

8th ANNUAL RESEARCH REPORT







Academic Year 2015 - 2016



H. M. SULTAN QABOOS BIN SAEED

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Legend:

AY Academic Year

CAAS College of Arts and Applied Sciences

CCBA College of Commerce and Business Administration

CE College of Engineering

DR Department of Research

DU Dhofar University

DVC Deputy Vice Chancellor

FURAP Faculty mentored Undergraduate Research Award program

IC Incentive Claim

IT Information Technology

ORG Open Research Grant

QA Quality Assurance

Questionnaire

RCOL Research Collaboration

RL Research leave

R.O Rial Omani

SG Seed Grant

STFDG Short Term Faculty Development Grant

TRC The Research Council

URB University Research Board

VC Vice Chancellor



AForeword by the Vice Chancellor

I am pleased to present to you the 8th Annual Research Report for AY 2015–16. Ten years ago we set ourselves a goal to achieve greater impact and greater engagement towards Research. I have experienced the privilege of helping Dhofar University (DU) working towards achieving the goals outlined in our Research Strategic Plan; driving the organisation's vision and ensuring appropriate governance for Research during AY 2015-16. It has strongly shaped the intellectual identity of the University and, today, Research expenditure is a significant component.

A mark of our success is that based on its RG score, ResearchGate ranked DU as second best in Research among all private Universities in Oman. Moreover, one of our faculty member won "Best Researcher Prize" across Oman during Annual National Research Forum in October, 2016. A major milestone for DU during last academic year was the establishment of University's first Research centre; a part of which is already operational, and will emphasize on different Research topics of regional importance.

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 would like to acclaim the tremendous achievements of our University, and the immense efforts and commitment of our committed and passionate staff, students and faculty members who worked hard to make DU's vision a reality. We thank you for your wonderful contributions for raising the University's Research profile by doing quality Research work and look forward with confidence to the year ahead.

Last but not the least I would like to express my gratitude to Board of Trusties (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. I look forward to observing the continuing success of DU in Research for many years to come.

Best Regards,

Dr. Hassan Said Kashoob

Vice Chancellor Dhofar University



H Foreword by the Deputy Vice Chancellor

I have an immense pleasure in presenting the Dhofar University's 8th Annual Research Report as an evidence of DU seeking to achieve the highest levels of distinction in the discovery and transmission of knowledge and understanding.

This AY 2015-16 saw a significant growth of academic and Research activities. The number of academic events including workshops, seminars, lectures, symposia almost doubled. There was also a steady increase in the number of publications and scientific presentations. I believe this trend will undoubtedly accelerate as many new Research projects units moved from the development phase to full Research activity. Also, DU established a Research center that will focus on few niche areas of Research of regional importance, dealt with in Research clusters. One of the cluster is the 'Frankincense and Medicinal plants' for which a fully operational Research lab has already been setup.

I would like to express my utmost appreciation to the Department of Research and 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

Juneary Machine

Deputy Vice Chancellor

Dhofar University



A Foreword by the Director, Department of Research

Research activity at Dhofar University continues to show immense growth. With an increased allocated budget, increased productivity and faculty receiving and managing externally funded grants to receiving prestigious awards there is a sense of excitement amongst our faculty. Dhofar University is working with internationally renowned institutions and working progressively towards becoming the main Research Hub within the Dhofar region. The main goal for the next academic year is to work with local stakeholders and offer consultancy services.

The main driver behind our continued success is the dedication, hard work and commitment of our faculty. The Department of Research will continue to support faculty to achieve excellence in Research in order to meet the Key Performance Indicators as outlined in the Operational Plan.

Best Regards,

TOTAL

Dr. Israr Ul HassanDirector, Department of Research
Dhofar University

1. Explanatory Notes

The <u>Eighth Annual Research Report</u> presents the 'Research output' of faculty members of Dhofar University (DU) from June 2015 to May 2016. Please note that:

- In the Publications' list, DU faculty members are indicated with bold letters and are underlined.
- 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, Department of Research, Chairperson URB
- 2. Dr. Muhammad Asif Gondal, College of Arts and Applied Sciences
- 3. Dr. Francesco Bigagli, 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
- 9. Dr. Mohd Idrees, Editor & Reviewer

3. <u>URB Activities during the Academic Year 2015-16</u>

During the Academic Year (AY) 2015-16, URB received a total of 159 applications categorized as:

- 26 applications for Short Term Faculty Development Grant (STFDG),
- 2 for Seed Grant (SG),
- 1 for Regular Research Grant (RRG),
- 102 applications for the Incentive Claims (IC),
- 4 for Research leave,
- 19 for the distribution of questionnaires, and,
- 5 requests for Research collaboration

129 applications were unanimously approved by the URB, Deputy Vice Chancellor (DVC) and the Vice Chancellor (VC), whereas, **14** applications were rejected while **16** were put on hold due to budget shortages that will be discussed during next academic year. Figure 1 summarizes the URB activity during AY 2015-16 while figure 2 shows the comparison of URB activity over last four years i.e. from AY 2012-13 to AY 2015-16.

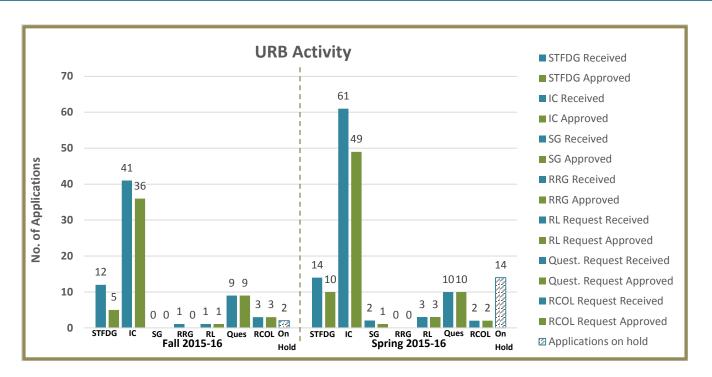


Figure 1: URB Activity during AY 2015-16

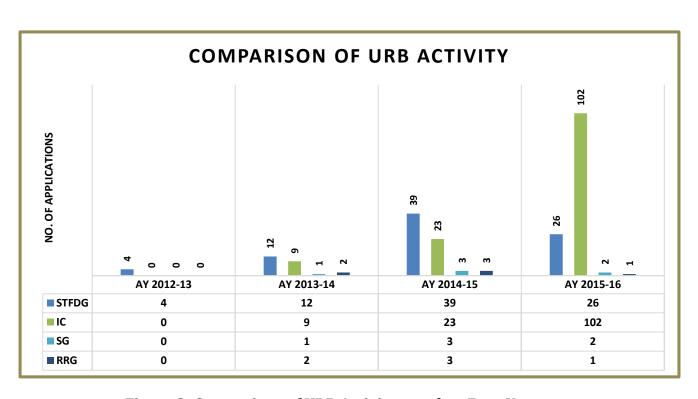


Figure 2: Comparison of URB Activity over last Four Years

3.1. Budget Utilization

Total allocated budget for the grants for the AY 2015-16 was 40,000 R.O. Due to overwhelming number of application received; URB exceeded the budget allocated and utilized an amount of 42,733 R.O. for the approval of internal grants. For the AY 2016-17, the expected budget to be received is 41,000 R.O. for Research activities. Figure 3 shows the budget utilization for the AY 2015-16 while figure 4 shows the comparison of budget utilization over the past 5 years.

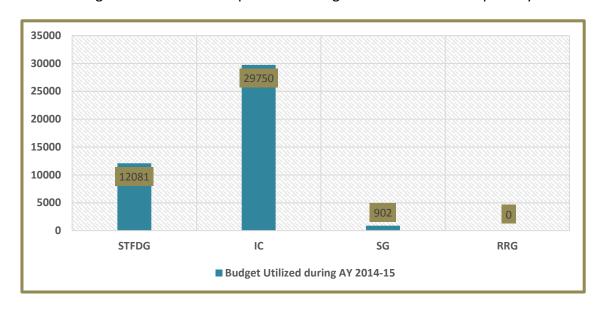


Figure 3: Budget Utilization for AY 2015-16

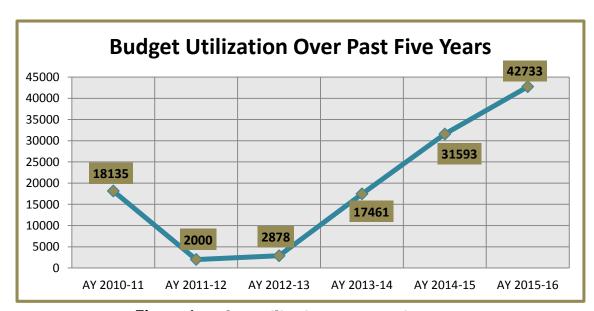


Figure 4: Budget Utilization over Past Five Years

3.2. Comparison of Research Activity across Colleges and Foundation Program (FP)

Following charts below shows the comparison of Research activity across all Colleges and the FP.

3.2.1 Incentive Claims - Scopus or Web of Science

Beginning from the AY 2013-14, the URB in coordination with the DVC suggested incentives for Research to encourage faculty members at DU to engage in quality Research activities. Faculty members publishing their Research work in Scopus or Web of science indexed journals will be eligible for 350 R.O monetary incentives.

During the AY 2015-16, 102 applications were received for incentive claims compared to 23 applications during AY 2014-15. Among these, 52 applications were from the College of Commerce and Business Administration (CCBA), 19 from College of Engineering (CE), 31 from the College of Arts and Applied Sciences (CAAS) while no applications for incentives were received from FP. Figure 5 shows the distribution of incentive claim applications received from all Colleges and FP.

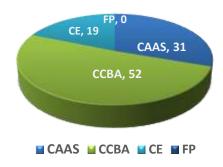


Figure 5: Distribution of Incentive Claims across all Colleges/FP

3.2.2 Short Term Faculty Development Grant

Faculty members presenting their Research papers in prestigious conferences are eligible to receive a grant to cover their travel and accommodation along with the registration fee. The number of applications received for STFDG have declined this academic year due to the stringent review process both at CRC and URB levels. 39 STFDG applications were received during the last academic year while only 23 applications were received during current AY. Figure 6 shows the distribution of STFDG applications across all Colleges and FP.



Figure 6: Distribution of STFDG applications across Colleges/FP

3.3. URB Policy

The URB reviewed and modified the URB policy taking into consideration and feedback from the internal auditor. The revision includes:

- Addition of clauses in IC and STFDG guidelines
- Tidying up the whole policy

4. DR Activities during the Academic Year 2015-16

4.1. Turnitin Renewal

The annual subscription of the Turnitin software was renewed during Fall semester by the DR.

4.2. Policies Related to Research

The DR in coordination with the DVC, the Department of Quality Assurance (DQA) and along with the help of faculty members, developed and implemented policies related to Research as shown in table 1 below. The policies were approved by the URB and the University Council (UC).

Table 1: Approved Policies for Research

| No. | Policies Approved | |
|-----|--|--|
| 1. | Research Ethics & Code of Conduct Policy | |
| | Policies Polished and Updated | |
| 1. | Consultancy Policy | |
| 2. | Biosafety Policy | |
| 3. | Intellectual Property Policy | |
| 4. | URB Policy | |

4.3. 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 DR conducted a series of seminars on Research skills as tabulated in Table 2 below:

Table 2: Seminars on Professional Development of Research during AY 2015-16

| No. | Details of Event | Presenter | Target Audience | Date | Location | |
|-----|-----------------------------|--------------|--------------------|------------|----------------|--|
| 1 | Teaching-Research Nexus: | Prof. Ramzi | DU | 21/10/2015 | Lecture Hall 2 | |
| | The Scholarship of Teaching | Nasser | Academic | | | |
| | through Action Research | | Staff | | | |
| 2 | How to write a good | Prof. | DU | 28/12/2015 | Lecture Hall 2 | |
| | Research Paper? | Rustom | Academic | | | |
| | | Mamlook | Staff | | | |
| 3 | How to tackle problems | Dr. Shafique | FP | 16/2/2016 | FP Meeting | |
| | while conducting Research? | Chaudhry | Academic Staff | | Room | |

| 4 | ļ. | How to tackle problems | Dr. Shafique | FP | 4/4/2016 | FP Meeting |
|---|----|----------------------------|--------------|----------|-----------|----------------|
| | | while conducting Research- | Chaudhry | Academic | | Room |
| | | Part II? | | Staff | | |
| 5 | 5 | Where to present and | Dr. Asif | DU | 27/4/2016 | Lecture Hall 2 |
| | | publish? | Gondal | Academic | | |
| | | | | Staff | | |









Figure 7: Seminars on Research Skills

4.4. Strategic and Operational Plan for Research

As specified in the operational and strategic plan of DU, the DR with the support of URB, DQA and the DVC, worked tirelessly to achieve following objectives to promote quality Research across the University:

1. Strengthen Environment for Research Activities:

- 50% increase in the Research budget as compared to AY 2015-16.
- Promoting the faculty members to publish their Research work in quality journals that resulted in increased number of publications in Scopus and Web of Science indexed journals by 2 folds.
- Increase in incentives given to faculty members for their quality Research papers.
- Organized seminars and events for improving Research skills.
- Conducted and organized seminars to create awareness regarding policies related to Research.

2. Provide an Environment Conducive to Consultancy Services:

- Presentations to motivate faculty members to take part in Consultancy activities.
- Approval and signing of two consultancy agreements with local agencies.
- Performed Marketing activities to introduce DU expertise to local community.

3. Develop DU into a Hub for Research Activities that are Important to the Region

- Worked in coordination with DVC to develop the first Research Centre at DU.
- Set up of Frankincense and Biodiversity lab and promoting DU as the Hub for Frankincense Research in the region.
- Increased number of institutional and private Research activities in Dhofar region channelized through DU.
- Signed MoUs with national and international private and government entities like PDO, Dhofar Power Company, Viva cell and others (for details, refer to table 12).

4. Ensure Ethics and Bio-Safety in Research:

 Developed and implemented the policy for ethics and biosafety along with creating awareness among faculty & staff members.

5. Establish Research Teaching Nexus:

- Seminar conducted on Research teaching nexus.
- Worked in coordination with the University and Academic council at DU to Incorporate Research Skills as a compulsory subject in the Syllabi.
- Developed plans to focus on 'Research teaching nexus' during AY 2016-17 by promoting faculty members to incorporate their Research into curricula.

5. Research Centre and Deanship of Research and Graduate Studies

DU has established a Research center which has been approved by the Ministry of Higher Education (MoHE) that will be supported by a Steering Committee (SC). The Centre aims to promote quality Research across the University. The Centre will focus on few niche areas of Research of regional and strategic importance dealt with in different Research clusters. One of the cluster is the 'Frankincense and Medicinal plants' for which a fully operational Research lab has already been established. The second unit, under development, will focus on Omani Cultural Studies. However, other units on pre-selected areas of Research will follow. All potential Research focus areas as listed in Table 3, 4 and 5 respectively.

Table 3 Research Focus Areas in CCBA

| S.No | Research Focus Area | Research Focus Topic | | |
|------|---------------------|---|--|--|
| 1. | Entrepreneurship | Entrepreneurship and innovation | | |
| 2. | | Omani Economy and Globalization, Efficacy of | | |
| | Economics | Microfinance and Cooperative Movement (Qabila | | |
| | | system) for sustainable development | | |

| 3. | Management & Marketing | Human capital development, Development of tourism industry in Oman | : |
|----|-------------------------------|--|---|
| 4. | Management Information System | Could Computing, Social Media | |

Table 4: Research Focus Areas in CAAS

| S.No | Research Focus Area | Research Focus Topic | |
|------|---|--|--|
| 1. | Autonomous Monitoring Systems | Large scale Wireless Sensor Networks, Wireless communications for distributed and intelligent networks, Intelligent Monitoring, Autonomic Network Management, Geo-simulations | |
| 2. | Big Data Analytics | This Research area addresses Research challenges in Big Data domain. The big data group at DU is working both in the applications of Big Data and in underpinning technologies and concepts. | |
| 3. | Health Care (Cancer) | The aim of this group is develop strategies to establish cancer Research at DU. In the long run, main focus areas shall be diagnosis, prognosis, treatment selection, and treatment aims. | |
| 4. | Youth Leadership | Youth Leadership | |
| 5. | Family Cohesion | Family Structure, Divorce , Elderly Care and Interaction between family members | |
| 6. | Use of Technologies for Education and Learning | Use of Technologies for Education and Learning | |
| 7. | Material Science and Nanotechnology | Material Science and Nanotechnology | |
| 8. | Applied Mathematics | Numerical Analysis, Cryptography, Inverse Problems, Analysis of PDEs, Financial Mathematics and Fuzzy Algebra and Applications | |

Table 5: Research Focus Areas in CE

| S.No | Research Focus Area | Research Focus Topic | | |
|------|-----------------------------|---|--|--|
| 1. | Electrical and Computer | Artificial Intelligence group (Neural Networks, Fuzzy | | |
| | Engineering | Logic, Control), Energy, and Environment group, | | |
| | | Communication and Networking group | | |
| 2. | Civil Engineering | Earth retaining structures, Soil-structure | | |
| | | interaction, Reparability of structures | | |
| 3. | Mechanical and Mechatronics | Renewable Energy, Energy Manufacturing, | | |
| | Engineering | Mechanical damage | | |
| 4. | Chemical and Environmental | Waste water treatment, Renewable energy, | | |
| | Engineering | Modeling and diabetes, Biopolymers and | | |
| | | Composite materials | | |

| 5. | Graphic Design and Interior | Architectural heritage and Ecological Architecture, |
|----|-----------------------------|---|
| | Architecture | Eco- Architecture Management |

6. TRC Related Activities

6.1 Projects Submitted to The Research Council (TRC) during the Academic Year 2015-16:

During the AY 2015-16, nine new applications for Open Research Grant (ORG) worth 1,330,781 R.O. were submitted to TRC for funding along with eight new applications for Faculty mentored Undergraduate Research Award Program (FURAP) worth 12,850 R.O. One ORG application along with five applications for FURAP were approved by the TRC in the first quarter of the AY as shown in Table 6 below.

Due to the current economic condition of the country and due to budget constraints, TRC froze all grants during second quarter of the academic year resulting in no new submissions for ORG projects during Spring 2015-16. However, eight applications for FURAP were submitted by students in March, 2016. The details of the ongoing projects are shown in Table 7 while the submitted projects are tabulated *via* Table 8.

Table 6: TRC Projects Approved during AY 2015-16

| No. | Type of Application | Title | Principal Investigator | Amount Requested (R.O) |
|-----|---------------------|--|---------------------------|------------------------------|
| 1. | ORG | Intelligent Monitoring Systems for Cooperating Objects Using 6LowPAN(6-IMS) | Dr. Shafique Chaudhary | 103,700 |
| 2. | | Feasibility study to set up a manufacturing unit of ice cream in the city of Salalah | Dr. Syed Ahsan Jamil | 1,300 |
| 3. | | Web intelligent home control system | Dr. Rustom Mamlook | 1,995 |
| 4. | FURAP | PV power system based street lighting for highways in sultanate of Oman with GSM based remote monitoring | Dr. Shiekh Muhammed | 1,400 |
| 5. | | Experimental investigation on tube hydroforming and formability | Dr. Fethi Abbasi | 2,400 |
| 6. | | Intention to adopt electronic purchasing: online shopping for books in Sultanate of Oman | Dr. Mansour Alraja | 1,400 |
| 7. | Concept Note | The Sustainable Development of the Dhofar Mountains Chain | Dr. Lokman Zaibet | 25,000 |
| | | | Total | 137,195 |

Table 7: Ongoing TRC Projects

| No. | Type of Application | Title | Principal Investigator | Amount Requested (R.O) |
|-------|---------------------|--|---------------------------|------------------------------|
| 1. | | Improved Design Parabolic Trough Collector for Electric Power Generation | Dr. Said Grami | 78,250 |
| | ORG | Natural Fractures Reactivation and its impact on Enhanced Oil Recovery | Dr. Fethi Abbasi | 145,700 |
| 2 | | Towards the Future Dhofar Smart Power Grid | Dr. Abdulkader Dekdouk | 118,200 |
| 3. | EcoHouse | Eco House Competition (Phase2) | Dr. Liudmila Cazacova | 30,000 |
| Total | | | 372,150 | |

Table 8: Submitted TRC Projects during AY 2015-16

| No. | Type of Application | Title | Principal Investigator | Amount Requested (R.O) |
|-----|------------------------|---|----------------------------|------------------------------|
| 1. | | Development of Nano-fertilizers for selected medicinal plants of Oman | Dr. Mohammad Idrees | 477,256 |
| 2. | | Reducing dependence: An integrated model of Human capital for Economic Growth | Dr. Rabia Imran | 105,300 |
| 3. | | Mirbat old town's recognition as a place of National cultural heritage: Identification, assessment and documentation | | 169,700 |
| 4. | | Online Package for Distance Teaching and Learning of English for Speakers of Other Languages (ESOL) in Oman | Dr. Norlaila Hussein | 68,600 |
| 5. | ORG | Sources of cold molecules for parity violation CMPV | Dr. Ridha Horchani | 207,800 |
| 6. | | Evaluation of the progress towards e- Society in Oman | Dr. Dimitrios Xanthidis | 73,600 |
| 7. | | Implementation of web server for achieving real-time e-service (information) and environment (traffic monitoring and air quality) information towards improving hospitality and environment (traffic monitoring and air quality) in Salalah | Dr. Rustom Mamlook | 122,625 |

| 8. | The interaction of psychological variables and student achievement: finding optimal structure to student success | | Dr. Ramzi Nasser | 63,300 |
|-----|--|---|--------------------------|---------|
| 9. | | Development of Cancer Detection and Classification Methods using Microarray Gene Expression and Medical Imaging Data | Dr. Andri Mirzal | 105,900 |
| 10. | | Students' attitude towards voluntary services: A study of Dhofar University | Dr. Reem Abuiyada | 1200 |
| 11. | | Ad-hoc remotely controlled rover system | Dr. Manaf Zghaibeh | 2400 |
| 12. | | Surface modified Gd ₂ O ₃ nanoparticles for Magnetic Resonance Imaging(MRI) contrast agents | Dr. Md. Wasi Ahmad | 1850 |
| 13. | | Synthesis of bacterial cellulose facial masks for industrial and medical applications | Dr. Mazhar Ul Islam | 1700 |
| 14. | FURAP Tube expansion analysis with digital image correlation and numerical modeling | | Dr. Fethi Abbasi | 1650 |
| 15. | | Designing a high performance work system: A key step towards building employee engagement in the health sector | Dr. Rabia Imran | 1000 |
| 16. | | Entrepreneurship and innovation in Oman: An examination of factors that promote entrepreneurship behavior | Dr. Lakshmi Narayanan | 1800 |
| 17. | The prevalence of internet addiction | | Dr. Shanker Menon | 1250 |
| | | | | |

6.2. Best Researcher Award by TRC

The 'National Research Award' by TRC aims to encourage Researchers to conduct high quality Research of national relevance. Each year the award is given in following two categories:

- Category I: Best published Research led by a PhD holder or equivalent
- Category II: Best published Research led by a young Researcher

During the AY 2015-16, in the second round of the award, Dr. Andri Mirzal, an Assistant professor in the Department of Computer Science in College of Arts and Applied Sciences at DU has been awarded the "National Research Award"; in the Information and Communication Technology sector (ICT) for his Research titled "Nonparametric Tikhonov Regularized Nonnegative Matrix Factorization and its Application in Cancer Clustering", by The Research Council (TRC), Muscat. The award ceremony took place on 25th& 26th October, 2015 at Shangri-La, Bar al Jissah.



Figure 8: Dr. Andri Mirzal won National Research Award, 2015

6.3. TRC Visits

As a part of TRC's mission to create an innovative ecology and promote quality Research across the Sultanate, during Fall 2015-16, TRC arranged a COACh workshop aiming on proposal writing techniques to enhance Research proposals. For this, five distinguished experts were invited from United States (US) by TRC to train Researchers during the workshop. Selected faculty members; active in Research and nominated by their respective Deans from each college and FP, attended the workshop. The experts emphasized on necessary steps to be considered while submitting a project for funding to TRC that may help in securing the grant successfully. All participants were awarded a participation certificate at the end of the workshop. The detail of the event is shown in Table 9.

Table 9: COACh Workshop Fall 2015-16

| | Tubic 7. Collen Wolliam Plan 2010 10 | | | | | | |
|-----|--------------------------------------|--|-----|--|--|--|--|
| No. | Details of Event | Attendees Date | • | | | | |
| 1. | COACh Workshop | Faculty members who are active Researchers and are nominated by Dean of their respective Colleges and FP |)15 | | | | |









Figure 9: COACh Workshop

6.4. EcoHouse Competition Phase II

The EcoHouse Design Competition (EHDC) is an award-winning program, initiated by TRC, that challenges collegiate teams to design, build, and operate Eco friendly houses that are cost-effective, energy-efficient, and attractive. The winner of the competition will be the team that best blends consumer appeal, and design excellence with optimal energy production and maximum efficiency. Five HEIs participated in the competition from all across Oman. During the EHDC Phase-I, DU secured 4th position with a score of 510.610. Phase-I mainly included designing and building the Eco-friendly house. Currently teams are in the Phase-II of the competition during which the houses will be evaluated based on their livability. Owed to the hard work of Dr. Liudmila and her team, DU successfully secured first position in the Stage –I deliverables of the EHDC-Phase II. Figure 10 shows the detailed scoring of the Stage-I deliverables.



Figure 10: EHDC-Phase II- Stage-I Deliverables

7. Consultancy Activities

As a part of DU's efforts to facilitate activities to smoothen the progress of knowledge and technology transfer between University and the local community, contributing to economic and social impact of the society, the faculty members were encouraged to take part in consultancy activities. Such activities will also act as an extra source of additional income to the University and/or financial benefit to the faculty. Table 10 enlists the consultancy activities carried out during current academic year while Table 11 shows the list of professional development workshops or lectures delivered to local schools, Colleges and industry during AY 2015-16.

Table 10: Consultancy Activities carried out during AY 2015-16

| S.No | Code | Consultant | College/ FP | Client | Duration | Task Assigned |
|------|------------------------------------|-------------------------|----------------|---------------------------------|--|--|
| 1. | DU/AY- 2015- 16/CONS- 001 | Dr. Alexandria Maria | ССВА | Sadim Business Consulting | 1 st March 2016 -31 st August, 2016 | Evaluate customers' brand perception and to make recommendations for brand management. |
| 2. | DU/AY- 2015- 16/CONS- 002 | Dr. Alexandria Maria | ССВА | Salalah Mills SAOC | 1 st April 2016 -31 st August, 2016 | Human resource management and business performance assessment |

<u>Table 11: Professional Development Workshops/Guest Lecture given by Faculty members during AY 2015-16</u>

| N.T | Intelligent State of the College of | | | | | D (0 |
|-----|---|--|------------|---|----------|---------------------------------------|
| No | Workshop/ Guest Lecture | Speaker | College/FP | Place | Duration | Date & Time |
| 1. | Greener Nature, Better Future | Ms. Hridhya Menon | FP | Ittin ground, arranged by the Ministry of Environment and Climate affairs, Salalah, Oman | 1 Day | 21 st August, 2015 |
| 2. | Self-promotion and motivation for learning | Dr. Abdelkader Al Syed | CAAS | Alhaq City School, Salalah, Oman | 1 Day | 16 th November, 2015 |
| 3. | How to deal with the students and resolve their problems | Dr. Nasser Said Gomaa Abdelrashee d | CAAS | Aisha Bint Abu Bakr Alsediq for basic education (5- 10), Salalah, Oman | 1 Day | 8 th December, 2015 |
| 4. | Ways to improve academic achievement for students | Dr. Nasser Said Gomaa Abdelrashee d | CAAS | School for basic education Girls (5-10), Salalah, Oman | 1 Day | 20 th December, 2015 |
| 5. | The Psychological and social underpinnings of the curriculum and teaching methods | Dr. Nasser Said Gomaa Abdelrashee d | CAAS | Alsaadah School for basic education (10 – 12), Salalah, Oman | 1 Day | 22 nd December, 2015 |
| 6. | Classroom Management | Ms. Rashidah Azhar | FP | Samharam International Bilingual School, Salalah, Oman | 1 Day | 18 th January, 2016 |
| 7. | Modern trends in effective teaching | Dr. Abdelkader Al Syed | CAAS | Oiron Herty School, Salalah, Oman | 1 Day | 24 th February, 2016 |
| 8. | Talk on 'in memory of the famous South Asian poet Mr. O.N.V Kurup' | Ms. Hridhya Menon | FP | Salalah Institute of Music and Arts, Salalah, Oman | 1 Day | 1 st March, 2016 |
| 9. | To raise motivation and enhance mental processes | Dr. Abdelkader Al Syed | CAAS | Alhaq City School, Salalah, Oman | 1 Day | 2 nd March, 2016 |

| 10. | Emotional Intelligence in the Classroom: Strategizing Class Delivery | Mr. Faical Ben Khalifa | FP | TESOL Arabia, Dubai, UAE | 1 Day | 12 th March, 2016 |
|-----|---|---|--|--|--------|---|
| 11. | How to write a resume (CV) | Dr. Tareq Al Housary | ССВА | Dhofar University, Salalah, Oman | 1 Day | 27 th March, 2016 |
| 12. | How to teach Pronunciation to Elementary learners | Mr. Amir Saeed | CAAS | Pakistan School Salalah, Salalah, Oman | 1 Day | 31 st March, 2016 |
| 13. | Discover yourself and professional trends | Dr. Abdelkader Al Syed | CAAS | Dhofar University, Salalah, Oman | 1 Day | 7 th April, 2016 |
| 14. | The role of the directors of the schools in the development of total quality management | Dr. Abdelkader Al Syed | CAAS | General Directorate of Education, Salalah, Oman | 4 Days | 24 th -28 th April, 2016 |
| 15. | Peopling of Arabia | Dr. Jeffrey I. Rose (National Geographic / Ronin Institute), Prof. Riad Bayoumi (Dubai Healthcare City), Prof. Giovanni Romeo (European School of Genetic Medicine), Prof. Mohammed Osman Hassan (Sultan Qaboos University) | Organized by Dhofar University in conjunction with the International Committee on Archaeologic al Heritage Management and the International Council on Monuments and Sites | Salalah Rotana Resort, Salalah, Oman | 2 Days | 1 st -2 nd May, 2016 |

8. Liaison/Agreement with External Agencies/HEIs

DU has signed mutual agreements with world renowned HEIs for collaboration in 'Teaching & Learning' and Research during AY 2015-16. Also, it has worked on implementing the objectives of MoUs signed with HEIs during previous academic years. Table 12 highlights the details of all MoUs signed, in process or implemented.

Table 12: Events Organised by DU Faculty and Staff AY 2015-16

| C NI- | Table 12: Events Organ | | |
|-------|---|------------------------|--|
| S.No | External Agency/HEI | National/International | Status |
| 1. | Waljat College of Applied Sciences, Oman | National | MoU signed during AY 2015-16 |
| 2. | English Language Center, College of Technology, Oman | National | MoU signed during AY 2015-16 |
| 3. | A' Sharqiyah University, Oman | National | MoU signed during AY 2015-16 |
| 4. | Sohar University, Oman | National | MoU signed during AY 2015-16 |
| 5. | Caledonian College of Engineering, Oman | National | MoU signed during AY 2015-16 |
| 6. | University of Nebraska Omaha, USA | International | Signed MoU during previous academic year and throughout the 2015-2016 has been in the process of implementing objectives of the MOUs |
| 7. | The University of Western Australia, Australia | International | Signed MoU during previous academic year and throughout the 2015-2016 has been in the process of implementing objectives of the MOUs |
| 8. | Anglia Examinations ,UK | International | Signed MoU during previous academic year and throughout the 2015-2016 has been in the process of implementing objectives of the MOUs |
| 9. | Indian Institute of Technology Bombay, India | International | Signed MoU during previous academic year and throughout the 2015-2016 has been in the process of implementing objectives of the MOUs |
| 10. | Indian Agricultural Research Institute, India | International | Signed MoU during previous academic year and throughout the 2015-2016 has been in the process of implementing objectives of the MOUs |
| 11. | Gokula Education Foundation, India | International | Signed MoU during previous academic year and throughout the 2015-2016 has been in the |

| | | | process of implementing objectives of the MOUs |
|-----|--|---------------|--|
| 12. | The Indian Institute of Information Technology, Allahabad, India | International | Signed MoU during previous academic year and throughout the 2015-2016 has been in the process of implementing objectives of the MOUs |
| 13. | The University of St. Andrews, Scotland, UK | International | Signed MoU during previous academic year and throughout the 2015-2016 has been in the process of implementing objectives of the MOUs |
| 14. | Nitte University, India | International | Pending approval by the Ministry of Higher Education to sign MoU |
| 15. | Rajarejeswari Medical College, India | International | Pending approval by the Ministry of Higher Education to sign MoU |
| 16. | Viva Cell, Germany | International | Pending approval by the Ministry of Higher Education to sign MoU |
| 17. | Dhofar Power Company, Oman | National | Agreement for Research collaboration on TRC funded project of Dr. Abdelkader Dekdouk |
| 18. | Salalah Port, Oman | National | Agreement for Research collaboration on TRC funded project of Dr. Shafique Chaudhry |

9. Annual Research Day

As a part of its vision to foster, promote and establish conducive environment for the Research, under the patronage of Dr. Hassan Kashoob, the VC, the DR with the support of Prof. Mohamed Limam, the DVC, celebrated 4th Annual Research Day on 14th June, 2016. The aim of this day was to highlight and appreciate the significant Research contributions of its academic staff and students during AY 2015-16.

DU has been celebrating the Research efforts across the University each year, since 2013. The event brings together Researchers from all Colleges and FP and provides an opportunity to share exciting new findings, facilitate scientific exchange and identify potential new collaborations.

This year the full-day program included both oral and poster presentations as well as a keynote address by Prof. Luay Rashan; a distinguished Researcher in Biodiversity and medicinal plants. The day was concluded with an award ceremony, the details of which are given in Section 10 of the document i.e. "**DU Awards and Incentives 2015-16**".









Figure 11: Annual Research Day

10. DU Awards and Incentives

As per the "Incentives and Rewards Policy", to appreciate the outstanding performance and efforts of the academic staff, selected faculty members from each college and FP were given awards in the areas of 'Teaching & Learning', 'Research' and 'Community Service during the 4th annual Research day. Faculty (enlisted in Table 13 below) were awarded a cash award of 500 R.O along with an appreciation certificate, whereas, students winning the best poster award for their FURAP or Final Year Project (FYP) were awarded with 100 R.O along with an appreciation certificate.

Table 13: List of Award Winners for AY 2015-16

| S.No | Name of Faculty Member | College/FP | | | | |
|------|------------------------------|------------|--|--|--|--|
| | Best Teacher Award | | | | | |
| 1. | Mr. Moosa Ahmed Ali | CAAS | | | | |
| 2. | Dr. Mohammed Imran Khan | ССВА | | | | |
| 3. | Dr. Mazhar Ul Islam | CE | | | | |
| 4. | Dr. Wajdi Hamza Al Redany FP | | | | | |
| | Best Research Scholar Award | | | | | |
| 5. | Dr. Shafique Chaudhry | CAAS | | | | |
| 6. | Dr. Mansour Alraja | ССВА | | | | |
| 7. | Dr. Fethi Abbassi | CE | | | | |
| 8. | Dr. Umamaheswara Rao Bontha | FP | | | | |
| | Best Community Server Award | | | | | |
| 9. | Dr. Vijay Singh Thakur | CAAS | | | | |
| 10. | Dr. Mohammed Yousoof Ismail | ССВА | | | | |

| 11. | Dr. Thabit Sultan Mohammed | CE | | | |
|-----|---|--|--|--|--|
| 12. | Ms. Sabiha Janjua | FP | | | |
| | Best Poster A | ward-FURAP | | | |
| 13. | Ms. Zainab Al Baloushi, Ms. Amina Kashoob, Ms. Noof Al Baloushi, Dr. Manaf Zghaibeh | PV power system based street lighting for highways in sultanate of Oman with GSM based remote monitoring | | | |
| | Best Poster Award-FYP | | | | |
| 14. | Ms. Khulood Khalifah Marhoon Al Ghafri | Intelligent Cry Translator | | | |





Figure 12: Award ceremony on Annual Research Day

11. The ECO 2015 Conference on Energy Challenges in Oman (ECO'2015)

Understanding the importance of energy challenges and related issues in Oman, the College of Engineering at Dhofar University organized the Energy Challenges in Oman (ECO' 2015) Conference from 9th-10th December, 2015. Eco'2015 aimed at attracting the interest of specialists, academicians and researchers from Oman community working in research areas related to Energy. The key activities included:

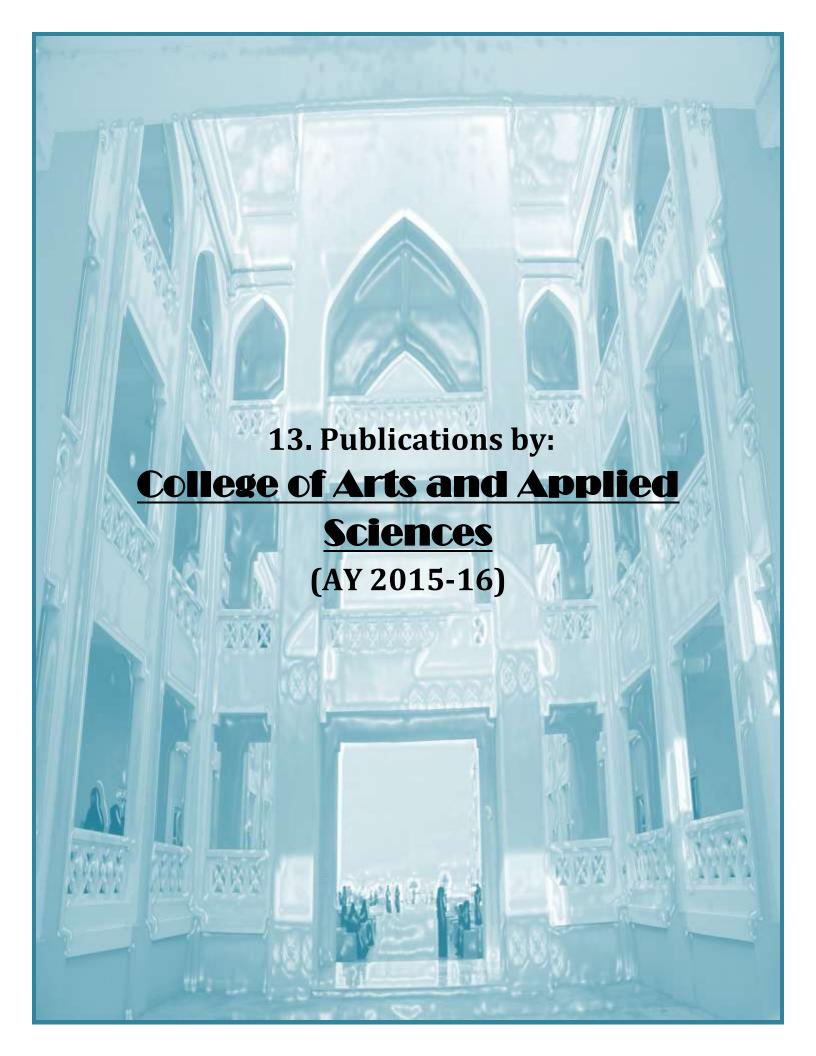
- 1. Three eminent keynote speakers were invited.
- 2. Eighteen Presentations were conducted.
- 3. Stands organized to showcase the ECO house.

Themes

- 1. Wind Energy.
- 2. Solar Energy.
- 3. Thermal Energy
- 4. Hydrogen Energy.
- 5. Petroleum Production.
- 6. Enhanced Oil Recovery.
- 7. Advanced Energy Applications.
- 8. Energy issue in Eco-House.

12. Annual Research Report

The DR along with the URB prepared the 8th annual Research report for AY 2015-16.



13.1 Department of Computer Sciences

Refereed Journal Papers:

Chaudhry JA., <u>Chaudhry, S. A.,</u> Rittenhouse, R., "Phishing attacks and defenses", International Journal of Security and Its Applications, Vol no. 10, Issue 1, pp: 247-256, 2016.

<u>Chaudhry, S. A.</u>, "On the need of source address for route-error delivery in 6LoWPAN", Journal of Computer Science, Vol no. 11, Issue 8, pp: 902-914, 2015.

Conference Papers:

Boulekrouche, B., <u>Haddad, H., Jabeur, N.</u>, and Alimazighi, Z., "Integrating multiple geometric representations within spatial data warehouse structures for enhanced collaborative decision-making processes", International workshop on Mobile Spatial Information Systems 2015 (MSIS 2015), Belfort, France, 17-20 Aug, 2015.

<u>Bouyahia, Z.,</u> "Stability of probabilistic scheduling problems with precedence constraints and weighted completion time objective", Multidisciplinary International Scheduling conference: Theory and Applications MISTA 2015, Prague, Czech Republic, 25-28 Aug, 2015.

Chaudhry, JA., <u>Chaudhry, S. A.,</u> "Secure calls and caller id spoofing countermeasures towards building a cyber-smart societies," International conference on Recent Advances in Computer Systems (RACS 2015), Hail, Saudi Arabia, 30 Nov – 1 Dec, 2015 (doi:10.2991/racs-15.2016.29).

Chaudhry, JA., <u>Chaudhry S. A.</u>, Rittenhouse, R., "Phishing: classification and countermeasures," Mulgrab 2015, Jeju, Korea, 25-27 Nov, 2015.

<u>Jabeur, N., Haddad, H.,</u> "Towards intelligent Web of Things", Conference on Recent Advances in Computer Systems (RACS 2015), Hail, KSA, 30 Nov – 1 Dec, 2015.

Yahyaoui, H., <u>Dekdouk, A. E. K.</u>, Krichen, S., "A DSS based on genetic algorithm for solving the hydrogen transportation problem", IEEE International Conference on Control, Decision and Information Technologies, San Julian's, Malta, 6 – 8 Apr, 2016.

Yahyaoui, H., <u>Dekdouk, A. E. K.</u>, Krichen, S., "A hybrid VNS based framework for biomass transportation", 17th IEEE/ACIS International Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing, Shanghai, China, 30th May – 1st Jun, 2016.

Member Editorial Board:

Chaudhry, S. A., Member editorial board, Ubiquitous Computing and Communication Journal.

Externally Funded Research:

<u>Chaudhry, S. A., Haddad, H.,</u> "Intelligent monitoring systems for cooperating objects using 6LowPAN", Approved by TRC, 2016.

The aim of this project is the design of large-scale and interoperable architecture of heterogeneous networks and applications for intelligent monitoring systems using 6LowPAN as the core sensing and communication protocol. There are numerous applications that might be considered during this project:

- 1) Smart Homes (or TRC's Eco homes)
- 2) Environment Monitoring
- 3) Monitoring of movement near important buildings
- 4) Healthcare monitoring
- 5) Multi-robot surveillance systems, etc.

The expected output of this project is a complete prototype for one of the above mentioned possible applications. In addition, the findings and conclusions from the project can be used to:

- Experience the universal reachability of 6LoWPANs both in terms of connectivity and serviceability
- Visualize and forecast newer intelligent applications that 6LoWPANs can
- Render and are useful to Oman and the rest of the world, and
- Suggest extensions to the scope and context of 6LoWPAN chartering activity, if any,
- Demonstrate the deployment of a real-world large-scale application using cyber-physical devices (e.g. sensor nodes, RFID chips, etc., which has been known as very challenging.

<u>Dekdouk, A. E. K., Biju, S.,</u> Touzen, A., <u>Chaudhry, S. A.,</u> "Toward future smart Dhofar power grid: advanced distribution management and meter data analytics", Approved by TRC, 2015

In this project, followings issues will be addressed:

- 1) The integration of a geographic information system (GIS) component in our smart power grid that is part of the work and asset information system (WAMS). The GIS provides information with visualization capabilities to many assets of the power grid. It consists of developing a geographic information system that describes and visualizes the different grid assets such as the electric high/low voltage power lines, power stations and the large number of transformers.
- 2) The development of an outage management system (OMS) integrating intelligent techniques to forecast power consumption and predict power outages in order to enhance the self-healing mechanism of the smart power grid. This system will be combined with the new DMS challenges like the integration of renewable energies and the concept of microgrids to deal with what we call advanced outage management system (AOMS) or more frequently advanced distribution management system (ADMS).
- 3) The development of a mobile workforce management system (MWMS). The client-side application should be deployed on smart handheld devices, facilitating thus the real-time intervention and maintenance operations carried out by the mobile workforce agents. This mobile application uses particularly services offered by the GIS component.

4) Last but not the least, in this project we are also interested in integrating the big data technology as an efficient means to collect and analyze the huge data received from the large number of the deployed smart meters in the smart power grid. This task consists in developing a meter data management system (MDMS) and also a customer information system (CIS). The MDMS and CIS use big data analytics techniques that permit to analyze the behavior of any customer in terms of his power consumption and hence the system can help to serve more efficiently the customers and establish a demand response energy policy.

<u>Hussain. N., Madanan, M.,</u> "Online package for distance teaching of English for speakers of other languages in Oman", Submitted to TRC, 2015.

The objectives of the project are:

- To customize and enhance a prototype of an accessible distance enhanced package for the teaching of English for speakers of other languages, which can be delivered from Dhofar University in Oman or Massey University New Zealand, to students and staff at universities in Oman.
- To develop a mobile version of the learning package that can run on smartphones.
- To establish collaboration with Massey University, with view to gaining access to Massey's expertise, especially in relation to encouraging short courses or post-graduate study in New Zealand.

<u>Mirzal. A., Chaudhry, SA.,</u> "Development of cancer detection and classification methods using microarray gene expression and medical imaging data", Submitted to TRC, 2015.

Cancer is a major health problem in Oman. It is reported that cancer incidence in Oman is the second highest after Saudi Arabia among Gulf Cooperation Council states. Based on GLOBOCAN estimates, Oman is predicted to face almost two-fold increase in cancer incidence in the period 2008-2020. However, cancer research in Oman is still in infancy. This is due to the fact that medical institutions and infrastructure that play central role in data collection and analysis are relatively new developments in Oman. We believe Oman requires organized plan and efforts to promote local cancer research.

In this proposal, we intend to develop novel cancer detection and classification methods by using microarray gene expression and medical imaging data to improve reliability in cancer detection and classification. This proposal considers using two types of datasets because of their complementary characteristics and functionalities in assisting the detection and classification tasks. We will utilize Support Vector Machine (SVM) and Artificial Neural Network (ANN) for classification purposes. Because it is also possible to devise hybrid methods for improving the classification performance of SVM and ANN, we will also explore the possibility to combine some classifiers based on SVM and ANN. We plan to initiate our research on early detection and classification of breast cancers because breast cancer in Oman presents at younger age with more aggressive phenotype. An early detection of breast cancer shall provide many benefits to women in their productive ages. Our project is unique in its nature because we plan to pioneer the research to evaluate the effectiveness of computer-aided detection and diagnosis to assist radiologists in detecting the abnormal lesion from mammographic images in Oman in the long run.

13.2 Department of Education

Books:

Al Said, M. S., Abdelwahab, F.M., <u>Elsayed, A. M.,</u> "Special education programs and curricula between thought, application and development", Alain: House Book, 2016.

Elsayed, A. M., "General teaching method and strategies (from Traditional Learning to Active Learning)", Alain: House Book, 2016.

Refereed Journal Papers:

Bakhiet, S., <u>Abdelrasheed, N.,</u> Lynn, R. & Essa, Y., "A study of the colored progressive matrices in Kuwait", Mankind Quarterly, Vol. no. 56, Issue 2, pp: 167 – 161, 2015.

<u>Elsayed, A. M.</u>, Balhaf, M. E., <u>Sabtan, Y. M.</u>, "Job performance assessment for school activity teachers from the viewpoints of school principals in Dhofar Governorate", International Journal of Humanities and Cultural Studies, Vol no. 2, Issue 4, pp:563-585, 2016.

Elsayed, A. M., "Effectiveness of using elaboration theory in teaching mathematics to develop academic achievement and critical thinking for primary students in Oman", International Journal of Humanities and Cultural Studies, Vol no. 2, Issue 3, pp: 851-865, 2015.

Elsayed, A. M., "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 no. 47, Issue 2, pp: 183-195, 2015.

<u>Elsayed, A. M.</u>, Al-Amry, T.A., "The availability of procedural research skills of the senior teachers at elementary schools in the province of Dhofar- Oman", Journal of Education College, Benha University, Vol no. 26, Issue 103, pp: 139-162, 2015.

Essa, Y., <u>Abdelrasheed, N.</u>, Bakhiet, S., Cheng, H. & Lynn, R., "Sex differences in the intelligence of students at an Egyptian University", Journal of personality and individual differences, 2016.

Member Editorial Board:

Elsayed, A. M., International Conference on Global Environment.

Elsayed, A. M., Universal Journal of Educational Research.

Elsayed, A. M., Journal of Mathematics Education.

Elsayed, A. M., Journal of College of Education, Benha University.

13.3 Department of Languages and Translation

Book Chapters:

Al. Mahrooqi, R., Coombe, C., Al-Maamari, F. and <u>Thakur, V. S.</u>, "Revisiting EFL assessment: Critical perspectives", Springer, UK, 2016.

Refereed Journal Papers:

<u>Abuiyada, R., Salithamby, R.,</u> and <u>Eteiwi, A.,</u> "The effect of internet usage on relations between members of the Omani family in the Dhofar region", Asian Social Science, Vol. no. 12, Issue 4, pp: 131-137, 2016.

<u>Al-Abdullah, M.,</u> "Rhythms of the chorus and choral odes in Oedipus Rex", Imperial Journal of Interdisciplinary Research (IJIR), Vol. no. 2, Issue 5, pp: 841-50, 2016.

<u>Al-Saqqaf, A.H.</u> and Al Busaidi, S., "English spelling errors made by Arabic speaking students, English Language Teaching, Vol. no. 8, Issue 7, pp: 181-199, 2015.

<u>Rauff, S.A.</u>, "Ethno religious nationalism and the crisis of Muslim leadership", Colombo Telegraph, Retrieved from https://www.colombotelegraph.com/index.php/ethnoreligious-nationalism-the-crisis-of-muslim-leadership/, 2016.

Rauff, S. A., "Some observation on Srisena-led good governance after year one", Jaffna Muslim, Retrieved from http://www.jaffnamuslim.com/2016/01/some-observations-on-sirisena-led-good.html, 2016.

<u>Rauff, S.A.,</u> "Electoral success of AKP in Turkey: The re-emerging of political Islam in Europe" Jaffna Muslim, Retrieved from http://www.jaffnamuslim.com/2015/11/electoral-success-of-akp-in-turkey-re.html, 2015.

Thakur, V. S., "Planning and writing a stylistic essay: Pedagogical perspectives on social aspects of language use and the ground rules of how we process language in interpersonal communication", European Journal of Social Sciences, Vol. no. 49, Issue 4, pp: 511-523, 2015.

Thakur, V. S., "Using supplementary materials in the teaching of English: Pedagogic scope and applications", English Language Teaching, Vol. no. 8, Issue 12, pp: 1-6, 2015.

Conference Papers:

<u>Abuiyada, R., & Rauff, S.A.,</u> "Impact of modern technology on traditional nature and structure of families in Oman", Seoul International Conference on Social Sciences and Management, 5-7 January, 2016.

Khan, K., <u>Saeed, M.A.</u>, "The impact of mixed gender classes on academic achievement", Oman 16th International ELT Conference 2016, Muscat, Oman, 21 -22 April, 2016.

<u>Thakur, V. S.,</u> "Promoting critical thinking as a social practice: Shaping students' voice, agency and inter-subjectivity in a cohesive framework", Third International Conference of English Scholars Beyond Borders on Crossing Borders in English Teaching: Publishing and Academic Study, Taichung, Taiwan, 19-22 May, 2016.

Member Editorial Board:

Al-Saggaf, A. H., Editorial board member, The Arabic Dialects of Aden, Hadramout and Salalah.

<u>Al-Saqqaf, A. H.,</u> Editorial board member, *Wortatlas der arabischenDialekte (Word Atlas of Arabic Dialects, WAD)*.

Al-Saggaf, A. H., Editorial board member, International Journal of Language and Linguistics.

Rauff, S. A., Editorial board member, Review of European Studies.

Thakur, V. S., Editorial board member, Journal of English as an International Language.

Thakur, V. S., Editorial board member, The Asia TEFL Journal.

<u>Thakur, V. S.,</u> Editorial board member, International Journal for the Scholarship of Teaching and Learning.

Externally Funded Research:

Al Mahrooqi, R., Mehta, S., Al-Aghabri, K., <u>Thakur, V. S., "</u>Investigating critical thinking strategies integrated in cycle 2 and post-basic education in English Language Teaching in Oman", Approved by TRC, 2015.

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.

13.4 Department of Law

Refereed Journal Papers:

د محمد أحمد الزين – ديسمبر 2015-القرائن وحجيتها في الإثبات –مجلة مجمع الفقه الإسلامي –جمهورية السودان العدد التاسع -الصفحات303 –344.

د محمد أحمد الزين - ديسمبر 2015 - الإحتيال - مجلة العدل - وزارة العدل - جمهورية السودان - العدد الخامس والأربعون- الصفحات 215-250.

13.5 Department of Mathematics and Sciences

Books:

Khan, S. A., "International year of light and light-based technologies", LAP LAMBERT Academic Publishing, Germany, 2015.

Khan, S. A., "Introductory physics laboratory manual", LAP LAMBERT Academic Publishing, Germany, 2015.

Book Chapters:

<u>Khan, S. A.</u>, "Chapter-1 in advances in photonics engineering, International year of light and history of optics, Nano photonics and Bio photonics, Nova Science Publishers, New York, USA, 2016.

Refereed Journal Papers:

<u>Abdelkarim, R., Abuiyada, R., and Ali Siddiqui, S.,</u> "Undergraduate students' attitude towards Mathematics after peer teaching experience", Global Journal of Pure and Applied Mathematics, Vol. no. 12, Issue 2, pp:1501-1517, 2016.

<u>Abdelkarim, R., and Abuiyada, R.,</u> "The effect of peer teaching on Mathematics academic achievement of the undergraduate students in Oman, International Education Studies, Vol. no. 9, Issue 5, pp: 124-132, 2016.

<u>Ali Siddiqui, S.</u>, Andrabi, S., Alam, M., and <u>Abdelkarim, R.,</u> "Concomitants of order statistics of a new Bivariate Finite Range Distribution (NBFRD)", Global Journal of Pure and Applied Mathematics, Vol. no. 12, issue 2, pp: 1691-1697, 2016.

Al Khaldi, A. H., Hussain, I., and <u>Gondal, M. A.</u>, "A novel design for the construction of safe S-Boxes based on TDERC sequence", Alexandria Engineering Journal, Vol. no. 54, Issue 1, pp: 65-69, 2015.

Alsayyed, O., <u>Jaradat, H. M.,</u> Jaradat, M. M. M., Mustaf, Z., and Shatat, F., "Multi-soliton solutions of the BBM equation arisen in shallow water", Journal of Nonlinear Sciences and Applications, Vol. no. 9, Issue 4, pp: 1807-1814, 2016.

Alsayyed, O., Shatat, F., and <u>Jaradat, H. M.,</u> "A new N-soliton solution for a generalized mKdV equation with variable coefficients", The Journal Advanced Studies in Theoretical Physics, Vol. no. 10, Issue 1, pp: 45-56, 2016.

Alomari, A.K., <u>Awawdeh, F.</u>, Abbasbandy, S., Alsayyed, O., and Bani A. F., "Analysis of steady three-dimensional hydromagnetic stagnation point flow towards a stretching sheet with heat generation", Italian Journal of Pure and Applied Mathematics, Vol. no. 36, pp: 1-16, 2015.

Alquran, M., Al-Shara', S., <u>Jaradat, H. M.</u>, and <u>Awawdeh, F.</u>, "A new simplified bilinear method for the N-soliton solutions for a generalized FmKdV equation with variable coefficients", International Journal of Nonlinear Sciences and Numerical Simulation, Vol. no. 16, Issue 6, pp: 259-269, 2015.

Dar, R. A., <u>Naikoo, G. A., Hassan, I. U.</u>, and Shaikh, A. M. H., "Electrochemical behavior of kaempferol and its determination in presence of quercetin employing multi-walled carbon nanotube modified carbon paste electrode", Analytical Chemistry Research, Vol. no. 7, pp:1-8, 2016.

<u>Gondal, M. A.</u>, & Hussain, I., "An image encryption scheme based on nonlinear chaotic algorithm and substitution box transformation", Applied Mathematics & Information Sciences, Vol. no. 9, Issue 6, pp: 2991-2995, 2015.

<u>Horchani, R.,</u> "Asymmetric transport of light in linearly arrayed metallic nano-chain", European Physical Journal Plus, Vol. no. 131, Issue 2, pp:1-8, 2016.

<u>Horchani, R.,</u> "Laser cooling of internal degrees of freedom of molecules, Frontiers of Physics, Vol. no. 11, Issue 4, pp: 1-18, 2016.

<u>Horchani, R.</u>, "Femtosecond laser shaping with digital light processing", Optical and Quantum Electronics, Vol. no. 47, Issue 8, pp: 0306-8919, 2015.

Hussain, I., Al Qahtani, A., and <u>Gondal, M. A.</u>, "An efficient method for secure communication of biometric information based on chaos", 3D Research, Vol. no. 6, Issue 2, pp: 1-7, 2015.

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Awawdeh, F., Arab Network of Applied and Computational Mathematicians ANACM.

Rehman, L., International Journal of Information Technology and Electrical Engineering.

Rehman, I., International Journal of Algebra and Statistics.

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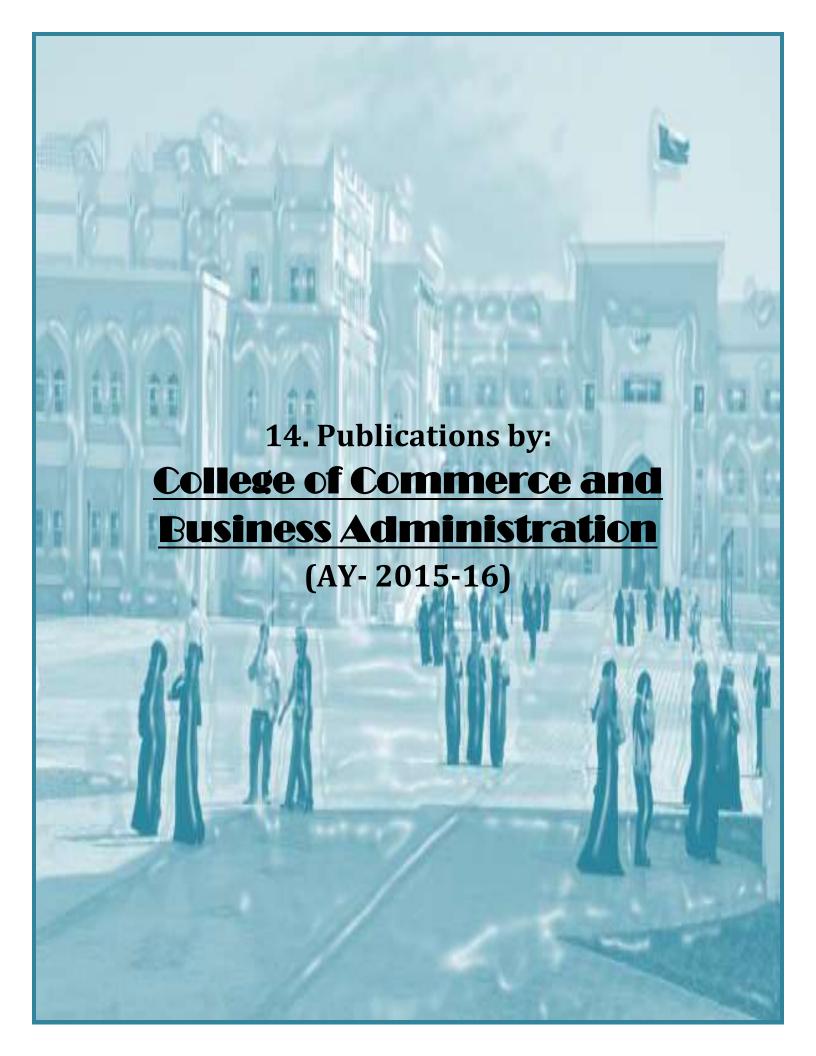
Externally Funded Research:

<u>Naikoo, G. A.,</u> Sammar, A., Qahoor, N. M., "Nanoporous materials for the development of energy efficient hybrid supercapacitors", Submitted to TRC.

The investigation of novel, low-cost, environmentally-friendly and high-performance energy storage systems switch on the key to the success of a future energy-efficient and energy sustainable economy. So, incorporating new pseudocapacitance materials and designing materials with nanoscale hierarchical structures are expected to enable high energy density supercapacitors while maintaining high power operation. The macro/meso-structured porous metal oxide monoliths combined with carbonaceous materials (GN, CNTs etc.) will give advantages of both the pseudocapacitance and electrical double layer formation due to the presence of pores. Thus, our versatile platform design will open the door to new synthetic opportunities for electrical energy storage systems. The exploitation of pseudocapacitive effects to enhance double-layer capacitance seems to be a prevalent goal amongst current researchers, and offers a good chance of developing the next generation of high power, high-energy supercapacitors.

<u>Horchani R., Abo-Hassan, K., Hassan, I. U.,</u> "Sources of cold molecules for parity violation (CMPV)", Submitted to TRC.

The potential for molecules to improve on atomic precision measurements, owing to their rich electronic, vibrational, rotational and hyperfine structure is becoming increasingly apparent. Molecules are now being (or have recently been) used to test fundamental symmetries, to test the summarization postulate of quantum mechanics, to measure either absolute values of fundamental constants, or to measure their variation in time. This requires advanced manipulation techniques already standard in atomic physics, such as the ability to address individual hyperfine states despite the presence of complex spin structure, and the ability to improve particle detection rates and coherence times by cooling both internal and external degrees of freedom.



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<u>Bilal, Z., & Hammami, S.,</u> "Assessing the role of Salalah port in supporting SMEs in Oman", The first workshop on Entrepreneurship and Innovative Business Architecture, Salalah, Oman, 6-7 May, 2015.

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Member Editorial Board:

Shariq, M., International Journal of Innovative Research in Engineering & Management.

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Externally Funded Research:

Zaibet, I., Hussein, M. A., "Over-grazing in the Dhofar Mountain Chain: A Major Sustainability Challenge, A Focus on Stakeholders' Perceptions", Approved by TRC.

The sustainable development challenges of the Dhofar Mountain Region have certainly received special attention from the Government and many other national and international entities. National efforts which include publications, symposiums, workshops, academic research etc. have been directed towards the identification of the magnitude of the problem of desertification as a whole, suggesting options for solutions, development of action plans and strategies to particularly address the issue of desertification, its drivers, impacts and mitigation strategies.

This concept note provides a general background and outline of the proposed scoping study that will address the sustainability challenges of the Dhofar Mountains, with a focus on the issue of overgrazing and its impacts, according to stakeholders' perceptions, addressed within the wider unique socioeconomic context of the region. The main objective of this study is to use an integrated approach considering livestock i.e. cows, camels and goats.

14.2 Department of Management & Marketing

Books

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<u>Ahmed F.,</u> "Foreign Policy of India: West Asia and North Africa (WANA)", ISBN: 978-81-770-8406-1http://www.amazon.es/Foreign-Policy-India-North-Africa/dp/8177084062, 2016.

<u>Pauceanu, A. M.,</u> "Competitive Entrepreneurship development in business technological parks and incubators in Romania" in Romanian Language (Title in Romanian: DEZVOLTAREA ANTREPRENORIALĂ COMPETITIVĂ ÎN PARCURILE TEHNOLOGICE ȘI INCUBATOARELE DE AFACERI DIN ROMÂNIA), **Publisher: DACOROMANA TDC,** Bucharest, Romania, **ISBN 978-606-601-113-6**, September 2015.

Book Chapters:

AbdulRashid, M. & <u>Hasan, M. H.</u>, "Financing of micro and small enterprises in Garo Hills of Meghalaya", Financing Priority Sector in India: Scenario, Setback and Solution, First Edition, 2015.

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<u>Allil, K., & Khan, M.,</u> "Factors affecting adoption of mobile services", Asia International conference on Future of Marketing and Management (FMM), Kuala Lumpur, Malaysia, 5-6 December, 2015.

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<u>Pauceanu, A. M.,</u> "Business performance management – an innovative approach", 7th Lumen International Conference, Targoviste, Romania, 17-19 November 2015.

<u>Sanyal, S., & Hisam M. W.,</u> "Impact of Innovations on the Performance and Profitability of SMEs-A Study of Sultanate of Oman", International Conference on Emerging Strides in Innovations and Skill Development: A Sustainable Perspective, Varanasi, India, February, 2016.

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Ahmed, J.U. and <u>Hasan, H.,</u> "A study on identification of key barriers to e-commerce in Syria", Journal of Supply Chain Management Systems, Vol. no. 5, Issue 1, pp: 14-26, 2016.

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<u>Mahmoud, A.</u>, & Khalifa, B., "A Confirmatory Factor Analysis for SERVPERF Instrument based on a Sample of Students from Syrian Universities", Education & Training, Vol. no. 57, Issue 3, pp: 343 – 359, 2015.

<u>Mahmoud, A.,</u> & Riesel, W., "Exploring personal experience of wartime crisis effects on job insecurity in Syria, Psychology of Human Resources Journal, Vol. no. 13, Issue 2, pp: 245-256, 2015.

Mahmoud, A., "E-mail advertising in Syria: Assessing beliefs, attitudes, and behaviors", Journal of Promotion Management, Vol. no. 21, Issue 6, pp: 649–665, 2015.

<u>Mohammed, S., Uddin, M. A. & Ahmad, M.,</u> "Factors affecting entrepreneur's development in Oman", Corporate Ownership and Control, Vol. no. 13, pp: 66-70, 2016.

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<u>Pauceanu, A. M.,</u> "Foreign investment promotion analysis in Sultanate of Oman: the case of Dhofar Governorate", International Journal of Economics and Financial Issues, Vol. no. 6, Issue 2, pp: 392-401, 2016.

<u>Pauceanu, A. M.,</u> "Leadership through spiritual wisdom – the case of Romania", Journal Purushartha, Vol. no. VIII, Issue 2, pp: 44-49, 2016.

<u>Pauceanu, A. M.,</u> Hammouri, S. M., "Strategic energy management in Sultanate of Oman", Montenegrin Journal of Economics, Vol. no. 12, Issue 1, pp: 95 – 105, 2016.

<u>Pauceanu, A. M., Sanyal, S., & Hisam, M. W.</u>, "Variables affecting employee satisfaction—Evidence from Sultanate of Oman", International Journal of Applied Business and Economic Research, Vol. no. 14, Issue 1, 2016.

<u>Pauceanu, A.M., Hisam, M.W.,</u> "ABC method contribution to business performance", International Journal of Applied Business and Economic Research, Vol. no. 14, Issue 1, pp: 511 – 520, 2016.

<u>Sanyal, S., & Hisam, M.W.</u>, "An Analysis of the Impact of Service Quality and Passenger Satisfaction on Passenger Preferences for Airlines: A Study of the Indian Aviation Sector". International Review of Management and Marketing, Vol. no. 6, Issue 2, pp: 354-357, 2016.

<u>Sanyal, S., Hisam, M.W. & Ahmed, M.,</u> "Customer satisfaction on e - banking services in public and private sector banks - a comparative analysis in Dhofar region of Sultanate of Oman ". International Journal of Economic Research, Vol. no. 12, Issue 5, pp: 1969-1979, 2016.

Member Editorial Board:

Imran, R., Business Management Dynamics.

Imran, R., International Journal of Management and Administrative Sciences.

<u>Sanyal, S.,</u> Vikas Vimarsh.

Sanyal, S., Amity Journal of Entrepreneurship.

14.3 Department of Management Information Systems

Refereed Journal Papers:

<u>Alraja, M., & Aref, M.</u> "Customer acceptance of e-commerce: integrating perceived risk with TAM", International Journal of Applied Business and Economic Research, Vol. no. 13, Issue 2, pp: 913-921, 2015.

<u>Alraja, M.,</u> & Chikhi, B., "Perceived factors affecting customers' attitudes toward electronic shopping: An empirical study", International Journal of Economic Research, Vol. no. *12, Issue* 3, pp: 815-823, 2015.

<u>Alraja, M.,</u> & Malkawi, N. M., "E-Business adoption in banking sector: Empirical study", Indian Journal of Science and Technology, Vol. no. 8, Issue 27, pp: 19-25, 2015.

<u>Alraja, M.,</u> "User acceptance of Information Technology: A field study of an E-mail system adoption from the individual students' perspective", Mediterranean Journal of Social Sciences, Vol. no. 6, Issue 6, pp: 1-5, 2015.

<u>Alraja, M., Hammami, S., & Alhousary, T.</u> "Factors affecting e-government services adoption: Field study", Journal of Theoretical and Applied Information Technology, Vol. no. 78, Issue 1, pp: 65-69, 2015.

<u>Aref, M., & Alraja, M., "Data mining approach to assess condition of rotating machine using sound signal"</u>, Journal of Theoretical and Applied Information Technology, Vol. no. 80, Issue 1, pp: 173-178, 2015.

Ben Brahim, A. & Limam, M., "Sequential instance based feature subset selection for high dimensional data, MIKE 2015, LNCS, Vol. no. 9468, pp: 37-46, 2016.

Ben Brahim, A., & <u>Limam, M.</u>, "A hybrid feature selection method based on instance learning and cooperative subset search", Pattern Recognition letters, Vol. no. 69, Issue 1, pp: 28-34, 2016.

Ben Mzoughia, M., & Limam, M., "CLV model selection for segmentation perspective", Chapter: Business Challenges in the Challenging Economic Landscape, Vol. no. 2, of the series: Eurasian Studies in Business and Economics pp. 257-266, 2016.

Ben N'cir, H., Essoussi, N., & <u>Limam, M.,</u> "Kernel based methods to identify overlapping clusters with linear and nonlinear boundaries", Journal of Classification, Vol. no. 32, Issue 2, pp: 176-211, 2015.

Dridi, A., Ghourabi, M., & <u>Limam, M.</u>, "On reverse stress testing for worst case scenarios: an application to credit risk modelling of Tunisian economic sectors", International Journal of Economic Sciences, Vol. no. 4, Issue 2, pp: 40-56, 2015.

Gani, W., & <u>Limam, M.,</u> "A kernel distance based representative subset selection", Journal of Statistical Computation and Simulation, Vol. no. 86, Issue 1, pp: 135-148, 2016.

Ghourabi, M., Dridi A., & <u>Limam, M.,</u> "A new financial stress index model based on Support Vector Regression and control chart", Journal of Applied Statistics, Vol. no. 42, Issue 4, pp: 775-788, 2015.

Hachmi, F., & <u>Limam, M.</u>, "An improved intrusion detection system based on two stage alert alarm correlation to identify outliers and false alerts", Mike 2015, LNCS, Vol. no. 9468, pp: 130-139, 2016.

Hachmi, F., Boujenfa, K., & <u>Limam, M.,</u> "An optimization process to identify outliers generated by intrusion detection systems", Security and Communication Networks, Vol. no. 8, Issue 18, pp: 3469-3480, 2015.

<u>Hammami, S., Kasem, S., & Alhousary, T.,</u> "BA as an enabler of knowledge creation in E-learning environment", International Journal of Applied Business and Economic Research, Vol. no. 13, Issue 4, pp:1619-1628, 2015.

<u>Kasem, S., Hammami, S., & Alhousary, T.,</u> "Applying SECI model to encourage knowledge creation in E-learning environment", Vol. no. 12, Issue 4(Part I), pp: 1601-1611, 2015.

<u>Kasem, S., Hammami, S., & Alraja, M.,</u> "Elearning environment as a facilitator for knowledge creation using SECI model in the context of BA", Journal of Theoretical and Applied Information Technology, Vol. no. *80*, Issue 2, pp: 372-380, 2015.

Khanchouch, I., Charrad, M., & <u>Limam, M.,</u> "An improved Multi-SOM algorithm for determining the optimal number of clusters", Springer: Studies in Computational Intelligence 614, Computer and Information Science, pp. 189-202, 2015.

Telmoudi, F., El Ghourabi, M., & Limam, M., "On conditional risk estimation considering model risk", Journal of Applied Statistics, DOI: 10.1080/02664763.2015.1100595.

<u>Xanthidis</u>, <u>D.</u>, <u>Yousoof</u>, <u>M.</u>, Koutzampasopoulou, O., "ICT and the people with dementia", Journal of Theorotical and Applied Information Technology, Vol. no. 86, Issue 1, pp: 78-86, 2016.

<u>Xanthidis</u>, <u>D.</u>, Alali, A., "An exploratory study of the profile of the Saudi user of social media, Journal of Theoretical and Applied Information Technology, Vol. no. 85, Issue 1, pp: 40-49, 2016.

<u>Yousoof, M.,</u> Sapiyan, M., "Customized pedagogy in learning programming - proposed model", Journal of Theorotical and Applied Information Technology, Vol. no. 85, Issue 3, pp: 809-820, 2016.

Conference Papers:

Hammami, S., Kasem, S., & Al Housary, T., "BA as an Enabler of Knowledge Creation in eLearning Environment", 7th International Conference on Economics and Social Sciences, Penang, Malaysia, May 16-17, 2015.

Alraja, M., & Aref, M., "Customer acceptance of e-commerce: integrating perceived risk with ATM", 8th International Conference on Education and Information Management, Penang, Malaysia, 16-17 May, 2015.

Member Editorial Board:

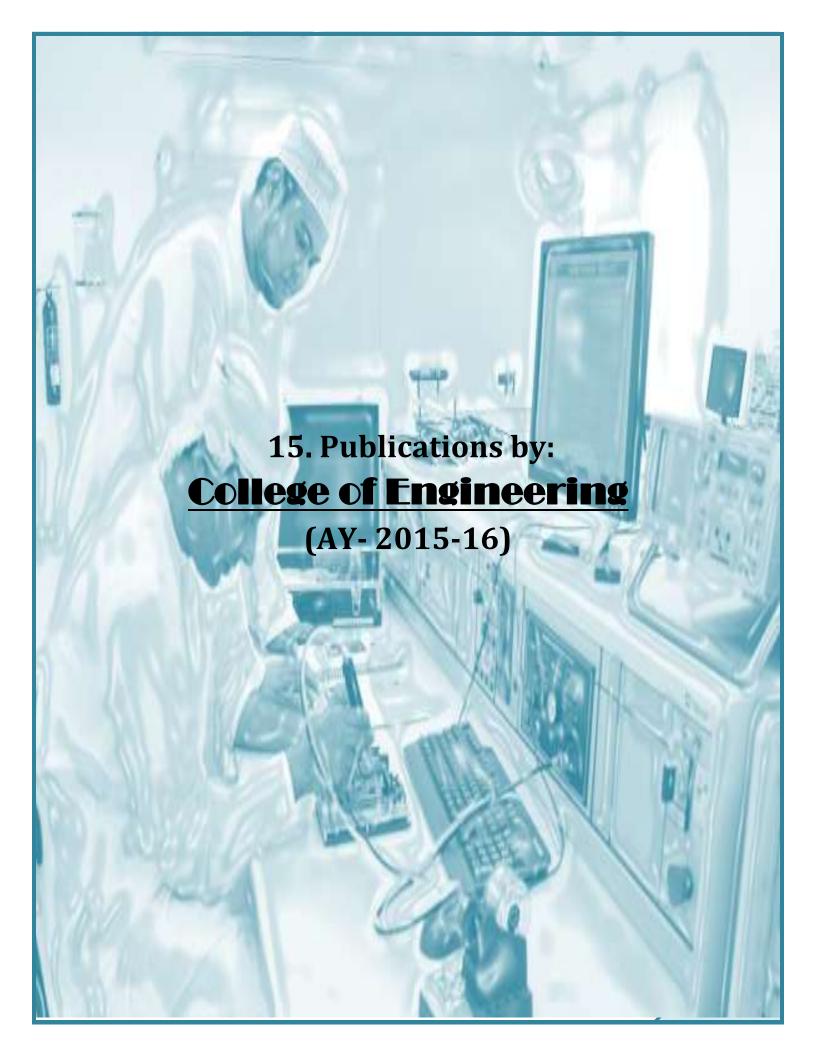
Aref, M., World Journal of Advanced Engineering and Technology.

Alraja, M., Amity Journal of Management Research.

Externally Funded Research:

<u>Kashoob, M., Kashoob, N., Alraja, M.,</u> "Intention to adopt electronic purchasing: online shopping for books in Sultanate of Oman." Approved by TRC-FURAP Call 3 Project.

The project strives to identify the critical factors that may help people in Oman about how to get books they need easily. So, the main objective is to study The Omanis intention to adopt electronic purchasing. Also, we need to know if they will accept electronic purchasing and if they will use this way of purchasing to purchase books through electronic way. In our region, there is no business do the same. Then, working on this project will provide new service for the community through having strong relationships with many publishers. Also, the project will create new job opportunities for those who are look for. This project is very important because it helps various segments of the community to get any book they need from their homes by using the internet, especially students and instructors. In addition, the most important it will be the first project in our region. Also, the work opportunities that will be created are add value for the economy. This idea will help us to have cultured community.



15.1 Department of Chemical Engineering

Book Chapters:

<u>UI-Islam, M.,</u> Khan, S., Khattak, W.A., Ullah, M.W., Park, J.K., "Synthesis, Chemistry, and Medical Application of Bacterial Cellulose Nanocomposites", Advanced Structured Materials, Springer, India, 2015.

Khattak, W.A., <u>UI-Islam, M.</u>, Ullah, M.W., Khan, S., Park, J.K., "Endogenous hydrolyzing enzymes: Isolation, characterization, and applications in biological processes", Polysaccharides: Bioactivity and Biotechnology, Springer Publishing Agency Switzerland, 2015.

Refereed Journal Papers:

<u>Ibrahim, A. S.</u>, Ali, Y. A. Saad, H. M. and Amur, I. H., "Kinetics and mechanism of bulk polymerization of vinyl chloride in a polymerization reactor", The Journal of Engineering Research (TJER), Vol. no. 12, Issue 2, pp: 41-50, 2015.

<u>Ibrahim, A. S.</u>, Al-Shab A., Al-Ansari, M., Al-Yafai, S., Baomar, F., "Protection of carbon steel against corrosion using Frankincense", Wulfina Journal, Vol. no. 23, Issue 1, 2016.

Kamal, T., Ul-Islam, M., Khan, S. B., Asiri, A. M., "Adsorption and photocatalyst assisted dye removal and bactericidal performance of ZnO/chitosan coating layer", International Journal of Biological Macromolecules, Vol. no. 81, pp: 584–590, 2015.

Khan, S., Ul<u>-Islam, M.,</u> Ikram, M., Subhan, F., Ullah, M. W., Kim, Y., Jang, J. H, Yoon, S. & Park J.K., "Engineered regenerated bacterial cellulose scaffolds for in vitro tissue regeneration applications", RSC Adv., Vol. no. 5, 2015.

Khan, S., <u>Ul-Islam, M.,</u> Khattak, W. A., Ullah, M. W., and Park, J. K., "Synthesis and characterization of a novel bacterial cellulose-poly(3,4-ethylenedioxythiophene)-poly (styrene sulfonate) composite for use in biomedical applications", Cellulose, Vol. no. 22, pp: 2141–2148, 2015.

Shah, N., Claessyns, F., Rimmer, S., Arain, M. B., Rehan, T., <u>Wazwaz, A.</u>, Ahmad, M. W., <u>Ul-Islam</u>, <u>M.</u>, "Effective role of magnetic core-shell nanocomposites in removing organic wastes from water", Recent Pat Nanotechnol, PMID: 27136928, 2016.

<u>UI-Islam, M.</u>, Khan, S., Ullah, M. W., and Park, J. K., "Bacterial cellulose composites: synthetic strategies and multiple applications in bio-medical and electro-conductive fields", Biotechnology Journal, Vol. no. 10, Issue 12, pp: 1847-61, 2015.

Ullah, M. W., Khattak, W. A. <u>Ul-Islam, M.</u>, Khan, S., Park, J. K., "Metabolic engineering of synthetic cell-free systems: Strategies and applications", Biochemical Engineering Journal, Vol. no. 105, pp: 391–405, 2016.

Ullah, M. W., <u>UI-Islam, M.</u> Khan, S., Kim, Y., Jang, J. H., Park, J. K., "In situ synthesis of a biocellulose/titanium dioxide nanocomposite by using a cell-free system", RSC Adv., Vol. no. 6, pp: 22424-22435, 2016.

Ullah, M. W., <u>UI-Islam, M.</u>, Khan, S., Kim, Y., Park, J. K., "Structural and physico-mechanical characterization of bio-cellulose produced by a cell-free system", Carbohydrate polymers, Vol. no.136, pp: 908–916, 2016.

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Ullah, M.W., Khattak, W. A., <u>Ul-Islam, M.</u>, Khan, S., Park, J. K., "Encapsulated yeast cell-free enzyme system: a strategy for cost-effective and sustainable bio-ethanol production in consecutive batches", Biotechnology and Bioprocess Engineering, Vol. no. 20, Issue 3, pp: 561-575, 2015.

Wahid, F., Khan, T., Khan, R., <u>Ul-Islam, M.</u>, "Effects of nickel oxide nanoparticles on visual processes and electro-retinography waves in the bullfrog eye", Journal of The Chemical Society of Pakistan, Vo. no. 38, Issue 1, pp: 56-62, 2016.

Waleed, A. K., <u>Ul-Islam, M.</u>, Ullah, M. W., Khan, S., Khan, T., "Production, characterization and biological features of bacterial cellulose from scum obtained during preparation of sugarcane jaggery (gur)", Journal of Food Science and Technology, pp: 1-7, 2015.

<u>Wazwaz, A.</u>, Al-Salaymeh, A., "Theoretical and measured optical properties of Ni-Al2O3 over Al substrate selective absorber", Sustainable Cities and Society, Vol. no.16, Issue 1, pp:13–23, 2015.

Conference Papers:

<u>Ahmad, M. W.</u>, Arshad, M. W., <u>UI-Islam, M</u>, & Lee, G. H., "Synthesis and characterization of metal oxide nanomaterials for advanced energy applications", ECO' 2015 conference, Salalah, Oman, December 9-10, 2015.

<u>Ibrahim A. S.</u>, Al Buloshi, A., Al Zaabi, S., Al Yafai, L., "Experimental study and mathematical model to removal of multi heavy metal components using bio waste", 11th Chemical Engineering Gathering Engineering, Muscat, Oman, February, 21-24, 2016.

<u>Ibrahim A. S.</u>, Al-Shab, A., Al-Ansari, M., Al-Yafai, S., Baomar, F., "Protection of carbon steel against corrosion using frankincense", 11th Chemical Engineering Gathering Engineering, Muscat, Oman, February, 21-24, 2016.

<u>Ibrahim A. S.</u>, Ali, Y., Saad H., Amur, I., "Kinetics and mechanism of bulk polymerization of vinyl chloride in continuous stirred tank reactor", 2nd International Conference on Desalination using Membrane Technology, Singapore, 26 - 29 July, 2015.

<u>Ibrahim A. S.</u>, Mohammed, G., Mohammed, S., Salim, A., "Catalytic surface reaction of gas phase using fluidized bed for production of polyamide", 22nd Regional Symposium on Chemical Engineering - RSCE, Bangkok, Thailand, September, 24-25, 2015.

<u>UI- Islam, M.,</u> Ullah, M. W.; Khan, S.; Ahmad, M. A.; Arshad, M. W., "Bio-ethanol from waste sources: A renewable energy source", ECO'2015 conference, Salalah, Oman, December 9-10, 2015.

<u>Wazwaz, A.</u>, Al-Rasbi, Z., Al-Harthi, Q., Al-Hosni, T. "Analysis of seawater from different locations in Oman followed by salt production and some generic medical products preparations", 6th National Symposium on Engineering Final Year Projects, Nizwa, Oman., May 4-5, 2016.

<u>Wazwaz, A.</u>, Rajab, E., Al-Shahri, Z., Bait Suwlaim, S., Al-Mashani, A., "Corrosion study for some metal alloys used in houseware tools under different conditions at Dhofar University", 6th National Symposium on Engineering Final Year Projects, Nizwa, Oman, May 4-5, 2016.

<u>Wazwaz, A.</u>, Al-Salaymeh, A., "Analysis of the measured direct solar irradiation with relative humidity and atmospheric temperature at Dhofar University", Global Conference on Renewables and Energy Efficiency for Desert Regions 2016 (GCREEDER-2016), Amman, Jordan, April 4-6, 2016.

<u>Wazwaz, A.,</u> Al-Salaymeh, A., AL-Mashaikhi, L., AL-Fulaiti, S., AlMashani, A., "Solar desalination of seawater using an innovated solar distillator", Global Conference on Renewables and Energy Efficiency for Desert Regions 2016 (GCREEDER-2016), Amman, Jordan, April 4-6, 2016.

<u>Wazwaz, A.</u>, Al-Salaymeh, A., AlMashani, A., "Testing of innovated solar sterilizer on polluted water using solar concentrated parabolic dish collector", Global Conference on Renewables and Energy Efficiency for Desert Regions 2016 (GCREEDER-2016), Amman, Jordan, April 4-6, 2016.

<u>Wazwaz, A.,</u> AlMashani, A., "Solar sterilization of polluted water using solar parabolic dish collector", Salalah, Oman, December 9-10, 2015.

<u>Wazwaz, A.</u>, AlJassasi, A., Albaloushi, A., AlSaifi, A., "removing heavy metals using different types of soils and marble powders in Oman", SBE16 Dubai Conference, Dubai, UAE, 1-3 November, 2015.

<u>Wazwaz, A.</u>, Al Mashaikha, L., Al Flaiti, S., "Solar desalination of seawater using simple technique (Solar Distillator)", 3rd International Congress on Energy Efficiency and Energy Related Materials (ENEFM02015), Turkey, 23-25 October, 2015.

Exhibition

<u>Wazwaz, A.</u>, "Analysis of samples Using SEM", ARABLAB 2016, DUBAI, 20-23 March 2016, International Shows Center, 2016.

15.2 Department of Electrical and Computer Engineering

Refereed Journal Papers:

Al-Azzo, W. F., Ali, B. M., Khatun, S., & <u>Mohammed, T. S.</u>, "Tone reservation based on fourier transformed sequence for PAPR reduction in OFDM Systems", Engineering Letters, Vol. no. 23, Issue 4, pp: 239-244, 2015.

<u>Mamlook, R., et. al,</u> "Advanced genetic traffic intelligent system", International Journal of Electrical and Electronic Science, Vol. no. 2, Issue 3, pp: 57-63, 2015.

<u>Mamlook, R., Khan, O., F.,</u> "Advanced security system using web remote controller", International Journal of Engineering and Advanced Technology (IJEAT), Vol. no. 4, Issue 6, pp: 353-360, 2015.

<u>Mamlook, R., Khan, O., F.,</u> "Web based advanced intelligent systems", International Journal of Electrical and Electronic Science, Vol. no. 2, Issue 3, pp: 95-101, 2015.

<u>Mohammed, T. S.,</u> "Communication and Diagnosis in Distributed Systems: A Proposed Graph Network", Research Journal of Applied Sciences, Vol. no. 10, Issue 9, pp: 497-500, 2015.

<u>Mohammed, T. S., & Ibrahim, A. S.,</u> "Simulation and analysis for activities in image recognition using MATLAB", Computer Science and Information Technology, Vol. no. 3, Issue 1, pp. 22-30, 2015.

<u>Mohammed, T. S.</u>, Al-Khairi, W., K., Al-Jubouri, A. T., Shamas, O. S., "Development and implementation of an automated car parking system", Applied Mechanics and Materials Journal, Vol. no. 789-790, pp: 939-945, 2015.

<u>Mohammed, T.S.</u>, Al-Jobouri, L. A., "A comparative study of construction techniques of t-EC/AUED codes", Science publications, Journal of Computer Science, Vol. no. 11, Issue 2, pp: 403-410, 2015.

<u>UI Hassan, N.</u>, Ejaz, W., Ejaz, N., Seok W., Anapalagan, A., & Minho Jo., "Network selection and channel allocation for spectrum sharing in 5G heterogeneous networks", IEEE Access, Vol. no. 4, pp: 980-992, 2016.

Conference Papers:

<u>Mohammed, T. S.</u>, Sultan, M. I., "Remote-Controlled Microcontroller-Based Temperature Control System: An Economical Design", 6th International Conference on Industrial Engineering and Operations Management (IEOM 2016), Malaysia, Kuala Lumpur, March 8-10, 2016.

<u>Prajoona V.</u>, P. Manimegalai, "Analysis of area delay optimization of improved sparse channel adder", National Conference on Intelligent Systems in Electronic Technologies, India.

Member Editorial Board:

Baig, I., International Journal of Information Technology and Electrical Engineering.

Mamlook, R., Advances in Fuzzy Systems journal.

Mamlook, R., Advances in Robotics & Automation Journal.

<u>Mamlook, R.,</u> Automatic Control of Physiological State and Function Journal.

Mamlook, R., International Journal of Computer Science and Information Technology Research.

Mamlook, R., International Journal of Electrical and Electronics Research.

Mamlook, R., Journal of Bioelectronics and Nanotechnology.

Mohammed, T. S., Computer Science and Information Technology.

Mohammed, T. S., Journal of Computer and Communications.

<u>UlHassan, N.,</u> Annals of Telecommunication [SCI/SCIE], Springer.

<u>UlHassan, N.,</u> IEEE Access [SCI/SCIE].

<u>UlHassan, N.,</u> International Journal of Information Technology and Electrical Engineering (ITEE).

Externally Funded Research:

<u>AlBaloushi, Z., AlBaloushi, N., Kashoob, A., Zghaibeh, M.,</u> "Solar PV power system based street lighting for highways in sultanate of Oman with remote monitoring". Approved by TRC for FURAP call 3.

<u>Haddad, M., Tabook, S., Koofan, M., Mamlook, R., Khan, O.,</u> "Web intelligent home control system". Approved by TRC for FURAP call 3.

<u>Mamlook, R., Zghaibeh, M.,</u> "Implementation of web server for achieving real-time e-service (information) for environment (traffic monitoring and air quality) and provision of information towards improving hospitality and environment (traffic monitoring and air quality) in Salalah". Submitted to TRC.

Providing e-service (information about points of interest, directions and traffic information) to the users in Salalah City comes with real time data centralization and dissemination challenges. Here we consider the duration of 24 hours and 7 days a week throughout the year, collecting and providing data. We consider the technical challenges faced in understanding and processing of user's input format, applying recognition and intelligent methods for retrieving the data while transforming information to knowledge and output to human readable format. We proposed a proper solution for our case study during the whole year and times when human activity on Main

Streets is highest. The major challenges include; a practical system for dissemination of information to the residents and visitors in advance to promote their presence in events; working model of automated public services locator and guidance system at public and authorities disposal; avoidance of traffic congestions by active geo-locating and traffic monitoring methods for street's safety and studying the indicators for effects of vehicle emissions on air pollution. Our solution to be proposed has five aims 1) Addressing the connectivity problem with the available mobile technology and infrastructure 2) Addressing speech recognition problem with the use of open source speech recognition software 3) Making a Fuzzy (simulation of human logic) based Knowledge (expert system) management by organizing knowledge to be propagated with mobile phones 4) Addressing location and traffic conditions related problems with imaging, GPS, Sensors and accompanying Software, and 5) Finding results of a study of air pollution using numerical analysis of archived data gathered on regional traffic from previous case studies and comparing with global data, determining the condition and types of major vehicle models with respect to engine efficiency, fuel consumption and exhaust emissions. Determining the extent of certain factors in generation of pollution in peak seasons and comparing the results with off-peak seasons and throughout the year.

15.3 Department of Graphic Design and Interior Architecture

Refereed Journal Papers:

<u>Cazacova</u>, <u>L</u>., "Sustainable built cultural heritage conservation with cradle to cradle", International Journal of Energy and Environment, Vol. no. 10, pp: 61-69, 2016.

Conference Papers:

<u>Cazacova, L., & Yapicioglu, B.,</u> "Revealing Mirbat's traditional dwelling, proceedings of Euro-American congress, REHABEHG 2016, Burgos, Spain, May 24-27, 2016.

<u>Yapicioglu, B., & Cazacova L.,</u> "Culture embedded in city's architecture; incense burning custom and its effects on modern buildings, features of Salalah, Oman", Proceedings of STACH'16 – 5th International Conference on Sustainable Tourism and Cultural Heritage, Istanbul, Turkey, May 15-17, 2016.

Externally Funded Research:

<u>Cazacova</u>, L., <u>Adam</u>, K., <u>Abbassi</u>, F., <u>Yapicioglu</u>, B., <u>Osmen</u>, W., "Mirbat old town's recognition as a place of National cultural heritage: Identification, assessment and documentation - MNCH'20", Submitted to TRC.

This research project aims to identify and recognize the old area of Mirbat town, which was developed in the beginning of 20th century, as a place of National cultural heritage for its future conservation. Hence, the objectives of the research are: Identification of old town of Mirbat as cultural heritage; Cultural heritage assessment; Develop a conservation policy; and Increase public awareness. The achievement of the project's objectives will result in Mirbat old town documentation, listing it as country's cultural heritage and its branding, which will boast heritage

tourism development and enhance environmental, social, cultural, and economical sustainable growth of the country.

<u>Cazacova, L., Adam, K., Mana, S., Abbassi, F., Yapicioglu, B., Grami, S.,</u> "EHDC2 (Eco-House Second phase)"

Through research and innovation in architecture, environment and renewable energy the competition raises awareness of the possibilities and importance of green building and ecodesign. Higher Education Institutions will compete in designing houses that are innovative in architecture, engineering and inspiration. The designs will incorporate smart technology and may either use new ideas or reinterpret traditional styles.

Exhibition

<u>Eddine, M.,</u> "The small arts exhibition", Ministry of Heritage and Culture of Oman, 9th Session, 06 - 11 October 2015, Muscat.

<u>Osmen, W., "</u>The small arts exhibition", Ministry of Heritage and Culture of Oman, 9th Session, 06 - 11 October 2015, Muscat.

15.4 Department of Mechanical and Mechatronics Engineering Refereed Journal Papers:

Gharbia, Y. A., & <u>Grami, S.,</u> "Towards automatically cleaned parabolic trough collectors", Asian Transaction on Engineering, Vol. no. 5, Issue 6, pp:19-26, 2016.

Gherissi, A., <u>Abbassi, F.</u>, Ammar, A., & Zghal, A., "Numerical and experimental investigations on deep drawing of g1151 carbon fiber woven composites", Applied Composite Materials, pp: 1-16, 2015.

<u>Abbassi F.</u>, Mistou S., Pantale O., & Zghal, A., "FE simulation and full-field strain measurements to evaluate the necking phenomena", Procedia Manufacturing, Vol. no. 2, pp: 500-504, 2015.

Externally Funded Research:

<u>Abbasi, F., Grami, S.,</u> "Natural Fractures Reactivation and its impact on Enhanced Oil Recovery". Approved by TRC. (Ongoing ORG project)

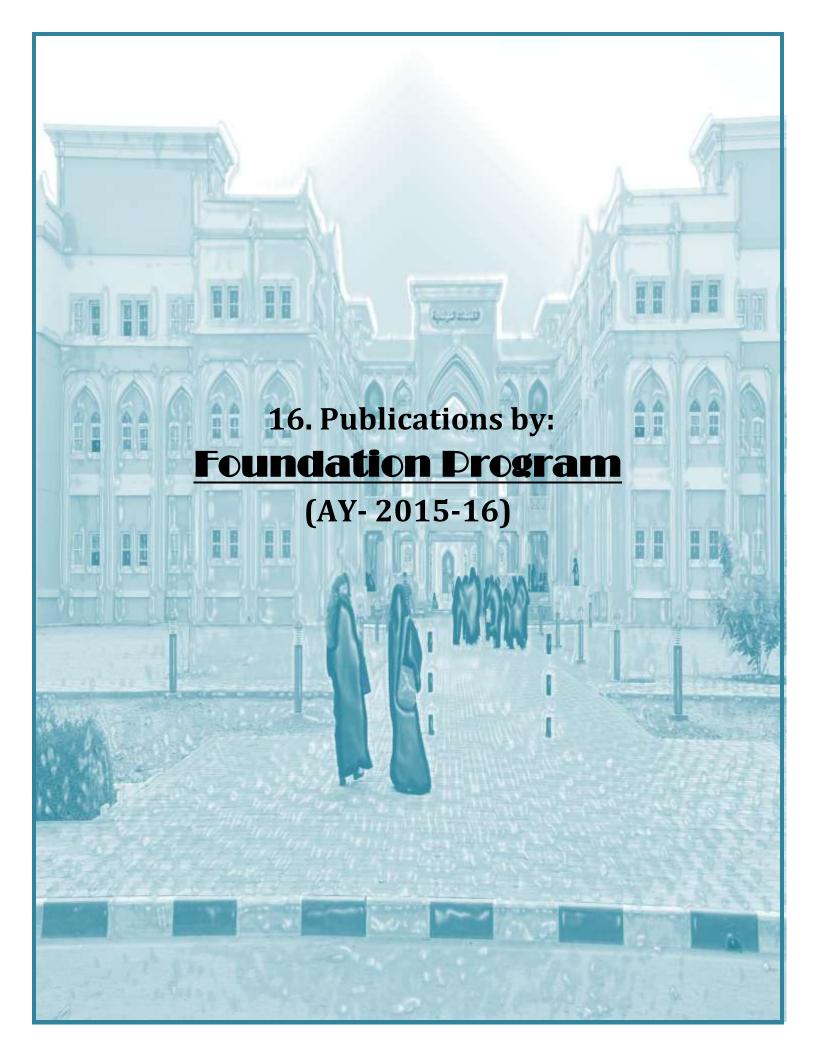
The ever-increasing energy demand and decline in number and size of new oil discoveries have set the stage for advanced research on new technologies including Enhanced Oil Recovery (EOR). This technology, which involves the injection of fluids into hydrocarbon reservoirs to increase its pressure, proved 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 optimize 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.

<u>AlMuqabali, S., AlToobi, M., Abbasi, F.,</u> "Experimental Investigation on Tube Hydroforming and Formability", Approved by TRC for FURAP Call 3.

<u>Grami, S., Wazwaz, A.,</u> "Parabolic Trough Solar Collector System for Water Desalination and Electrical Power Generation". Approved by TRC. (Ongoing ORG project)

The need for continues supply of fresh drinking water is as pressing as the need for new sources of energy especially with fast growth of urban centers. Solar energy can play a vital role in satisfying this need in particular in the Middle East region where there is a strong correlation between the sun intensity and the scarcity of water. Different parabolic trough desalination plants are already implemented in different parts of the world. Similar plants have been installed in the Middle East in places such as Al-Ain in UEA with capacity of 500 m3 /day, Arabian Gulf with capacity of 6000 m3 /day, and in Kuwait with capacity of 10 m3 /day. Parabolic trough collectors use mirrored surfaces curved in a parabolic shape. The mirrors focus sunlight on a receiver tube running the length of the trough along its focal axis. A high-heat-capacity fluid such as oil runs through the focal region where it is heated to high temperatures and then goes through a heat exchanger to generate steam. The steam is then used to run a conventional power plant. Rusal et. al. showed that 6 meter by 6-meter solar trough concentration system is capable of producing 5.6 kW thermal power and maximum steam temperature of 260 °C. Direct steam generation approach has also been proposed in which water flows through the receiving tubes. The produced steam could then be used for generating electricity using turbine/generator assembly or for water desalination. With the use of absorption chiller, excess heat from the trough collector could also be used for reducing cooling, heating, and refrigeration loads in big buildings such as shopping malls or university campuses by installing the system on buildings' roof tops.



16.1 Mathematics & IT Unit

Refereed Journal Papers:

<u>Malkawi, G.,</u> Ahmad, N., Ibrahim, H., & Albayari, D. J., "A note on solving fully fuzzy linear systems by using implicit Gauss---Cholesky algorithm", Computational Mathematics and Modeling, Vol. no. 26, Issue 4, pp: 585-592, 2015.

<u>Malkawi, G.,</u> Ahmad, N., & Ibrahim, H., "An algorithm for a positive solution of arbitrary fully fuzzy linear system", Computational Mathematics and Modeling, Vol. no. 26, Issue 3, pp. 436-465, 2015.

<u>Malkawi, G.,</u> Ahmad, N., & Ibrahim, H., "solving the fully fuzzy sylvester matrix equation with triangular fuzzy number", Far East Journal of Mathematical Sciences, Vol. no. 98, Issue 1, pp: 37, 2015.

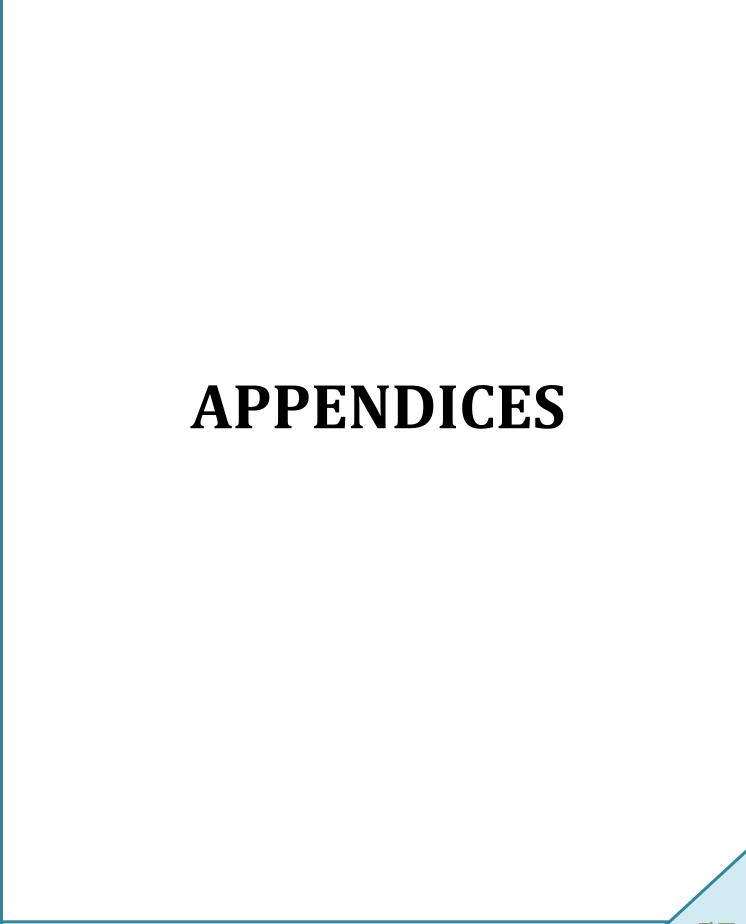
Conference Papers:

Ahmad, N., <u>Malkawi, G.,</u> & Ibrahim, H., "Solution of IR-fuzzy linear system with trapezoidal fuzzy number using matrix theory", Malaysia, 2015.

<u>Malkawi, G.,</u> "On the solution of left-right fuzzy linear system", The Arab International Conference on Mathematics and Computations (IACMC 2016), Zarqa, Jordan, May 11-13, 2016.

Exhibition

Shareef, Z., "Infinity, Pi day celebration", Salalah, Sultanate of Oman, April 17, 2016.



Appendix A

Table 1: Approved Applications for STFDG (Fall 2015-16)

| No. | Applicant | College | Paper presented | Conference |
|------|----------------------|---------|--|---|
| 140. | Аррисанс | Conce | r uper presenteu | Comerciace |
| 1. | Dr. Faris Al Shubiri | ССВА | Analysis of Economic Development Indicators based on KIBS Interaction | 3 rd International conference on Business and Management |
| | | | and Economic Performance: Evidence from Sultanate of Oman | on Connected Era |
| 2. | Ms. Khayar Al Ansi | ССВА | Procedural justice as a source of organizational commitment: examining the role played satisfaction | International Conference in Organization and Management (ICOM) |
| 3. | Dr. Thabit Sultan | CE | Remote-controlled microcontroller based temperature system: An economical design | 6 th International Conference on Industrial Engineering and Operation Management |
| 4. | Dr. Syed Adil | CAAS | Impact of video based instrumental music through multimedia for an enhanced learning experience in reading and vocabulary acquisition in EFL classroom | International Conference on Advances in English studies |
| 5. | Dr. Fadi Awawadeh | CAAS | A numerical scheme for the one- dimensional wave equation subject to an integral condition | 2 nd International Conference on Mathematical Sciences & Statistics |

<u>Table 2: Approved Applications for Research Collaboration (Fall 2015-16)</u>

| No. | Applicant | Research Title | Affiliation |
|-----|---|--|------------------------------|
| 1. | Lawrence Bell | The socio-ecological dynamics of overgrazing in Dhofar Mountains in Oman | University of Kent |
| 2. | Lara Goffman | Learning spaces of modernity: Education and the formation of national identity in Oman | Georgetown University |
| 3. | Dr. Mohammed bin Ali Al Baloushi, Dr. Mohammad bin Saleh Al Ajami, Mr. Said bin Al Abdul Salam, Ms. Asia bint Said Al Hinaiah | Youth Issues | National Committee for Youth |

<u>Table 3: Approved Applications for Distribution of Questionnaire (Fall 2015-16)</u>

| No. | Applicant | Research Title | Affiliation | | |
|-----|--|---|---|--|--|
| 1. | Ms. Aieda Al Arami | Investigating the level, practice and the relationship between the knowledge management capabilities, Islamic work ethics and organizational performance in the higher education institutions in Oman | University of Technology Malaysia | | |
| 2. | Mr. Ahmed Al Shihhi | تصور مقترح لتطوير المسار الوظيفي لمديري المدارس الحكومية في سلطنة عمان | Sultan Qaboos University | | |
| 3. | Dr. Rahma | Investigating quality assurance mechanisms in EFL programs in the Sultanate of Oman: Challenges and opportunities | Sultan Qaboos University | | |
| 4. | Ms. Mona Sherief | Study for media sports as an entry point for advancing University sport in Oman | International Maritime College, Oman | | |
| 5. | Dr. Rahma | Investigating critical thinking strategies integrated in cycle 2 and post-basic education in English language teaching in Oman | Sultan Qaboos University | | |
| 6. | Prof. Ramzi | Emotion and affect project | Dhofar University | | |
| 7. | Ms. Saleha Al Baloushi | دور القيادات الجامعية في ممارسة المسؤولية الاجتماعية للجماعية للجامعات الخلصة في سلطنة عمان من وجهة نظر القيادات و أعضاء هيئة التدريس في تلك الجامعات | | | |
| 8. | Mr. Aiman Saleh | League of Arab states تحليل ممارسات التخطيط الاستراتيجي في الجامعات الخاصة بسلطنة عمان | | | |
| 9. | Mr. Sohail Amjid and Mr. Nasser Alkatheri | Research to explore the causes and effects of excessive printing in the workplace | College of Applied Sciences | | |

Table 4: Approved Applications for IC (Fall 2015-16)

| | <u> </u> | | | | |
|------|-----------------------------|---------|---|--------------------------------|--|
| S.No | Applicant Name | College | Paper title | Journal Title | |
| 1. | Dr. Shanker Menon | CAAS | Cultural intelligence: new directions for Research in Asia | Asian social science | |
| 2. | Dr. Andri Mirzal | CAAS | Spectral clustering on gene expression profile to identify cancer types or subtype | Jurnal teknologi | |
| 3. | Dr. Mohammad Asif Gondal | CAAS | Construction of nonlinear component for block cipher based on one-dimensional chaotic map | 3D Research | |
| 4. | Dr. Mohammad Asif Gondal | CAAS | A novel design for the construction of safe s-boxes based on TDERC sequence | Alexandria engineering journal | |
| 5. | Dr. Mohammad Asif Gondal | CAAS | An efficient method for secure communication of biometric information based on chaos | 3D Research | |

| 6. | Dr. Mawih Al Ani | ССВА | The effect of corporate citizenship activities on financial performance and market performance: the Omani experience | South east European journal of economics & business |
|-----|-----------------------------|------|---|---|
| 7. | Dr. Mazhar Ul Islam | CE | Bacterial cellulose-poly(3, 4- ethylenedioxythiopene)-poly (styrene sulfonate) composites for optoelectronic applications | Carbohydrate polymers |
| 8. | Dr. Mazhar Ul Islam | CE | Innovative production of bio-cellulose using a cell free system derived from a single cell line | Carbohydrate polymers |
| 9. | Dr. Mansour Alraja | ССВА | Factors affecting e-government services adoption: field study | Journal of theoratical and applied information technology |
| 10. | Dr. Faris Al Shubiri | ССВА | An empirical investigation of process innovation outputs on market capitalization listed of MSM | Investment management and financial innovations |
| 11. | Dr. Mohammad Ahmar Uddin | ССВА | A study of the entrepreneurial constrains in the Indian manufacturing sector | International journal of economics & financial issues |
| 12. | Dr. Mazhar Ul Islam | CE | Engineered regenerated bacterial cellulose scaffold for applications in vitro tissue regeneration | RSC advances |
| 13. | Dr. Mazhar Ul Islam | CE | Synthesis and characterization of a novel bacterial cellulose-poly(3,4-ethylenedioxythiopene)-poly (styrene sulfonate) composite for use in biomedical applications | Cellulose |
| 14. | Dr. Mazhar Ul Islam | CE | Encapsulated yeast cell-free system: a strategy for cost-effective and sustainable production of bio-ethanol in consecutive batches | Biotechnology and bioprocess engineering |
| 15. | Dr. Mazhar Ul Islam | CE | Adsorption and photocatalyst assisted dye removal and bactericidal performance of ZnO/chitosan coating layer | International journal of biological molecules |
| 16. | Dr. Abdullah Al Saqqaf | CAAS | English spelling errors made by Arabic speaking students | English language teaching |
| 17. | Dr. Thabit Sultan | CE | Communication and diagnosis in distributed systems: a proposed graph network | Research journal of applied sciences |
| 18. | Dr. Rabia Imran | ССВА | Enhancing performance: role played by high performance work system | International journal of economics & financial issues |

| 19. | Dr. Ridha Horchani | CAAS | Femtosecond laser shaping with digital light processing | Optical and quantum electronics |
|-----|-----------------------------|------|---|---|
| 20. | Dr. Fadi Awawadeh | CAAS | A new simplified bilinear method for the n-soliton solutions for a generalized FmKdV equation with time-dependent variable coefficients | International journal of non-linear science and numerical simulations |
| 21. | Dr. Tariq Saleh | ССВА | ISO certifications and firms performance: evidence from Oman | Corporate ownership & control |
| 22. | Dr. Mansour Alraja | ССВА | Perceived factors affecting customers attitude toward electronic shopping: empirical study | International journal of economic Research |
| 23. | Dr. Mawih Al Ani | ССВА | The effect of working capital management efficiency on the operating performance of the industrial companies in Oman | International journal of accounting & financial issues |
| 24. | Dr. Mohammad Asif Gondal | CAAS | An image encryption scheme based on nonlinear chaotic algorithm and substitution box transformation | Applied mathematics & Information sciences |
| 25. | Dr. Mawih Al Ani | ССВА | The determinants of capital structure: an empirical study of Omani listed industrial companies | Business: Theory & Practice |
| 26. | Dr. Thabit Sultan | CE | Tone reservation based on fourier transformed sequence for paper reduction in OFDM systems | Engineering letters |
| 27. | Dr. Samir Hammami | ССВА | The role of it in enhancing productivity at higher education institutions from staff and students' perspective-evidence from Oman | Journal of theoratical and applied information technology |
| 28. | Dr. Samir Hammami | ССВА | The role of CRM systems in consolidating the strategic position of the organization | International journal of applied business and economic Research |
| 29. | Dr. Samir Hammami | ССВА | E learning environment as a facilitator for knowledge creation using SECI model in the context of BA | Journal of theoratical and applied information technology |
| 30. | Dr. Samir Hammami | ССВА | Ba as an enabler of knowledge creation in e learning environment | International journal of applied business and economic Research |
| 31. | Dr. Mansour Alraja | ССВА | Customer acceptance of e-commerce: integrating perceived risk with TAM | International journal of applied business and economic Research |
| 32. | Dr. Aref Wazwaz | CE | Data mining approach to assess condition of rotating machine using sound signal | Sustainable cities & Society |
| U | | -U | T- | |

| 33. | Dr. Mansour Alraja | CCBA | E-business adoption in banking sector: field study | Indian journal of science & technology |
|-----|----------------------|------|--|---|
| 34. | Dr. Mohammed Aref | ССВА | Data mining approach to assess condition of rotating machine using sound signal | Journal of theoratical and applied information technology |
| 35. | Dr. Faris Al Shubiri | ССВА | The impact of financial position on risk asset ratios: empirical study of banking sector listed in MSM | Economics & Sociology |
| 36. | Dr. Ridha Horchani | CAAS | Tunable dual species Bose-Einstein condensates of 39K and 87Rb | Physical. Rev. A |

Appendix B

Table 1: Approved Applications for STFDG (Spring 2015-16)

| No. | Applicant | College | Paper presented | Conference |
|-----|--|---------|---|--|
| 1. | Dr. Sabbar Saadoon Sultan | CAAS | The poet's mourning his own death: D. H. Lawrence's example | Presumed autonomy |
| 2. | Dr. Zaroug Osman Bilal | ССВА | The relationship between dividend policy and stock price-evidence from Omani industrial sector | International Turgut Ozal Congress on Business, Economics and Political Science |
| 3. | Dr. Belkis Yapicioglu | CE | Revealing Mirbat's traditional dwelling | REHABEND 2016 |
| 4. | Dr. Talaat Youssef Helmy | CAAS | النظام الاجرائي لهيئة التحكيم المتخصة بنظر مناز عات الاستثمار | الابعاد القانونية والاقتصادية " "للمشروعات القومية |
| 5. | Dr. Husien Mahmoud Moh'd Jaradat | CAAS | Multiple soliton solutions for the couples modified kdV system | International conference on Mathematics and Computations IACMC-2016 |
| 6. | Mr. Ghassan Omar Mahmoud Malkawi | FP | On the solution of left-right fuzzy linear system | Arab International conference on Mathematics and computation |
| 7. | Dr. Vijay Singh Thakur | CAAS | Promoting critical thinking as a social practice: Shaping students' voice, agency and inter-subjectivity in a cohesive framework | 3 rd ESBB conference |
| 8. | Dr. Fethi Abbasi | CE | Numerical and experimental damage analysis of carbon/PPS fabric under biaxial loading | Global conference on polymer and composite materials (PCM 2016) |
| 9. | Dr. Mansour Alraja | ССВА | The effect of foreign direct investment in information and communication technology in developing countries-the case of sultanate of Oman | The 5 th International seminar about: foreign direct investments and the future of free industrial zones for export |
| 10. | Dr. Najm UlHassan | CE | QoS aware channel assignment for IoTenabled Smart building in 5G systems. | International Conference on Ubiquitous and Future Networks-IEEE, ICUFN 2016 |

<u>Table 2: Approved Applications for Research Collaboration (Spring 2015-16)</u>

| No. | Applicant | Research Title | Affiliation |
|-----|------------------------------------|--|------------------|
| 1. | Department of Quality Assurance | اسباب اختيار مخرجات الدبلوم العام للعام الدراسي 2014/ 2015 م الدراسة في بعض مؤسسات التعليم العالي بمحافظة ظفار. | |
| 2. | Dr. Adil Hassan | إنطبلع طلاب الجامعات والكليات في السلطنة حول ريادة الأعمال و تأثير. | Sohar University |

<u>Table 3: Approved Applications for Distribution of Questionnaire (Spring 2015-16)</u>

| No. | Applicant | Research Title | Affiliation |
|-----|-------------------------------------|---|---------------------------|
| 10. | Mr. Muhammad Amir Saeed | The impact of mixed gender classes on learners' academic achievement at Dhofar University. | Dhofar University |
| 11. | Prof. Ramzi Nasser | Study to understand the common exams operational effectiveness, resources, affect and interactions within the University. | Dhofar University |
| 12. | Middle East University | دور شبكات التواصل الأجتماعي في ترسيخ قيم المواطنة لدى الشباب الجامعي العماني | Middle East University |
| 13. | Dr. Omar Durrah | Impact of organizational culture on knowledge sharing among faculty members- A case study on Dhofar University | Dhofar University |
| 14. | Mr. Isam Shallal | Use of technology in translation | University Sains Malaysia |
| 15. | Mr. Muhammad Tahir | Information seeking behavior and information literacy instruction conceptions of university teachers in Sultanate of Oman | Sharqiyah University |
| 16. | Dr. Syed Ahsan Jamil | Leadership traits in administrative leaders of educational institution based on the leadership inventory proposed by Liang and Moss | Dhofar University |
| 17. | Ms. Maryam Bint Naser Al Nuameya | سلوك استخدام تقنية المعلومات على طلاب وطالبات جامعة ظفار | Sultan Qaboos University |

<u>Table 4: Approved Applications for IC (Spring 2015-16)</u>

| S.No | Applicant Name | College | Paper title | Journal Title |
|------|---------------------|---------|--|--|
| 1. | Dr. Ahmmed Saadi | CE | Kinetics and mechanism of bulk polymerization of vinyl chloride in polymerization reactor | Journal of engineering Research |
| 2. | Dr. Mazhar Ul Islam | CE | Production, characterization and biological features of bacterial cellulose from scum obtained during preparation of sugarcane jaggery (gur) | Journal of food science and technology |
| 3. | Dr. Mazhar Ul Islam | CE | Bacterial cellulose composites: synthetic strategies and multiple applications in bio-medical and electro-conductive fields | Biotechnology journal |
| 4. | Dr. Mazhar Ul Islam | CE | Structural and physico-mechanical characterization of bio-cellulose produced by a cell-free system | Carbohydrate polymers |
| 5. | Dr. Mazhar Ul Islam | CE | Metabolic Engineering of synthetic cell- free systems: strategies and applications | Biochemical engineering journal |

| 6. | Dr. Shafique Chaudhry | CAAS | On the need of source Address for Route-Error delivery in 6LoWPAN | Journal of computer science |
|-----|---------------------------------|------|--|---|
| 7. | Mr. Gowhar Naikoo | CAAS | Electrochemical behavior of kaempferol and its determination in presence of quercetin employing multi-walled carbon nanotube modified carbon paste electrode | Analytical chemistry Research |
| 8. | Dr. Ridha Horchani | CAAS | Asymmetric transport of light in linearly arrayed metallic Nano-particles | European physical journal plus |
| 9. | Dr. Nasser Said Abdelrasheed | CAAS | A study of the colored progressive matrics in Kuwait | Mankind quarterly |
| 10. | Dr. Husein Mahmoud Moh'd | CAAS | Multi-soliton solutions of the BBM equation arisen in shallow water | Journal of non-linear science and applications |
| 11. | Dr. Shafique Chaudhry | CAAS | Phishing attacks and defenses | International journal of security and its application |
| 12. | Dr. Muawya Ahmed Hussain | ССВА | Productivity and accounting profitability in Omani listed companies: an empirical study for a period 2010-14 | Journal of applied economic sciences |
| 13. | Dr. Mohammad Ahmar Uddin | ССВА | Private equity and its role in the development of the Indian manufacturing sector | International journal of economics and financial issues |
| 14. | Dr. Rabia Imran | ССВА | Achieving service performance through high performance work system: Psychological empowerment as mediator | Advance science letters |
| 15. | Dr. Kavita Chavali | ССВА | Impact of demographic variables and risk tolerance on investment decision: An empirical analysis | International journal of economics and financial issues |
| 16. | Dr. Kavita Chavali | ССВА | Dynamics of women entrepreneurs in Sultanate of Oman: opportunities and obstacles | International review of management and marketing |
| 17. | Ms. Shireen Rosario | ССВА | Market reaction on dividend announcement in Oman: an event study methodology | International journal of economics and financial issues |
| 18. | Dr. Rabia Imran | ССВА | Knowledge sharing among Pakistani IT professionals; examining role of procedural justice, pay satisfaction and organizational commitment | Advance science letters |

| 19. | Dr. Ali Bassam Mahmoud | ССВА | Email advertising in Syria: Assessing beliefs, attitude and behavior | Journal of promotion management |
|-----|---------------------------------|------|---|---|
| 20. | Dr. Shariq Mohammad | ССВА | Factors affecting entrepreneurs' development in Oman | Corporate ownership and control |
| 21. | Dr. Dimitrios Xanthidis | ССВА | Online socializing: how does it affect the information seeking behavior and the educational preferences in Saudi Arabia? | Computers in human behavior |
| 22. | Dr. Dimitrios Xanthidis | ССВА | An exploratory study of the profile of the Saudi user of social media | Journal of theoretical and applied information technology |
| 23. | Dr. Abdelkader Elsyed | CAAS | Effectiveness of using theory in teaching mathematics to develop academic achievement and critical thinking for primary students in Oman | Int. Journal of humanities and culture studies |
| 24. | Dr. Ridha Horchani | CAAS | Laser cooling of internal degrees of freedom molecules | Frontiers of physics |
| 25. | Dr. Ahmmed Saadi | CE | Protection of carbon steel against corrosion using Frankincense | Wulfenia journal |
| 26. | Dr. Mazhar Ul Islam | CE | Effects of nickel oxide nanoparticles on visual processes and electro-retinography waves in the bullfrog eye | Chemical society of Pakistan |
| 27. | Dr. Mazhar Ul Islam | CE | In situ synthesis of a bio- cellulose/titanium dioxide nanocomposite by using a cell-free system | RSC advances |
| 28. | Dr. Nasser Said Abdelrasheed | CAAS | Sex differences in the intelligence of students at an Egyptian University | Personality and individual differences |
| 29. | Dr. Abdelkader Elsyed | CAAS | Job performance assessment for school activity teachers from the viewpoints of school principals in Dhofar Governorate | Int. Journal of humanities and culture studies |
| 30. | Dr. Inayat Ur Rehman | CAAS | Application of soft sets to non-associative rings | Journal of intelligence and fuzzy systems |
| 31. | Dr. Gowhar Naikoo | CAAS | Theoretical and experimental studies of two Co(II) and Ni(II) coordination complex with N,O donor 2-chloro-6-{[(4-hydroxy-3-methoxyphenyl)methylidene]amino}-4 nitrophenol ligand | Journal of molecular structure |

| 32. | Dr. Najam Ul Hassan | CE | Network selection and channel allocation for spectrum sharing in 5G heterogeneous networks | IEEE access |
|-----|-----------------------------|------|---|---|
| 33. | Dr. Shouvik Sanyal | ССВА | Customer satisfaction on E-banking services in public and private sector banks-A comparative analysis in Dhofar region of sultanate of Oman | Int. Journal of economic Research |
| 34. | Dr. Alexandria Maria | ССВА | Foreign investment promotion analysis in Sultanate of Oman: the case of Dhofar governorate | Int. Journal of economics & financial issues |
| 35. | Dr. Zaroug Osman Bilal | ССВА | Supporting entrepreneurship context: the synergy between the government and big companies, a descriptive analysis of a case study in Oman | Int. Journal of economic Research |
| 36. | Dr. Muhammad Yousoof | ССВА | Customized instructional pedagogy in learning programming-proposed model IT learning | Journal of theoretical and applied information technology |
| 37. | Dr. Hazem Al Samman | ССВА | An examination of the Month-of-the- year effect at Damascus securities exchange | International journal of economics and financial issues |
| 38. | Dr. Khaliquz zaman Khan | ССВА | Does gender difference impact investment decision? Evidence from Oman | International journal of economics and financial issues |
| 39. | Dr. Ra'ed Abdelkarim | CAAS | Undergraduate students' attitude towards mathematics after peer teaching experience | Global journal of pure and applied mathematics |
| 40. | Dr. Inayat ur Rehman | CAAS | New types of bipolar fuzzy sets in T- semi-hypergroups | Songklanakarin journal of science & technology |
| 41. | Dr. Sarfaraz Fayyaz Khan | ССВА | An experimental evaluation of Bayesian classifiers applied to intrusion detection | International journal of science and technology |
| 42. | Dr. Omar Durrah | ССВА | Exploring the relationship between liquidity ratios and indicators of financial performance: an analytical study on food industrial companies listed in Amman Bursa | International journal of economics and financial issues |
| 43. | Dr. Sabir Siddiqui | CAAS | Characterization and development of a new failure model | Journal of theoretical and applied information technology |

| 44. | Dr. Kamal Allil | ССВА | The impact of organizational justice on | International review of |
|-----|---------------------|------|---|--------------------------|
| | | | employee retention: evidence from | management and |
| | | | Oman | marketing |
| 45. | Dr. Asad Rehman | ССВА | Influence of income and occupation on | International review of |
| | | | consumers' susceptibility to reference | management and |
| | | | group demands on brand choice | marketing |
| | | | decisions | |
| 46. | Dr. Husein Mahmoud | CAAS | Analytical solutions of time fractional | IAENG International |
| | Moh'd | | Derinfeld-Sokolov-Wilson system using | journal of applied |
| | | | residual power series method | mathematics |
| 47. | Dr. Md Shabbir Alam | ССВА | The determinants of inflation in India: | International journal of |
| | | | The bounds test analysis | economics and financial |
| | | | | issues |
| 48. | Dr. Sabir Siddiqui | CAAS | Concomitants of order statistics of a | Global journal of pure |
| | | | new bivariate finite range distribution | and applied mathematics |
| 49. | Dr. Omar Durrah | ССВА | The impact of the psychological capital | International review of |
| | | | on job performance: A case study on | management and |
| | | | faculty members at Philadelphia | marketing |
| | | | University | |
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