCOPUS
2010	18
2011	17
2012	13
2013	19
2014	27
2015*	24*
<b>Total</b>	<b>118</b>

*\*The data for Year 2015 is until June, 2015 and is subject to change*

**Table 2: Scopus Indexed Publications from 2010- June, 2015**

Year	Document Type	No. of Applications Published
2010	Articles	10
	Conference Papers	4
	Book Chapters	4
	Editorial	0
	Review	0
	Erratum	0
2011	Articles	8
	Conference Papers	6
	Book Chapters	2
	Editorial	1
	Review	0
	Erratum	0
2012	Articles	4
	Conference Papers	6
	Book Chapters	1
	Editorial	1
	Review	1
	Erratum	0

2013	Articles	10
	Conference Papers	8
	Book Chapters	0
	Editorial	0
	Review	0
	Erratum	1
2014	Articles	20
	Conference Papers	6
	Book Chapters	1
	Editorial	0
	Review	0
	Erratum	0
Till June, 2015	Articles	23
	Conference Papers	1
	Book Chapters	0
	Editorial	0
	Review	0
	Erratum	0
<b>Total</b>		<b>118</b>



*\*The data for Year 2015 is until June, 2015 and is subject to change*

**Figure 5: Papers published in Scopus from 2005-2015**

### 3.4. Policies Related to Research:

The Department of Research in coordination with the DVC for administration and research and Quality Assurance Unit (QA) along with the help of faculty members, developed policies related to research as shown in table 3. The policies were approved by URB and the University Council (UC).

**Table 3: Approved Policies for Research**

No.	Policies Approved
1.	Consultancy Policy
2.	Biosafety Policy
3.	Intellectual Property Policy
4.	Ethics Policy

### 3.5. URB Policy

The URB reviewed and modified the policy. The revision includes:

- Duties of URB
- Tidying up the whole policy
- Application forms for different type of grants
- Accepted similarity index for future applications has been reduced to 25% from 30% starting from September, 2015.

### 3.6. Seminars for Professional Development of Research:

As a part of its efforts to promote fruitful research and to create a healthy research environment in DU, the Department of Research conducted a series of seminars on research skills delivered by Prof. Rustom Mamlook, a leading researcher and chair of College Research Committee (CRC), CE as tabulated in Table 4 below:

**Table 4: Seminars on Professional Development of Research during AY-2014-15**

No.	Details of Event	Target Audience	Date
1.	Best steps to good research	DU Academic Staff	24 <sup>th</sup> December, 2014
2.	How to write a good research proposal	DU Academic Staff	30 <sup>th</sup> March, 2015
3.	How to write a good research paper	DU Academic Staff	22 <sup>nd</sup> April, 2015



***Prof. Rustom delivering seminar on “Research Skills”***

#### **4. TRC Related Activities:**

##### **4.1 Projects Submitted to The Research Council (TRC) during the Academic Year 2014-2015:**

During the AY 2014-15, 6 applications for Open Research Grant (ORG) worth 1,115,756 R.O. along with 5 applications for Faculty mentored Undergraduate Research Award Program (FURAP) worth 8495 R.O. were submitted to TRC for funding, while, an application for research chair in biodiversity conversation worth 5,187,000 R.O. has also been submitted. The detail of the projects submitted is shown in Table 5 and the ongoing projects are tabulated via Table 6.

**Table 5: Applications submitted to TRC (AY 2014-15)**

No.	Type of Application	Title	Principal Investigator	Amount Requested
1.	ORG	Development of Decentralized Wastewater Treatment System as a Rural Model: a Case Study from Dhofar Mountains, Sultanate of Oman	Dr. Ahmmed Saadi Ibrehem	75000
2.		Implementation of efficient watermarking schemes for copyrights protection and authentication of digital data using chaotic maps	Dr. Mohammad Asif Gondal	89000
3.		Secure Collaborative Proactive Shield against DDoS Attacks	Dr. Shafique Chaudhry	130100
4.		Study of infant and child mortality rate in Dhofar region of Sultanate of Oman- A demographic Study	Dr. Sabir Siddiqui	45300
5.		Establishment of Digitisation Center to Preserve Culture and Heritage	Dr. Mukesh Madanan	299100
6.		Development of Nano-fertilizers for selected medicinal plants of Oman	Dr. Mohammad Idrees	477256
7.	FURAP	Feasibility study to set up a manufacturing unit of ice cream in the city of Salalah	Dr. Syed Ahsan Jamil	1300
8.		Web intelligent home control system	Prof. Rustom Mamlook	1995

9.		PV power system based street lighting for highways in sultanate of Oman with GSM based remote monitoring	Dr. Shiekh Muhammed	1400
10.		Experimental investigation on tube hydroforming and formability	Dr. Fethi Abbasi	2400
11.		Intention to adopt electronic purchasing: online shopping for books in Sultanate of Oman	Dr. Mansour Alraja	1400

**Table 6: Ongoing TRC Projects**

No.	Type of Application	Title	Principal Investigator	Amount Requested
1.	ORG	Improved Design Parabolic Trough Collector for Electric Power Generation	Dr. Said Grami	78250
2.		Natural Fractures Reactivation and its impact on Enhanced Oil Recovery	Dr. Fethi Abbasi	145,700
3.		Towards the Future Dhofar Smart Power Grid	Dr. Abdulkader Dekdouk	118,200
4.	FURAP	Academic and non academic predictors of success in college	Dr. Lakshmi Narayanan	2100
5.	Concept Note	Over-grazing in the Dhofar Mountain Region: A Major Sustainability Challenge, A Focus on Stakeholders' Perceptions	Dr. Muawya Ahmed Hussein	70000
6.	Social Observatory	Youth Values: An Examination of Youth in Oman	Dr. Lakshmi Nayaranan	29900

#### 4.2. TRC Visits:

As a part of TRC's mission to create an innovative ecology and promote quality research across the Sultanate, TRC visited DU thrice during the AY 2014-15 to create awareness regarding different TRC research funding programs. The detail of the events is shown in Table 7.

**Table 7: TRC Events during AY-2014-15**

No.	Details of Event	Target Audience	Date
1.	Presentations and lectures to introduce TRC programs	Students and Faculty members of DU and College of Applied Sciences	28 <sup>th</sup> September, 2014
2.	Meeting with researchers who have TRC funds	Faculty members at DU	29 <sup>th</sup> September, 2014



3.	Presentation on Faculty Mentored Undergraduate Research Award Program	Students and faculty members at DU	17 <sup>th</sup> December, 2014
4.	General presentation on all TRC supported Research programs	DU Students, Faculty members and Staff	19 <sup>th</sup> May, 2015



***Dr. Ali AL Shidhani, Director, ICT Research at TRC delivering seminar on all TRC funded Programs***

### **4.3. Biodiversity Research Chair:**

DU submitted the proposal for the Research Chair in biodiversity to the TRC during AY 2013-14. After initial evaluation, TRC suggested some recommendations. The updated proposal was resubmitted to TRC in March, 2015. This research chair will develop new research projects and programs and will increase research capacity in the field of biodiversity. Total modified proposed Budget for the Research Chair is 5,187,000 R.O as shown in table 8 below.

**Table 8: Proposal for Research Chair**

No.	Type of Application	Title	Principal Investigator	Amount Requested
1.	Research chair	Research chair in biodiversity focusing on Frankincense and medicinal plants	Prof. Mohammed Limam	5,187,000

### **5. Annual Research Day:**

The second annual research day was celebrated on 9<sup>th</sup> June, 2014. All applicants who had successfully secured URB grants during AY 2013-14 presented their research work.

### **6. Annual Research Report:**

The department of Research along with the URB prepared the annual research report for AY-2014-15.



**7. Publications by:**  
**College of Arts and Applied**  
**Sciences**  
**(AY- 2014-15)**

## **7.1 Department of Computer Sciences**

### **Refereed Journal Papers:**

**A. Mirzal**, "Nonparametric Tikhonov Regularized Nonnegative Matrix Factorization and Its Application in Cancer Clustering", IEEE/ACM Transactions on Computational Biology and Bioinformatics, Vol. 11, Issue 6, pp: 1208 – 1217, 2014.

### **Conference Papers:**

**N. Hussain**, O. DeBruijn, "A Collaborative Design Coordination Framework Based on an Interaction Analysis around a Digital Tabletop", IHCI 2014, Lisbon, Portugal, July 15-17, 2014.

## **7.2 Department of Education**

### **Refereed Journal Papers:**

**A. Elsyed**, "Effectiveness of a Strategy Based on Brain Compatible Learning Theory in the Development of Numerical Sense Skills at the Primary School Students in Egypt", Journal of Mathematics Education, Vol. 17, Issue 2, pp: 1-49, 2014.

**A. Elsyed**, "The Effect of Using a Strategy Based on Brain Compatible Learning Theory in the Development of Numerical Sense Skills of the Basic Education Students in Oman", European Journal of Social Sciences, Vol. 47, Issue 2, pp: 183-195, 2015.

### **Member Editorial Board:**

**A. Elsyed**, "Member of the Scientific and Editor Committee of the journal of Taibah University in educational sciences", since 2013.

**A. Elsyed**, "Member of the Scientific and Editor Committee of the Universal Journal of Educational Research", since 2013.

**A. Elsyed**, "Member of the Scientific and Editor Committee of the journal of Mathematics Education", since 2014.

## **7.3 Department of Languages and Translation and Department of Social Sciences**

### **Edited Books:**

R. Al-Mahrooqi, **V. S. Thakur**, A. Roscoe, "Effective Writing Instruction Methodologies in EFL and ESL Classrooms", IGI Global, Hershey PA, 2015.

### **Book Chapters:**

**K. Khan**, **U. Rao**, "How Blending Process and Product Approach to Teaching Writing Helps EFL Learners: A Case Study", Methodologies for Effective Writing Instruction in EFL Classrooms, IGI Global, 2015.

**M. Risse**, "Research in Foreign Cultures", Emanations: Foray into Forever, International Authors, 2014.

**S. Jayaraman**, "Correct Writing and Spelling in ESL Classroom", Methodologies for Effective Writing Instructions in EFL and ESL Classrooms, IGI Global, 2015.

### **Refereed Journal Papers:**

**M. Risse**, "Generosity, Gift-Giving and Gift-Avoiding in Southern Oman", Proceedings of the Seminar for Arabian Studies, Vol. 45, pp: 1-8, 2015.

**S. Al-Hadhrami, V. S. Thakur, R. Al-Mahrooqi**, "Examining the Issue of Academic Procrastination in an Asian EIL Context: The Case of Omani University Students", Journal of English as an International Language, Vol. 9, pp: 78-103, 2014.

**S. Jayaraman**, "Motivation in Learning ESL – A Study of Arabic Learners", Indian Chronicle of Language and Literature, Special Issue, pp: 266-272, 2015.

**S. Menon, L. Narayanan**, "Cultural intelligence: New directions for Research in Asia", Asia Social Science, Vol. 11, pp: 183-193, 2015.

**V. S. Thakur, R. Al-Mahrooqi**, "Orienting ESL/EFL Students towards Critical Thinking through Pictorial Inferences and Elucidation: A Fruitful Pedagogic Approach", English Language Teaching, Vol. 8, pp: 126-133, 2015.

**V. S. Thakur, R. Al-Mahrooqi**, "Teaching Grammar Beyond the Borders of Sentence: An Integrated Approach to Grammar in Context", ESBB: English Scholarship Beyond Borders, Vol. 1, pp: 165-176, 2015.

### **Conference Papers:**

**K. Khan, F. Khan**, "Implementing Outcomes Based Education in Foundation Program: Nurturing Writing in the Classroom", 5th National Conference on ELT, Pune, India, January 30-31, 2015.

**K. Khan, F. Khan**, "Let Students Teach Grammar: A Practical Way to Overcome Grammar Phobia" International Interdisciplinary Conference on Language, Literature, Cultural Studies and Knowledge Resources, Guntur, India, February 5-6, 2015.

**K. Khan, M. Saeed**, "Promoting Learner Autonomy through Scaffolding", 15<sup>th</sup> International ELT Conference, Muscat, Oman, April 23 -24, 2015.

**L. Narayanan, S. Menon**, "Stress and Workplace Wellness", NOVUS International Conference, Nagpur, India, February 27-28, 2015.

**M. Risse**, "Writing Prompts to Facilitate Creativity and Interesting Texts", 15<sup>th</sup> International ELT Conference, Muscat, Oman, April 23-24, 2015.

**S. Menon, L. Narayanan**, "Workplace Diversity: The Importance of Cultural Intelligence", NOVUS International Conference, Nagpur, India, February 27-28, 2015.

### **Member Editorial Board:**

- A. Sharma**, Member of “Journal of English as an International Language”, since 2009.
- A. Sharma**, Member of “The Indian Review of World Literature in English”, since 2010.
- A. Sharma**, Member of “Labyrinth: The Bi-annual Literary Journal of Post-Modernism”, since 2011.
- A. Sharma**, Member of “Thematics: International Journal of English Studies”, since 2011.
- A. Sharma**, Member of “Thematics: Journal of English Language Teaching”, since 2011.
- A. Sharma**, Member of “International Journal of English and Literature”, since 2012.
- A. Sharma**, Member of “Literary Endeavour”, since 2013.
- A. Sharma**, Member of “Journal of Applied Research in Higher Education”, since 2014.
- A. Sharma**, Member of “International Journal of Management Sciences”, since 2014.
- A. Sharma**, Member of “Research Journal of English Language and Literature”, since 2014.
- S. Jayaraman**, Member of “Linguistlist”, since 2010.
- S. Jayaraman**, Member of “Asian EFL Journal”, since 2012.
- S. Jayaraman**, Member of “The Linguistics Journal”, since 2012.
- S. Jayaraman**, Member of “Linguistics and Literature Journal”, since 2014.
- V. S. Thakur**, Member of “Journal of English as an International Language”, since 2008.
- V. S. Thakur**, Member of “The Asia TEFL Journal”, since 2012.
- V. S. Thakur**, Member of “International Journal for the Scholarship of Teaching and Learning”, since 2012.

### **Externally Funded Research:**

**L. Narayanan**, S. Dhafri, M. Suleman, “Youth Values in Oman”, Funded by TRC.

**Short summary:** The major goal of this study is to examine youth values in Oman. We will develop reliable and valid measures of youth values, with prior validated measures and adapt the scales to the Omani culture and context. Several values such as citizenship, peer influence, social responsibility will be studied. We will measure several indicators of social change and correlate them with youth values. We will extensively examine educational and psychological aspects of the transition looking at youth values and related variables. Data will also be gathered in 3 different generations for inter-generational values. Qualitative and quantitative analysis will be done using surveys, interviews, and focus groups.

**L. Narayanan**, S. AL Maharbi, I. Al Amri, N. Al Mashani, A. Al Yazidi, “Academic and Non-Academic Predictors of Success in College”, funded by TRC (FURAP project).

**Short summary:** This project will examine both academic and non-academic factors that predict success in college of mostly first generation university students in the Dhofar region and use both a quantitative and qualitative method to understand factors that influence success in college.

R. Al Mahrooqi, S. Mehta, K. Al Aghbari, **V. S. Thakur**, “Investigating critical thinking strategies integrated in cycle 2 and post-basic education in English language teaching in Oman”, Funded by TRC.

**Short summary:** This project will investigate and evaluate the role of critical thinking across the English Language Curriculum of Cycle 2 consisting of grades 6 to 10 (from which grades 6 and 9 will be chosen) and the Post-Basic education (grades 11 and 12) of a representative group of schools in Oman. The study is motivated primarily by anecdotal evidence (based on classroom experience) pointing to a gap in the skills aimed at synthesizing, inferencing and critiquing found by the researchers at the tertiary level. In addition, it is also triggered by the increased deliberations on the part of the Ministry of Education concerning its English Language Curriculum as projected in its document of 2010. Research based on this document has pointed to gaps between the pedagogical postulations and the pragmatic, methodological outcomes of this document, even four years after its official formulation and 15 years after the implementation of Basic Education (Al-Issa & Al-Bulushi, 2012). As such, this project seeks to evaluate entrants to the tertiary level of College/University education in order to test the level of critical thinking ability with which they enter colleges. It will then investigate the school classroom situation, both, from the point of view of teachers, as well as the students to identify the way in which critical thinking is being defined and incorporated into the teaching of English Language. Further, it will also provide suggestions, recommendations as well as ways of testing critical thinking which will be based on local conditions and specifications. In this way, this project aims at creating a wider space for personal development on the part of the middle and high school students, equipping them with life skills in reading, questioning, inferring, judging opinions and critiquing commonly held assumptions, thereby making it possible for them to take advantage of challenging employment opportunities with knowledge, confidence and appropriate skills.

#### **7.4 Department of Mathematics and Sciences**

##### **Refereed Journal Papers:**

A. H. Alkhalidi, I. Hussain, **M. A. Gondal**, “A Novel Design for the Construction of Safe S-Boxes Based on TDERC Sequence”, Alexandria Engineering Journal, Vol. 54, Issue 1, pp: 65-69, 2015.

A. Anees, **M. A. Gondal**, “Construction of Nonlinear Component for Block Cipher Based on One-Dimensional Chaotic Map”, 3D Research, Vol. 6, Issue 2, Article 17, pp: 1-5, 2015.

H. Jaradat, **F. Awawdeh**, S. Al-Shara, M. Alquran, S. Momani, "Controllable Dynamical Behaviors and the Analysis of Fractal Burgers Hierarchy with the Full Effects of Inhomogeneities of Media", Romanian Journal of Physics, Vol. 60, Issue 3, pp: 324–343, 2015.

I. Hussain, **M. A. Gondal**, " Impact of Error Detecting or Correcting Codes on the Sensitivity to DPA of an AES S-Box", 3D Research, Vol. 5, Issue 3, Article 25, pp: 1-7, 2014.

I. Hussain, **M. A. Gondal**, "An Algorithm to Generating Inverse S-Box values for Rijndael Encryption Standard", 3D Research, Vol. 5, Issue 4, Article 30, pp: 1-5, 2014.

I. Hussain, **M. A. Gondal**, A. Hussain, "Construction of Dynamical Nonlinear Components based on Lorenz System and Symmetric Group of Permutations", 3D Research, Vol. 6, Issue 1, Article 4, pp: 1-6, 2015.

I. Hussain, **M. A. Gondal**, A. Hussain, "Construction of Substitution Box Based on Piecewise Linear Chaotic Map and  $S_8$  Group", 3D Research, Vol. 6, Issue 1, Article 3, pp: 1-5, 2015.

I. Hussain, A. Alqahtani, **M. A. Gondal**, "An Efficient Method for Secure Communication of Biometric Information Based on Chaos", 3D Research, Vol. 6, Issue 2, Article 15, pp: 1-7, 2015.

**M. A. Gondal**, A. Raheem, I. Hussain, "A Scheme for Obtaining Secure S-Boxes on Chaotic Baker's Map", 3D Research, Vol. 5, Issue 3, Article 17, pp: 1-8, 2014.

M. Naeem, **M. Idrees**, T. Aftab, M. M. Alam, M. Masroor, A. Khan, M. Uddin, L. Varshney, "Radiation Processed Carrageenan Improves Plant Growth, Physiological Activities, and Alkaloids Production in Catharanthus Roseus L", Advances in Botany, Vol. 2015, Article 150474, pp: 1-11, 2015.

W. A. Khan, **M. A. Gondal**, "Key-Dependent Nonlinear Component for Block Cipher Encryption Algorithm", 3D Research, Vol. 5, Issue 4, Article. 33, pp: 1-8, 2014.

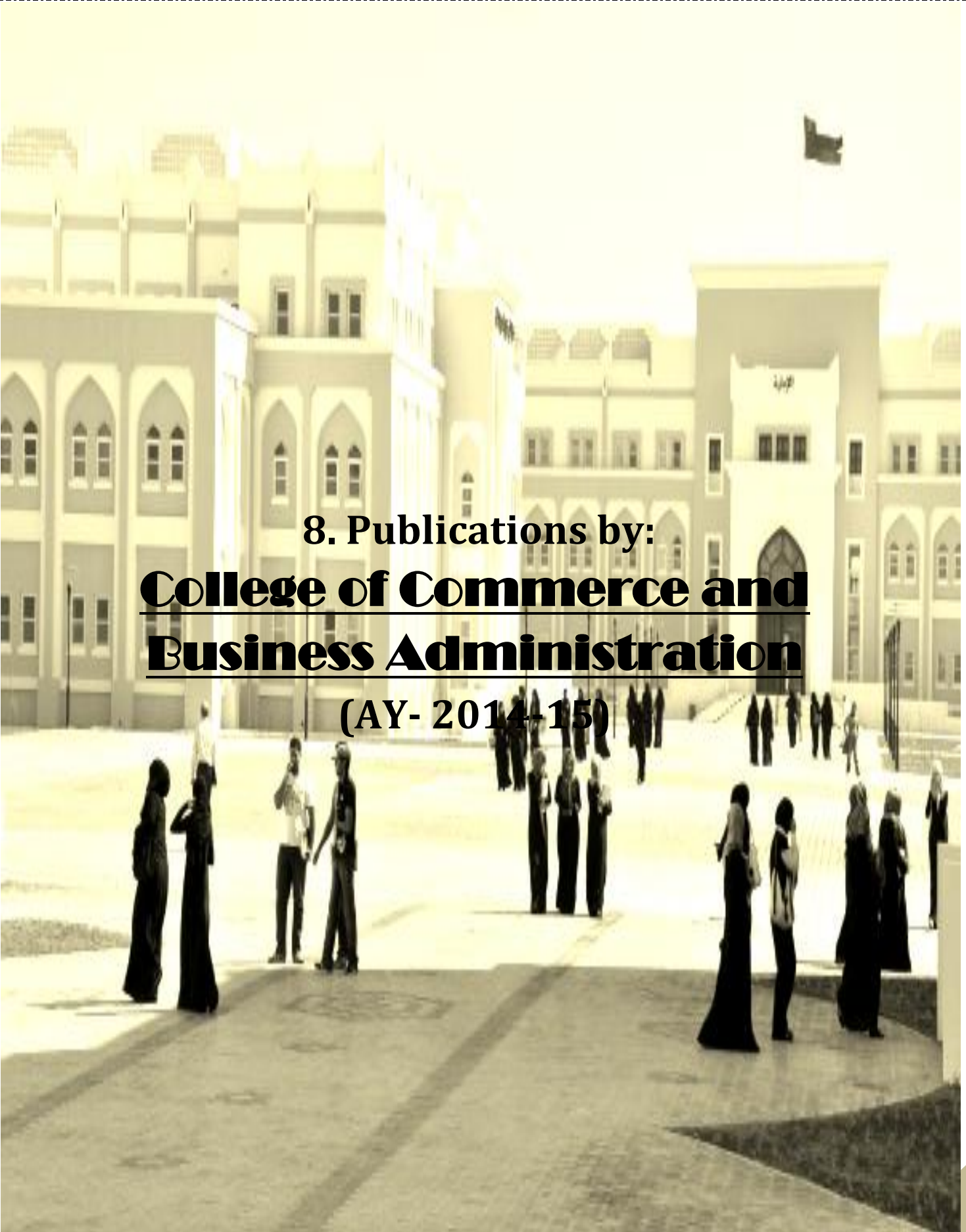
### **Conference Papers:**

**F. Awawdeh**, O. Al Sayyed, S. Al Shará, "Analysis of a Generalized Sharma-Tasso-Olver Equation with Variable Coefficients", 17<sup>th</sup> International Conference on Mathematical Modeling, Analysis and Computation, Paris, France, April 27-28, 2015.

**F. Awawdeh**, "Degenerate Identification Problems with Smoothing Over determination", The Joint International Meeting of the AMS-EMS-SPM, Porto, Portugal, June 10-13, 2015.

**M. A. Gondal**, "Convergence of an Exponential Runge-Kutta Method for Non-Smooth Initial Data", The Second International Conference on Mathematics and Statistics, Sharjah, UAE, April 2-5, 2015.

**M. Al Khaleel**, S. Wu, "Neumann-Neumann waveform relaxation methods for fractional RC circuits", The 6th International Conference on Information and Communication Systems, Amman, Jordan, April 7-9, 2015.



**8. Publications by:**  
**College of Commerce and**  
**Business Administration**  
**(AY- 2014-15)**



## **8.1 Department of Accounting and Finance**

### **Books:**

M. Al Azawi, **M. K. Al Ani**, K. Abdulsalam, "Management Ethics", 1<sup>st</sup> edition, Dar Al Ayam for Publication and Distribution, Amman, Jordan, 2015.

**S. A. Jamil, M. I. Khan**, "Basic Finance, A Concise Encyclopedia of Finance", Text Book for Students of Bachelors & Masters Program, Shabdadan Publication, India, ISBN: 978-93-8511525-7, 2015.

### **Book Chapters:**

**M. A. Hussein**, R. Dibia, "Environmental Policies And Issues In Arab Countries", Comparative Perspectives on Environmental Policies and Issues, *Routledge*, , New York, 2014.

R. Tandon, **S. Mohammed**, "Global Capital Flows and Payments Imbalances", Analytical Issues in Trade, Development and Finance, Essays in honour of Biswajit Chatterjee, India, Springer, 2014.

### **Refereed Journal Papers:**

**B. Salim**, N. H. Alnour, "The Role of the Qualitative Characteristics of Accounting Information in Enhancing Efficiency of the Planning and Controlling of the Sudanese's Financial Institutions", *Journal of Science & Technology*, Vol. 14, pp: 84-110, 2014.

**B. Salim**, M. H. Abdelrehman, "The Role of Internal Control in Enhancing the Efficiency of Financial Performance In the Sudanese National Electricity Corporation", *Journal of Science & Technology (Economic Science Journal)*, Vol. 13, Issue 1, pp: 89-110, 2015.

**F. Alshubiri**, "The Impact of Economic and Financial Variables on Cash Conversion Cycle of Energy, Oil and Gas Sectors Listed in Muscat Security Market", *International Journal of Energy Economics and Policy*, Vol. 5, Issue 1, pp: 174-181, 2014.

**F. Alshubiri**, "Impact of Intellectual Capital from Market Capitalization on Profitability in Financial Sector of Oman", *Mediterranean Journal of Social Sciences*, Vol. 6, Issue 2, pp: 54-60, 2015.

**K. Chavali**, V. V. A. Kumar, M. Sudha, "Vulnerability of Indian Health Insurance Industry to Frauds", *European Journal of Economics, Finance and Administrative Services*, Issue 73, pp: 146-152, 2015.

**M. A. Hussein**, "Challenges and Opportunities of Microfinance in Oman – Case of Dhofar Region", *Open Journal of Finance*, Vol. 1, Issue 1, pp: 49-60, 2014.

**M. I. Khan**, "Women Entrepreneurship in Oman: Challenges & Barriers", *International Journal of Management and Economics*, Vol. 1, Issue 14, pp: 290-295, 2015.

**M. K. AlAni**, “A Strategic Framework to Use Payback Period in Evaluating the Capital Budgeting in Energy and Oil and Gas Sectors in Oman”, *International Journal of Economics and Financial Issues*, Vol. 5, Issue 2, pp: 469-475, 2015.

**M. K. AlAni, Z. O. Bilal**, “Auditor Quality and Firm Performance: Omani Experience”, *The European journal of Economics, Finance and Administrative Sciences*, Issue 74, April, 2015.

**Z. O. Bilal, A. Bakheit**, “The Impact of International Financial Crisis on the Efficiency of Omani Banks' Performance: An Empirical Study”, *International Academic Search Journal of Economics and Finance*, Vol. 3, Issue 1, pp: 1-12, 2014.

**Z. O. Bilal**, “The Impact of Foreign Ownership on Commercial Bank’s Efficiency: A Case of Oman”, *European Journal of Economics, Finance and Administrative Sciences*, Issue 73, pp: 117-126, 2015.

**Z. O. Bilal, N. Al Maqbali**, “Challenges and Constrains Faced by Small and Medium Enterprises (SMEs) in Al Batinah Governorate of Oman”, *World Journal of Entrepreneurship, Management and Sustainable Development*, Vol. No.11, Issue 2, pp: 120 – 130, 2015.

#### **Conference Papers:**

**A. Uddin**, “Problems Faced by Micro, Small and Medium Enterprises in Raising Debt Capital”, *International Conference on Social Sciences Research (ICSSR 2014)*, Kota Kinabalu, Sabah, Malaysia, 9-10 June, 2014.

**F. Alshubiri**, “The Impact of Financial Position on Risk Asset Ratios: Empirical Study of Banking Sector Listed in Muscat Security Market”, *Fifth International Conference for the Faculty of Economics and Administrative Sciences*, Amman, Jordan, 20-22 April, 2015.

**H. Al-Samman, S. Hammami, M. Alraja**, “Assessing the Role of IT to Sustain the Strategic Position”, *7<sup>th</sup> International Conference on Economics and Social Sciences (ICESS-2015)*, University Utara, Malaysia, 16–17 May, 2015.

**M. I. Khan**, “Post Financial Crisis Progress of Oman Oil Company”, *Conference Compendium – II International Conference “Envisioning 2030 – The Path Ahead Globally”*, December, 2014.

**M. I. Khan**, “Women Entrepreneurship in Oman: Challenges & Barriers”, *International Conference–Innovative Trends in Entrepreneurship in New Millennium*, Aurangabad, India, 23-25 January, 2015.

**M. A. Tariq, M. K. AlAni**, “ISO Certifications and Firms Performance: Evidence from Oman”, *International Conference on Corporate and Institutional Innovations in Finance and Governance*, Paris, France, 21 May, 2015.

**M. K. Al Ani, Z. O. Bilal**, “Auditor Quality and Firm Performance: Omani Experience”, 13<sup>th</sup> Annual International Conference on Accounting, Athens Institute for Education and Research, Athens, Greece, 25-28 May, 2015.

**S. A. Jamil**, “Role of Gender in Investment Decision Making – A Case Study of Oman”, International Conference on Trends in Economics, Humanities and Management, Pataya, Thailand, 13-14 August, 2014.

**Z. O. Bilal**, “The Impact of Foreign Ownership on Commercial Bank’s Efficiency: A Case of Oman”, International Conference of Commerce, Financial Markets and Corporate Governance, Bangkok, Thailand, 7-9 February, 2015.

## **8.2 Department of Management, Marketing and Information System**

### **Book Chapters:**

A. B. Brahim, W. Bouaguel, **M. Limam**, “Combining Feature Selection and Data Classification Using Ensemble Approaches: Application to Cancer Diagnosis and Credit Scoring”, Case Studies in Intelligent Computing: Achievements and Trends, Published by Auerbach Publications, 2014.

W. Bouaguel, G. Belmufti, **M. Limam**, 20, “A New Feature Selection Technique Applied to Credit Scoring Data Using a Rank Aggregation Approach Based on Optimization, Genetic Algorithm, and Similarity”, Knowledge Discovery Process and Methods to Enhance Organizational Performance, CRC Press, pages 404, Taylor and Francis , 2015.

### **Refereed Journal Papers:**

A. B. Brahim, **M. Limam**, “A Stable Instance Based Filter for Feature Selection in Small Sample Size Data Sets”, Advanced Data Mining and Applications, Lecture Notes in Computer Sciences, LNCS, Vol. 8933, pp: 334-344, 2014.

A. Fatima, **R. Imran**, A. A. Khan, H. A. Khan, “Awakening Individual’s Change Commitment: The Role of Emotional and Spiritual Intelligences in Health Sector of Pakistan”, Journal of Applied Environmental and Biological Sciences, Vol. 5, Issue 1, pp: 14-19, ISSN: 2090-4274, 2015.

F. Hachmi, K. Boujenfa, **M. Limam**, “An optimization process to identify outliers generated by intrusion detection systems”, Journal of Security and Communication Networks, 2015. (DOI: 10.1002/sec.1271)

H. Nakouri, **M. Limam**, “Discovering Features Contexts from Images Using Random Indexing, Combinatorial Image Analysis”, Proceedings, Lecture Notes in Computer Science Springer, LNCS, Vol. 8466, pp: 134-145, 2014.

H. Nakouri, **M. Limam**, “Incremental Generalized Low Rank Approximation of Matrices for Visual Learning and Recognition”, Journal of Pattern Recognition and Image Analysis, Vol. 25, Issue 1, pp: 68-72, 2015.

I. Khanchouch, M. Charrad, **M. Limam**, “A Comparative Study of Multi-SOM Algorithms for Determining the Optimal Number of Clusters”, Journal of Statistical Software, Vol. 61, Issue 6, pp: 1-36, 2014.

M. B. Mzoughia, **M. Limam**, “An Improved Customer Lifetime Value Model Based on Markov Chain”, Applied Stochastic Models in Business and Industry, 2014. (wileyonlinelibrary.com, DOI: 10.1002/asmb.2053)

M. El Ghourabi, A. Dridi, **M. Limam**, “A New Financial Stress Index Model Based on Support Vector Regression and Control Chart”, Journal of Applied Statistics, Vol. 42, Issue 4, pp: 775-788, 2015.

**R. Imran**, A. Zaheer, A. Fatima & M. A. Khan, “Conflict Types and innovative Work Behavior: Exploring a New Path”, Proceedings of the Seventh International Conference on Management Science and Engineering Management, Lecture Notes in Electrical Engineering Volume 242, 2014, pp: 1001-1008. (DOI 10.1007/978-3-642-40081-0\_84)

**R. Imran**, B. Majeed, & A. Ayub, “Impact of Organizational Justice, Job Security and Job Satisfaction on Organizational Productivity”, Journal of Economics, Business and Management, Vol.3, Issue 9, pp: 840-845, 2015.

S. Rabbani, **R. Imran**, & N. Kamal, “Leadership and Creativity: Does Organizational Culture Matter?”, Journal of Basic and Applied Scientific Research, Vol. 4, Issue 6, pp: 50-45, ISSN2090-4304, 2014.

**S. Sanyal, M. W. Hisam**, “Factors Affecting Entrepreneurial Aspirations Among Omani Youth: An Empirical Study”, International Journal of Business Administration Research Review, ISSN– 2348 – 0653, Vol. 2, Issue 9, 2015.

W. Gani, **M. Limam**, “A One-Class Classification-Based Control Chart Using the-Means Data Description Algorithm”, Journal of Quality and Reliability Engineering, Vol. 2014, Article ID 239861, 9 pages, 2014.

W. Gani, **M. Limam**, “A Kernel Distance-Based Representative Subset Selection Method”, Journal of Statistical Computation and Simulation, pp: 1-14, 2015. (DOI: 10.1080/00949655.2014.996758)

### **Conference Papers:**

A. Fatima, **R. Imran**, H. Shahab, S. Zulfiqar, “Knowledge Sharing Among IT Professionals; Examining the Role of Procedural Justice, Pay Satisfaction and Organizational Commitment”, International Conference on Business, Management, Tourism and Hospitality (BIZMATOUR 2015), Melaka, Malaysia, 12-14 May, 2015.

**A. M. Păuceanu**, “Strategies for Improving the Performance of Firms Operating in Oman Tourism Industry”, International Research Conference on Business, Economics and Social Sciences, Dubai, UAE, 29-30 December, 2014.

**A. M. Păuceanu, S. M. Hammouri**, “Strategic Energy Management in Oman”, Arab Renewable Energy Commission, Energy Economy & Energy Management Forum for MENA, Amman, Jordan, 18-21 May, 2015.

H. Nakkouri, **M. Limam**, “Discovering Multi-sense Features from Images Using Random Indexing”, International Conference on Artificial Intelligence and Soft Computing (ICAISC), Zakopane, Poland, 1-5 June, 2014.

**M. Al Raja, M. Aref**, “Customer Acceptance of E-commerce: Integrating Perceived Risk with ATM”, 8th International Conference on Education and Information Management, Malaysia, 16-17 May, 2015.

P. Nikolaidis, **X. Dimitrios**, “People with Disabilities in the Digital Era: A Basic Review of the Policies and Technologies”, WSEAS Conference on Recent Advances in Computer Science, Kuala Lumpur, Malaysia, 23-25 April, 2015.

**R. Imran, A. Fatima**, “Achieving Service Performance through High Performance Work System: Psychological Empowerment as a Mediator”, International Conference on Business, Management, Tourism and Hospitality (BIZMATOUR 2015), Melaka, Malaysia, 12-14 May 2015.

**S. Sanyal**, “Challenges Facing Entrepreneurs in Developing Countries: A Case Study of the Dhofar Region of the Sultanate of Oman”, 2<sup>nd</sup> International Conference on Emerging Trends in Scientific Research , ISBN - 978-969-9952-07-4, Kuala Lumpur, Malaysia, 1-2 November, 2014.

**S. Sanyal, M. W. Hisam**, “Ethical Leadership: Muhammad (PBUH) as a Role Model”, International Conference on Spirituality: The Essence of Ethical Leadership and Management, School of Management Sciences, Varanasi, India, 5 – 8 Jan, 2015.

**T. Al Hadi**, “Determinants of Sustainability in Supply Chains”, 6<sup>th</sup> International Conference on Operations and Supply Chain Management (OSCM), Bali, Indonesia, 10-12 December, 2014.


W. Bouaguel, **M. Limam**, “An Ensemble Wrapper Feature Selection for Credit Scoring”, Fourth International Conference on Soft Computing for Problem Solving, Assam, India, 27-29 December, 2014.

**X. Dimitrios**, O. Koutzampasopoulou, “Limited Interest and Awareness on Issues related to Customization and Globalization when Developing Web Sites in the GCC”, WSEAS Conference on Recent Advance in Computer Science, Kuala Lumpur, Malaysia, 23-25 April, 2015.

#### **Member Editorial Board:**

**S. Sanyal**, Member of Editorial Board of Vikas Vimarsh: An International Multidisciplinary Refereed Research Journal, since 2014.

**M. W. Hisam**, Member of editorial board of Purusharth: A Journal on Spirituality and Management, since 2011

A photograph of two students in a laboratory setting. They are wearing white traditional Arab clothing and ghutras. They are focused on a circuit board on a desk. The desk is cluttered with various electronic equipment, including a computer monitor displaying a webpage, a keyboard, a mouse, and several test instruments like an oscilloscope and a signal generator. The background shows a typical lab environment with a fire extinguisher on the wall and various cables.

**9. Publications by:**  
**College of Engineering**  
**(AY- 2014-15)**

## **9.1 Department of Chemical Engineering**

### **Books:**

**A. Saadi, A. Wazwaz**, "Hysys Software for Chemical and Petroleum Engineering 2014", ISBN-13: 978-3-659-19198-5, LAP LAMBERT Academic Publishing, France, 2014.

### **Refereed Journal Papers:**

**A. S. Ibrehem**, "Mathematical Model for Gas Phase in Fluidized Bed Catalytic Reactor for Oxidation of Ethylene to Propanol", Wulfina Journal, Vol. 21, Issue 3, March, 2014.

**A. S. Ibrehem**, "Catalyst Flow Rate Effects on Gas Phase in Fluidized Bed Catalytic Reactor for Production of Polybutene", Wulfina Journal, Vol. 21, Issue 4, April, 2014.

**A. S. Ibrehem**, M. A. S. Rafit, A. M. AL-Hakmnai, A. S. Suhail, "Mathematical Model and Convention Controller System for Heater Transfer of Sun Cells to Produce Energy", Journal of Purity, Utility Reaction and Environment, Vol. 3, Issue 2, pp: 177-189, April 2014.

**A. Wazwaz**, "A Study of Solar Flux, Relative Humidity and Atmospheric Temperature and their Relations at Dhofar University", Journal of Purity, Utility Reaction and Environment, Vol. 3, Issue 3, pp: 196-208, 2014.

**A. Wazwaz**, A. Al-Salaymeh, "Theoretical and Measured Optical Properties of Ni-Al<sub>2</sub>O<sub>3</sub> over Al Substrate Selective Absorber", Sustainable Cities and Society, Vol. 16, Issue 1, pp: 13 – 23 , 2015.

**T. S. Mohammed, A. S. Ibrehem**, "Simulation and Analysis for Activities in Image Recognition Using MATLAB", Computer Science and Information Technology, Vol. 3, Issue 1, pp: 22-30, 2015.

### **Conference Papers:**

**A. S. Ibrehem**, R. Mamlook, "Advance Mathematical Model of Acrylamide Analysis in Different Food Types Using Fuzzy Logic", EDS Conference on Desalination for the Environment: Clean Water and Energy, Limassol, Cyprus, 11-15 May, 2014,.

**A. S. Ibrehem**, R. R. Al-Battashi , Y. N. Al-Yaarubi, "Study for the Removal of Multi-Heavy Metal Component from Simulated Wastewater Using Shield of Coconut (EE019)", 27th Symposium of Malaysian Chemical Engineers (SOMChE 2014), Selangor Darul Ehsan, Malaysia, 29-30 October, 2014.

**A. S. Ibrehem**, A. Al Jabri , H. AlBreiki, “Study for the Removal of Multi-Heavy Metal Component from Simulated Wastewater Using Palm Fronds (EE018)”, 27th Symposium of Malaysian Chemical Engineers (SOMChE 2014), Selangor Darul Ehsan, Malaysia, 29-30 October, 2014.

**A. S. Ibrehem**, “Mathematical Model for Gas Phase in Fluidized Bed Reactor Using PT/TiO<sub>2</sub> Catalytic for Production of Propanol”, 27th Symposium of Malaysian Chemical Engineers (SOMChE 2014), Selangor Darul Ehsan, Malaysia, 29-30 October, 2014.

**A. S. Ibrehem**, “Role of Different Food Types in the Prevention of Type 2 Diabetes”, Arab-American Frontiers of Science, Engineering and Medicine Symposium, Sultan Qaboos University, Muscat, Oman, December 13-15, 2014.

**A. S. Ibrehem**, “Catalyst Effects on Gas Phase 1-Butene in Fluidized Bed Catalytic Reactor”, International Conference on Purity, Utility Reaction and Environmental Research (PURE 2014), Kuala Lumpur, Malaysia, 19-21 December, 2014.

**A. S. Ibrehem**, K. Al-Baloushi, R. M. Al-Alawi, “Fixed Bed Column Study for the Removal of Multi-Heavy Metal Components from Simulated Wastewater Using Bio Waste of Tea Plant” 4TH International Conference about Hybrid Technique and Nanomaterials, Valencia, Spain, 9-13 March, 2015.

**A. S. Ibrehem**, “Selectivity Technique to Describe and Treat Cancer Diseases Using Healthy Food”, Open science conference, Near East University, Nicosia, North Cyprus, 25–27 March, 2015.

**A. S. Ibrehem**, A. A. Al.Balushi , I. S. AlHadhrami , M. B. AlRahbi, “Mathematical Model of Biomass Product Using Gasification Reactor”, CCE TECH FEST, Muscat, Oman, 4-5 May, 2015.

**A. S. Ibrehem**, G. A. Mohammed, S. S. Mohammed, A. S. Salim, “Catalytic surface reaction using fluidized bed for production of polyamide”, CCE TECH FEST, Muscat, Oman, 4-5 May, 2015.

**A. S. Ibrehem**, K. Al-baloushi, R. M. Al-alawi, “Removal of Multi-Heavy Metal Components from Simulated Wastewater Using Bio Waste of Tea Plant”, CCE TECH FEST, Muscat, Oman, 4-5 May, 2015.

**A. S. Ibrehem**, K.S. AL Khamisi, M.K. AL Sinani, “Removal of Organic Compounds From Simulated Wastewater Using Bio Waste of Coconut”, CCE TECH FEST, Muscat, Oman, 4-5 May, 2015.

**A. S. Ibrehem**, M. Suhail, L. Saad, I. Hassan, F. Ahmed, “Thermal Properties and Viscosity-Temperature Relationships of Omani Engine Oil”, CCE TECH FEST, Muscat, Oman, 4-5 May, 2015.

**A. S. Ibrehem**, Y. A. Ali, H. M. Saad, I. H. Amur, “Mathematical Model of Bulk Polymerization of Vinyl Chloride in Continuous Stirred Tank Reactor”, CCE TECH FEST, Muscat, Oman, 4-5 May, 2015.



**A. S. Ibrehem**, K.S. AL Khamisi, M.K. AL Sinani, "Removal of Organic Compounds From Simulated Wastewater Using Bio Waste of Coconut", CHEM SYMPOSIUM, 14-15 May, 2015.

**A. S. Ibrehem**, Y. A. Ali, H. M. Saad, I. H. Amur, "Mathematical model of Bulk Polymerization of Vinyl Chloride in Continuous Stirred Tank Reactor", CHEM SYMPOSIUM, 14-15 May, 2015.

**A. S. Ibrehem**, M. Suhail, L. Saad, I. Hassan, F. Ahmed, "Thermal Properties and Viscosity-Temperature Relationships of Omani Engine Oil", CHEM SYMPOSIUM, 14-15 May, 2015.

**A. S. Ibrehem**, G. A. Mohammed, S. S. Mohammed, A. S. Salim, "Catalytic Surface Reaction Using Fluidized Bed for Production of Polyamide", CHEM SYMPOSIUM, 14-15 May, 2015.

**Y. Ghrabia, S. Grami, A. Wazwaz**, "Vacuum Cavity Parabolic Trough Collector", Proceedings of ASME 2014 International Mechanical Engineering Congress & Exposition, Montreal, Quebec, Canada , 14-20 November, 2014.

### **Exhibition**

**A. Wazwaz**, L. Al-Mashaikhei, S. Al-Flaiti, "Solar Desalination of Seawater Using Simple Technique (Solar Distillator)", The 6th Students Engineering Exhibition, College of Engineering, Sultan Qaboos University, Muscat , 26-29 April, 2015.

## **9.2 Department of Civil Engineering**

### **Refereed Journal paper**

**A. Abu Abdo**, "Utilizing a Simple Numerical Model in Discrete Element Analysis to Simulate Flow Time and Number Tests of Asphalt Mixes", The Journal of Engineering Research, Vol. 11, Issue 2, pp: 39-49, 2014.

## **9.3 Department of Electrical and Computer Engineering**

### **Refereed Journal Papers:**

M. Zellagui, **H. A. Hassan**, A. Chaghi, "Short-Circuit Calculations for a Transmission Line in the Algerian Power Network Compensated by Thyristor Controlled Voltage Regulator", Journal of Electrical and Electronics Engineering (JEEE), Vol. 7, Issue 2, pp: 43-48, 2014.

M. Zellagui, **H. A. Hassan**, A. Chaghi, "Effect of TCVR Controlled Voltage on Short-Circuit Calculations in Case of Ground Fault in the Algerian Network", International Journal of Control and Automation (IJCA), Vol. 8, Issue 1, pp: 125-138, 2015. (<http://dx.doi.org/10.14257/ijca.2015.8.1.11>)

M. Zellagui, **H. A. Hassan**, A. Chaghi, "Fault Location Effect on Short-Circuit Calculations of a TCVR Compensated Line in Algeria", International Journal of Electrical and Computer Engineering (IJECE), Vol. 5, Issue 1, pp: 1-12, 2015. (<http://dx.doi.org/10.11591/ijece.v5i1.6651>)

**T. S. Mohammed**, K. M. Aljebory, "A Universal Decoding Algorithm for t-EC/AUED Codes", Asian Journal of Information Technology (AJIT), Vol. 13, Issue 12, pp: 787-790, 2014.

**T. S. Mohammed**, S. A. Al-Haddad, H. A. Smmar, F. O. Al-Shanfari, "Computer-Supported Learning: A Teaching Aid for ECE Students", International Journal of Multidisciplinary Education and Research, Vol. 1, Issue 2, pp: 1-5, 2014.

**T. S. Mohammed**, **W. F. Al Alzzo**, M. A. Akaak, M. L. Suroor, "Full Automation in Driverless Trains: A Microcontroller-Based Prototype", International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering, Vol. 3, Issue 7, pp: 10417 -10422, 2014.

**T. S. Mohammed**, **A. S. Ibrehem**, "Simulation and Analysis for Activities in Image Recognition Using MATLAB®", Computer Science and Information Technology Journal, Horizon Research Publishing, Vol. 3, Issue 1, pp: 22-30, 2015.

**T. S. Mohammed**, L. A. Al-Jobouri, "A Comparative Study of Construction Techniques of t-EC/AUED Codes", Science publications, Journal of Computer Science, Vol. 11, Issue 2, pp:403-410, 2015.

#### **Conference Papers:**

M. Zellagui, **H. A. Hassan**, A. Chaghi, "Impact of Voltage Controlled by TCVR on Ground Fault Parameters", International Workshop on Advanced Control (IWAC'2014), University of Guelma, Algeria, 3-4 November, 2014.

M. Zellagui, **H. A. Hassan**, A. Ghodbane, A. Chaghi, "Effect of Fault Location on Short-Circuit Calculations in Case of Phase to Earth Fault for a Line Compensated by TCVR", The 8<sup>th</sup> International Conference on Electrical Engineering (CEE'2014), University of Batna, Algeria, 16-17 November, 2014.

M. Zellagui, **H. A. Hassan**, A. Chaghi, "A Comparative Study on the Effects of Using Resistive and Inductive SFCL on Short-Circuit Calculations in the Presence of a Phase to Ground Fault", First International Conference on Electrical Engineering (ICEEB'2014), University of Biskra, Algeria, 7-8 December, 2014.

**I. Ahamed**, V. Borkar, "An Efficient Scheduling Algorithm for Solving Load Commitment Problem under Time of use Pricing with Bound on Maximum Demand", IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES), Bombay, India, 16-19 December, 2014.

T. P. M. Babar, **I. Ahamed**, E. Al-Ammar, A. Shah, "Consolidated Demand Bid Model and Strategy in Constrained Direct Load Control Program", 8th IEEE-GCC 2015, Muscat, Oman, 1-4 February, 2015.

**S. S. Mohammed**, D. Devaraj, "Interleaved boost converter with Perturb and Observe Maximum Power Point Tracking Algorithm for Photovoltaic System", 2015 International

Conference on Substantial Environmental Engineering and Renewable Energy (SEERE-15), Abu Dhabi, UAE, 13-14 January, 2015.

**S. S. Mohammed**, D. Devaraj, "Simulation of Incremental Conductance MPPT based Two phase Interleaved Boost Converter using MATLAB/Simulink", First International Conference on Electrical, Computer and Communication Technologies (ICECCT 2015), Tamilnadu, India, 5-7 March 2015.

**R. Mamlook, O. F. Khan**, "Web Based Intelligent Systems", Annual Summit on Artificial Intelligence, Philadelphia, USA, 25-27 August, 2014.

#### **Exhibition:**

**T. S. Mohammed**, "Microcontroller-Supported Car Parking System", The 6<sup>th</sup> Students Engineering Exhibition, Sultan Qaboos University, Muscat, Oman, 26-29 April, 2015.

#### **Member Editorial Board:**

**H. A. Hassan**, Member of "International Journal Advances in Power Systems", since 2013.

**H. A. Hassan**, Member of "International Journal of Power Systems and Integrated Circuits", since 2011.

**H. A. Hassan**, Member of "Asian Journal of Electrical Sciences (AJES)", since 2011.

**H. A. Hassan**, Member of "The International Journal of Innovations in Electrical Power Systems", since 2008.

**H. A. Hassan**, Member of "International Journal of Power and Energy Systems", since 2006.

**R. Mamlook**, Member of "Journal of Bioelectronics and Nanotechnology", since 2015.

**R. Mamlook**, Member of "Advances in Fuzzy Systems journal", since 2007.

**R. Mamlook**, Member of "Automatic Control of Physiological State and Function Journal", since 2012.

**R. Mamlook**, Member of "Advances in Robotics & Automation Journal", since 2012.

**R. Mamlook**, Member of "International Journal of Electrical and Electronics Research", since 2012.

**R. Mamlook**, Member of "Research Publish Journals: International Journal of Computer Science and Information Technology Research", since 2012.

**T. S. Mohammed**, Member of "Computer Science and Information Technology", since 2013.

**T. S. Mohammed**, Member of "Journal of Computer and Communications", since 2012.

## **9.4 Department of Graphic Design and Interior Architecture**

### **Conference Papers:**

**W. Osmen**, A. Saar, "Awareness Campaign against Cell Phone Radiation Hazard: Case Study Oman", 6th World conference on Psychology Counseling and Guidance, Antalya, Turkey, 14 - 16 May, 2015

**L. Cazacova**, "Cradle To Cradle Concept for Built Cultural Heritage Protection", WSEAS: 4<sup>th</sup> NAUN International Conference on Sustainable Tourism and Cultural Heritage, Konya, Turkey, 20-22 May, 2015.

### **Exhibition:**

**W. Osmen**, "Nizwa International Fine Art Exhibition", Nizwa Islamic City of 2015, Oman, 14-16 April, 2015.

**L. Cazacova**, "Solar Impulse World Round Trip", Group Exhibition dedicated Solar Impulse first stop representing Dhofar University with the Eco-House Project, Muscat International Airport, Oman, 9 March, 2015.

**M. B. El-Din**, "Solo Exhibition at the Omani Society of Fine Arts", Salalah, Oman, September 2014.

**M. B. El-Din**, "Nizwa International Fine Art Exhibition", Nizwa Islamic City of 2015, Oman, 14-16 April, 2015.

### **Externally Funded Research:**

**L. Cazacova**, S. Mohammed, K. Adam, F. Abbassi, S. Mana, "Eco House Design Completion", Funded by TRC.

### **Short summary**

Dhofari Eco-House designed by the students and faculties of College of Engineering is net-zero energy and satisfies its electricity needs by generating power using solar energy. Solar water heater supplies hot water for house needs and rain water harvesting system and grey water re-use system provide water for irrigation the rain garden planted with local vegetation. The indoor comfort is maintained by passive solar design and natural ventilation via wind catcher with smart air flow control system. Inspired by traditional architecture, Dhofari Eco-House was designed to satisfy the local population cultural desires and has the potential to be an example-setter of sustainable way of living for the region.

## **9.5 Department of Mechanical and Mechatronics Engineering**

### **Conference Papers:**

**F. Abbassi, S. Mana, I. Cazacova, S. Mohammad, K. Adam, M. Hidalgo** "Wind Catcher as a Paradigm to Reduce Energy Consumption in Building", 25th General Meeting of The World

Academy of sciences (TWAS) for the advancement of Science in Developing Countries, Muscat, Oman, 25th-28th October, 2014.

**F. Abbassi**, S. Mistou, O. Pantale, A. Zghal, “FE simulations and Full-Field Strain Measurements to Evaluate the Necking Phenomena”, 2nd International Materials, Industrial, and Manufacturing Engineering Conference, Bali, Indonesia, 4-6 February, 2015.

**S. Grami**, “Improvement Design Parabolic Trough Collector for Electrical Power Generation”, 25<sup>th</sup> General Meeting of The World Academy of sciences (TWAS) for the Advancement of Science in Developing Countries, Muscat, Oman, 25<sup>th</sup>-28<sup>th</sup> October 2014.

**S. Grami**, “Experimental Validation of New Proposed Switching Function for Generalized Maxwell Slip Friction Model”, 2nd International Conference on Automation, Control, Engineering and Computer Science (ACECS-2015), Sousse, Tunisia, March 21-23, 2015.

Y. Gharbia, **S. Grami**, **A. Wazwaz**, “Vacuum Cavity Parabolic Trough Collector”, Proceedings of ASME 2014 International Mechanical Engineering Congress & Exposition, Montreal, Quebec, Canada, 14-20 November, 2014.

#### **Externally Funded Research:**

**F. Abbassi**, “Natural Fractures Reactivation and its impact on Enhanced Oil Recovery”, funded by TRC.

#### **Short summary**

The ever-increasing energy demand and decline in number and size of new oil discoveries have set the stage for advanced research on new technologies including Enhanced Oil Recovery (EOR). This technology, which involves the injection of fluids into hydrocarbon reservoirs to increase its pressure, proved to be economically viable and environmentally friendly to a large extent. In Oman, this technology allowed to increase oil production by 17% in 2009 after a decrease of 27% between 2001 and 2007. EOR is particularly mature in conventional reservoirs, as it has been used extensively for decades. However, it still needs an extensive research work to adapt it to naturally fractured reservoirs. The purpose of this project is to investigate fractures’ reactivation due to fluids injection at different levels of temperature and pressure and identify the impact of such operations on the performance of fractured reservoirs. This research work will use advanced coupled multi-physics for reservoir modelling to optimise production from fractured reservoirs. It will also include novel continuum damage mechanics approaches to describe the initiation, evolution and coalescence of fractures within geological materials. Mathematically, such problem is governed by a fully coupled thermal-hydraulic-mechanical processes. Therefore, a high resolution is needed, which takes into account the intrinsic length and time scales of the involved processes. We intend to solve this problem using High Performance Computing. The solution method relies on massively parallel numerical models based on the finite element method.



**10. Publications by:  
Foundation Program  
(AY- 2014-15)**

## **10.1 English Unit**

### **Refereed Journal Papers:**

**J. Irudayasamy**, A. Vennakkadan, "Tightening the Grip over an Elusive System: Innovative Practices", English Language Teaching, Vol. 7, pp: 116-123, 2014.

M. Nazir, **S. Bashir**, Z. Bashir, "A Study of Second Language Speaking-Anxiety among ESL Intermediate Pakistani Learners", International Journal of English and Education, Vol. 3, pp: 216-229, 2014.

**S. Bashir**, Z. Bashir, "Time Management and Its Application in Academic Life: A Study of Omani Students at Dhofar University, Sultanate of Oman", Anglisticum, Vol. 4, pp: 154-159, 2015.

### **Conference Papers:**

**K. Khan, F. Khan**, "Implementing Outcomes Based Education in Foundation Program", Nurturing Writing in the Classroom, 5th National Conference on ELT 2015, Pune, India, January 30-31, 2015.

**K. Khan, F. Khan**, "Let Students Teach Grammar: A practical way to overcome Grammar Phobia", International Interdisciplinary Conference on Language, Literature, Cultural Studies and Knowledge Resources, Guntur, India, February 5-6, 2015.

**R. D. Sakhamuri**, "Pathways Leading to Effective Group-work Activities Using ZPD", 15th International ELT Conference, Muscat, Oman, 24 April, 2015.

## **10.2 Mathematics & IT Unit**

**W. A. Khan, M. A. Gondal**, "Key-Dependent Nonlinear Component for Block Cipher Encryption Algorithm", 3D Research, Vol. 5, pp: 1-8, 2014.

# APPENDICES



## Appendix A

**Table 1: Approved Applications for STFDG (Fall 2014-15)**

No.	Type of Application	Applicant	College
1.	<b>Short Term Faculty Development Grant (STFDG)</b>	Dr. Tariq Al-Houssary	CCBA
2.		Dr. Imthias	CE
3.		Dr. Tariq AlHadi	CCBA
4.		Dr. Magdi B. Alani	CE
5.		Dr. Muawya Ahmed Hussain	CCBA
6.		Dr. Shiekh Mohammed	CE
7.		Dr. Faris Al shubiri	CCBA
8.		Dr. Zaroug Osman Bilal	CCBA
9.		Dr. Fethi Abbasi	CE
10.		Dr. Muawya Ahmed Hussain	CCBA

**Table 2: Approved Applications for Questionnaire, SG and IC (Fall 2014-15)**

No	Type of Application	Applicant	College
1	<b>Questionnaire</b>	Dr. Marielle Risse	CAAS
2	<b>SG</b>	Dr. Manaf Zghaibeh	CE
3	<b>IC</b>	Dr. Mohammad Asif Gondal	CAAS
4		Dr. Mohammad Asif Gondal	CAAS
5		Dr. Abdullah Al Janabi	CE
6		Dr. Abdullah Al Janabi	CE
7		Dr. Heba Hassan	QA Unit

## **Appendix B**

**Table 1: Approved Applications for STFDG (Spring 2014-15)**

No	Type of Application	Applicant	College
1	<b>Short Term Faculty Development Grant (STFDG)</b>	Dr. Fadi Abdullah	CAAS
2		Dr. Rabia Imran	CCBA
3		Dr. Said Grami	CE
4		Dr. Linda Smail	CAAS
5		Dr. Mohammad Khaleel	CAAS
6		Dr. Asif Gondal	CAAS
7		Dr. Thabit Sultan	CE
8		Dr. Mansour Alraja	CCBA
9		Dr. Ahmmed Saadi Ibrehem	CE
10		Dr. Shouvik Sanyal	CCBA
11		Dr. Mawih Al Ani	CCBA
12		Dr. Dimitrios	CCBA
13		Dr. Elbek Musaev	CCBA
14		Dr. Tariq Saleh Atiya	CCBA
15		Dr. Liudmila Cazacova	CE

**Table 2: Approved Applications for Questionnaires & Interviews(Spring 2014-15)**

No	Type of Application	Applicant	College
1	<b>Questionnaire</b>	Dear Ahmed bin Abdullah Al Ajmi	Sohar University
2		Muna Ahmed	DU-Student
3	<b>Interview with DVC</b>	Mr. Saeed Nassir AlHandhali and Mr. Mohammed Al Jahdhami	Salalah College of Technology
4		Ms. Sabah Al Balushi,	University of York

**Table 3: Approved Applications SG and IC (Spring 2014-15)**

No	Type of Application	Applicant	College
1	SG	Dr. Mazhar UI Islam	CE
2	RRG	Dr. Raa'ed and Dr. Caas	CAAS
3	IC	Dr. Mohammad Asif Gondal	CAAS
4		Dr. Mohammad Asif Gondal	CAAS
5		Dr. Thabit Sultan	CE
6		Dr. Thabit Sultan	CE
7		Dr. Heba Hassan	QA Unit
8		Dr. Faris Alshubiri	CCBA
9		Dr. Ahmed Abu Abdo	CE
10		Dr. Vijay Singh Thakur	CAAS
11		Dr. Mohammad Asif Gondal	CAAS
12		Dr. Mohammad Asif Gondal	CAAS
13		Dr. Faris Alshubiri	CCBA
14		Dr. Julius	FP
15		Dr. Mawih Karim	CCBA
16		Dr. Mazhar UI Islam	CAAS
17		Dr. Zaroug Osman	CCBA
18	Dr. Kavita Chavali	CCBA	