There is no one setting that adequately represents how most research collaborative relationships are initiated. Some could begin quite informally, at research meetings, between investigators who are familiar with one another’s work and see how collaboration could be mutually beneficial. Another scenario might have investigators from different disciplines envisioning the value of a multidisciplinary approach to research problems. And yet another could involve investigators from different settings, such as academia and industry, exploring how a joint effort could result in scientific, social, and economic benefits.

Sultan Qaboos University supports collaborative research relationships with international institutions from all parts of the world. It believes that successful collaborations are bottom-up and people-driven. Following the initiation of the collaborative relationship, it is essential to establish how interactions should take place between investigators. Since collaborative research projects are likely to be more complex than research conducted by independent investigators, there is a need to assign specific roles and responsibilities to appropriate personnel in such a way that encourages the responsible conduct of research. Managing any collaborative relationship requires understanding the scope of the research, organizing participant priorities, allocating resources, maintaining the timetable, and demonstrating an ability to orchestrate all these components.

An important determinant of a successful collaborative relationship is the establishment of an effective system of communication. Maintaining good communication can enhance a rapid response to problems that arise, modify a flawed protocol, avoid unnecessary loss of data, and reliably disseminate critical information to all participants. Collaboration is well suited to investigating research questions that cross over the parameter of multiple disciplines. Investigators, as members of a research team, can study different aspects of the same problem. Thus, collaboration can facilitate conducting research with a grander scope, invite experts from diverse yet relevant disciplines, handle a larger number of study subjects, and permit research to be conducted at disparate locations including local, national, and international levels. An important tool to create interdisciplinarity and promote collaborative research in a bottom-up approach will be the direct exchange between researchers, PhD students, and postdocs, across disciplines and participating institutions.
The Department of Food Science & Nutrition at the College of Agricul-
dried anchovies are consumed without any heat treatment which could
fect the quality and safety of the product. Anchovies are associated with
load vary due to fluctuation in processing conditions which could af
The properties of dried anchovies such as water content and microbial
load during the storage provide potential hazards and risk factor for food-
During their doctoral research, the researchers recommended that fresh anchovies should be handled
under hygienic conditions and dried using appropriate technologies to
The researchers commented that their study raised the need for further
studies to elucidate the possible association of dried anchovies in food
poisoning.
As many as 160 registered participants from 27 countries attended the Third International Conference on “Numerical Analysis and Optimization: Theory, Methods, Applications and Technology Transfer” (NAOIII–2014) organized by the Department of Mathematics and Statistics (DOMAS) of the College of Science at SQU. The formal opening of the four-day conference was held under the patronage of H.E. Dr. Ali bin Saud Al Bimani, the Vice Chancellor of SQU. The conference was opened by the Department of Mathematics and Statistics (DOMAS) of the College of Science at SQU. The organizing committee is an area of strength of the department”, he said.

Speaking at the opening ceremony, Dr. Mehiddin Al Baali, Chairman of the Conference Organizing Committee, said that DOMAS is organizing this conference since 2009, and the second one in 2011. "We hope the conference series will become the forum where prominent mathematicians, gather and meet to stimulate the communication of innovative ideas and knowledge on new scientific methodologies, promote scientific exchange and discuss possibilities of further cooperation, networking, and promotion of mobility of senior and younger researchers and researchers students. The third international conference features some of the recent research developments in theory, algorithms and advanced applications in engineering, science and medicine to facilitate cross-fertilization among various key sectors of pure scientific and applied knowledge”, he said.

Dr. Mohamed Al Lawati, Head of DOMAS, highlighted his department’s 25-year services in teaching, research, internationalization and community service. “Their numbers have grown significantly in recent years. At present, the department has around 60 faculty members, 45 research staff, and 120 students, including 80 PhD candidates and 40 Master’s degree students,” he said.

The conference featured 20 invited speakers from Oman and abroad, who are prominent researchers in numerical analysis and optimization.

Bioethics Conference to be Held in December

The National Committee of Bioethics decided in its regular meeting, which was held recently at Sultan Qaboos University, to organize its first international conference from December 6 to 8, 2014. The meeting was chaired by H.E. Dr. Ali bin Saud Al Bimani, the Vice Chancellor of SQU, discussed the recommendations of the 4th Intellectual Forum. The committee members emphasized on the importance of premarital medical screening. In addition, the committee discussed the proper term of folk medicine, reformulated the recommendations of the third intellectual forum and sent them to the Council of Ministers. The committee reviewed the issues of stem cells and formulated the general principles of using them.

The participants suggested to establish a department of Bioethics at the College of Medicine and Health Sciences. The Committee approved the subject of the 5th Intellectual Forum, which will be “Don’t Resuscitate: Advantages and Disadvantages on Patient”. In addition, the committee confirmed the importance of designing a clearly defined annual plan for the committee in order to perform the tasks assigned to them, as well as to benefit from the national committees in other countries in order to know the related subjects of bioethics.

Campaign Against Childhood Obesity

The faculty and students of the Maternal and Child Health Department of College of Nursing at Sultan Qaboos University recently conducted a community awareness event under the theme “Childhood Obesity” in Muscat Grand Mall. Dr. Esra Al Khasawneh, Dean of the College of Nursing, inaugurated the program. The health awareness program for parents and children was showcased with spectacular performances by nursing students on healthy and unhealthy foods, health screening, nutritional counseling and amazing health quizzes.

Over 500 children and parents attended the program. Children and their families were educated on healthy lifestyle of outdoor activities and healthy dietary habits through entertainment programs that presented by cartoon character Mickey Mouse and Smurf, Fun activities like face painting, henna, flying colored balloons and cartoon characters mesmerized the whole event. The main entertainment activities were sponsored by Mr. Mohammed, who conducted the stage program for children and distributed gifts to all children who performed and participated in the healthy eating habits and other fun activities. The whole program gave an overview on how to modify the current dietary practices among families to prevent childhood obesity. The main magnetism of this program was the fulfilled creative role–play by the nursing students.

The event was sponsored by Alfair, Johnson and Johnson Abbot with involvement of nursing group at the College of Nursing. The event ended by thanking all members and all sponsors who donated gifts, healthy foods and the variety entertainment by Dr. Girija Madhavan Prabhakaran, Head of the Maternal and Child Health department. The event was coordinated by Dr. Suhailla Halasa, Mrs. Lina Shakman, Mrs. Eman Al Hashmi and Mrs. Sathiyar Raman and Mrs. Deepa Shaji Thomas.
Tobacco has become a mass global phenomenon. Although most of the tobacco that is consumed throughout the world is in the form of manufactured cigarettes, it is also smoked in other products, such as cigars, cigarillos, pipes, and waterpipes (sheesha). Currently, an estimated 794 million adults use tobacco, smoking 5.884 billion cigarettes, cigars, and waterpipes (sheesha) per year. A further 350 million are exposed to second-hand smoke (SHS) at work.

The problem is centuries old. Tobacco was brought to Europe by Christopher Columbus, who discovered it in Cuba in 1492. By the beginning of the 16th century, the tobacco trade was already established between the Caribbean and India, soon extending to China, Japan, and the Malay Peninsula. About the same time, the Portuguese and Spanish brought tobacco down the east coast of Africa, then to Central Africa. In the early 20th century, tobacco use rose to epidemic proportions, mostly due to aggressive marketing by the tobacco industry after the invention of the cigarette machine.

Scientific knowledge about the effects of tobacco smoking accumulated during the last century after evidence linking smoking and cancer appeared in the 1920s. Between 1920 and 1940, a chemist, Angel Honorio Roffo, published articles showing that cancer could be experimentally induced by exposure to tar from burned tobacco. Roffo et al. further showed that cancer could be induced by nicotine-free tobacco, meaning that the tar itself was carcinogenic. Evidence that smoking causes cancer mounted in 1951 when Hill et al. in Great Britain and Wynder et al. in the USA demonstrated a statistically significant correlation between smoking and lung cancer.

In 1957, the first official US government statements on smoking and health were televised; the Surgeon General, Leroy Burney, announced that scientific evidence supported cigarette smoking as a causative factor in the etiology of lung cancer. By 1960, Joseph Garland, editor of the New England Journal of Medicine, confirmed that the evidence has become sufficiently strong to suggest a causative role. Smoking causes an estimated 90% of all lung cancer deaths in men and 80% of all lung cancer deaths in women.

Despite this large volume of evidence, cigarette manufacturers have told smokers their products are not injurious to health. However, internal industry documents revealed that by the late 1950s the tobacco companies knew and accepted the evidence that cigarette smoking was a cause of cancer. These documents revealed also that the tobacco companies deliberately conspired to confuse the public debate about smoking and health and directed scientific research funding offers channeled through third party organisations.

Tobacco manufacturers only recently admitted that smoking causes lung cancer and other diseases, and in varying degrees. Despite this, they have rebutted charges made in personal injury lawsuits that their products caused cancer. Their defence experts testified that most people start smoking because of peer pressure or because family members smoke, not because they were influenced by advertising. Defence witnesses stated that the tobacco companies do not advertise their products to under 21-year-olds. Expert witnesses testified that nicotine is not addictive; that motivated people can quit smoking; that cigarettes, unlike hard drugs, are not intoxicating and withdrawal symptoms are mild; that nicotine does not impair human judgment or decision-making, and that people smoke for relaxation, taste, and enjoyment, not because they are addicted.

The global response to the pandemic of tobacco induced death and disease has been the World Health Organization’s (WHO) Framework Convention on Tobacco Control (FCTC), the first ever global health treaty. The WHO FCTC exhorted countries to develop action plans for public policies, such as bans on direct and indirect tobacco advertising, tobacco tax and price increases, the promotion of smoke-free public places and workplaces, and the printing of health warnings on tobacco packaging.

Indeed, many countries have recently implemented stricter measures, in line with the WHO FCTC, such as smoking bans at beaches in some Australian states and parks in Canada. Brazil has banned the use of additives in cigarettes and tobacco products. Some countries have increased the size of the pictorial health warnings — Uruguay (to 80%) and Mauritius (to 65%) — while Australia now requires plain packaging of tobacco products with other countries likely to follow suit. Nine countries have banned the display of tobacco products, and five have banned tobacco advertising at points of sale. Nepal now forbids the sale of tobacco products not only to minors but also to pregnant women, while Bhutan has legislated for a comprehensive tobacco sale ban. Finally, Finland and New Zealand are endeavouring to become tobacco-free countries.

Oman has already banned TV, radio, and outdoor cigarette advertising. From April 2010, the Muscat municipality banned smoking in all public places. Anyone flouting the ban is fined up to OMR 100 and OMR 300 from the third offence. Private establishments, lax in enforcing the new curbs, also face fines and even having their establishment closed down for 3 to 7 days. The licences of persistently offending establishments can be permanently cancelled. Establishments covered by the new measure must display English and Arabic ‘No Smoking Zone’ signs and smoking in these establishments is permitted only in designated ‘smoking zones’. Since November 2012, cigarette packs in Oman must be printed with a message alerting smokers to the dangers of smoking and a compelling image aiming to persuade them to kick the habit. All cigarette manufacturers and distributors should also keep such messages as part of anti-smoking campaigns.

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Mapping of earth resources like urban, water, soil, agriculture, minerals and ore deposits through surveying and conventional mapping in inaccessible areas or regions are difficult and challenging tasks to the surveyors, scientists and resource analysts. The advent of both space borne and airborne remote sensing techniques and the applications of satellite data are proven in mapping, monitoring and analyzing of said earth resources. As on date, several significant growths are seen in developing satellite launching vehicle to earth’s space and to the space of lunar and building satellite sensors by improving their spectral, spatial, temporal and radiometric resolutions. Considerable achievements made in obtaining satellite data with 0.4m spatial resolution and around of 0.7 micrometer hyperspectral resolutions significantly that capable for scientific surveying, mapping of earth resources and monitoring environments. Study of satellite sensor resolutions able to provide significant realistic detailed informations of earth surface and several research study area are carried out worldwide.

Though, the applications of satellite data are very wide, the use of satellite data to arid regions like the Sultanate of Oman is more significant. Several research studies are carried out on the use of satellite data, especially to mapping of minerals and mineral bearing rocks of Sultanate of Oman at the Department of Earth Sciences, Sultan Qaboos University. The occurrence of the silicates, carbonates and mafic minerals bearing rocks of several parts of the country are mapped as case studies by Dr. S.Rajendran and his research group. The research group demonstrated the potential use of satellite data and the capability of sensors of satellites through the study on the occurrence of REE (Rare Earth Elements) bearing carbonate and adakilitic rocks of Batinah region, which consists the base metal deposits. They mapped such rock types and zones of mineralization by detecting the major minerals and rocks of those regions over satellite image and confirmed their results through field and laboratory studies.

During the year 2013, Dr. S. Rajendran and Prof. S. Nasir of the Department of Earth Sciences developed a scientific proposal on spectral absorptions in remote sensing and demonstrated how to use the multispectral satellite image spectra to map ultramafic lamprophyre and carbonatiocurrences based spectral absorption characters to the remote sensing community. They proved clearly about the detection of carbonate minerals and bearing the ultramafic lamprophyre (carbonatites and adakilites) occurred in the Batinah Nappe of northeastern margin of Oman. Also, they mapped the limestone formations of Tanuf valley and region near Sur and proved the capability of FASTER satellite sensor, which is very good for mapping of minerals and rocks.

Dr. S. Rajendran stated based on his experiences in use of satellite data in the regions of India and Oman that the satellite data acquired by the technique works very well in detecting the mineral resources and discriminating the rock types of Sultanate of Oman while comparing the semi-arid regions like India. The Sultanate of Oman has been privileged in satellite data applications, especially in mapping of minerals and rocks. His observations are being communicated to the scientific communities and public that the advantage is basically due to the energy interaction of such resources with satellite sensor. According to Dr. Rajendran the cloud free dry arid climate and vegetation free barren exposures of minerals and rocks of the arid regions reflecting and emitting energy in the spectral wavelength are well sensed, without any abstractions, by the sensor on board in satellite. Thus, the data collected over this region is more superior in mapping of mineral resources. On the other hand, the climatological conditions of India has developed more vegetation in most of the regions and the satellite data obtained are showing clouds (most of the time) with vegetation which are abstracted by the energy interactions between the surface occurrences of minerals and rock types with the sensor. However, such kinds of data are being used as well for assessing the water resources of the regions therein India.

Keeping view on these, the research groups at the Department of Earth Sciences, Sultan Qaboos University strongly recommend the remote sensing technique and the use of satellite data for mapping of minerals and ore resources to the different ministries, mine owners, researchers and exploration geologists of Sultanate of Oman for their needs. The department is keen to extend its knowledge and fulfill the needs of users in this field.
Dr. Regaraj Selvaraj, an Assistant Professor in the Department of Chemistry, College of Science, SQU, has been elected as a member of the board of directors of the Pacific Basin Consortium for Environment and Health (PBC). In this capacity, he is expected to promote technology and information exchange on environment and health issues in the Pacific Basin, specifically including issues related to hazardous substances or wastes, air and water pollution, climate change, and agricultural chemicals and effects on these problems on human health. His responsibility includes developing a network of individuals and organizations in the research and development of policy related to and management of issues mentioned above. He is also expected to stimulate, coordinate, and conduct research on and promote sustainable policies for management of environment and health issues in the Pacific Basin.

Dr. Rengaraj’s research encompasses various novel applications of Analytical and Environmental Technologies for water and wastewater treatment and to combine the nanotechnology (NT) with environmental technology (ET) in order to develop environmental friendly nanomaterials and novel nanoscale systems. Dr. Rengaraj would serve the members and wider community of the PBC for the next four years. PBC has 23 members on the board of directors representing 15 countries. This consortium provides a forum for individuals and organizations with diverse professional expertise and geographic backgrounds to come together and discuss the most pressing environment and health issues of our time, engage in cooperative research, and develop and disseminate innovative strategies for addressing these issues and creating sustainable, affordable alternatives.

Innovation Forum Calls for Promotion of Initiatives

The Annual Innovation Forum was held at SQU recently under the auspices of H.E. Dr. Ahmed bin Mohammed Al Saeedi, Minister of Health. Dr. Al Saeedi pointed out that such initiatives are considered the first at the level of ministries in the Sultanate as the best initiatives will be selected during the forum to be applied accordingly. Dr. Fatima bint Mohammed Al Ajmi, Director-General of Health Services in the Governorate of Muscat, gave a speech touching on the initiative as a mental activity directed by a strong desire to look for solutions or useful results. She pointed out that the initiatives are classified as per its outcomes, but the basic feature of the successful initiative is the potential of application and the measurement of impact.

Then, all initiatives were presented. After that, the chief guest honored the owners of the initiatives, sponsoring companies and individuals who contributed in making the forum tangible reality. It has been decided to hold the forum during the upcoming years in the governorates of the Sultanate. Committees were formed in each Health Services Directorate in the governorates and self-managed hospitals as their missions are receiving the initiatives presented by the employees based on circular issued that is showing dates and controls of participation.

SQU Academician Elected to PBC Board of Directors

Aquaculture began thousands of years ago and its production already accounts for more than 40% of the world’s fisheries production. However, one of the ongoing problems aquaculture products must overcome is the pre-judgment of taste. Consumers usually think fish from the wild are safer and more delicious than that from aquaculture farms but many evidences and research results prove them wrong.

A group of students from the Department of Marine Science & Fisheries at Sultan Qaboos University performed a blind taste test between cultured and wild groupers. The results showed that 48.6% of all judging panels preferred the cultured grouper taste while only 8.6% of them decided the wild fish tasted better. 42.8% could not recognize any differences between cultured and wild groupers. According to test participants, the main reason for the choice of the cultured grouper was the distinctive softness of flesh flavour. Results from female judging panels were 42.8% for cultured, 14.4% for wild and 42.8% for no difference. The male panels gave more preference to the cultured grouper shown by the result of 50% 10.7% votes for the wild grouper and 39.3% of male panels could not recognize any differences between the two groups.

The leader of the student group who conducted this investigation, Mr. Haitham Al-Gheilani, said, “I was very surprised when we analysed the results because we expected Omani people to prefer the wild grouper taster rather than the cultured one.” The supervisor of this project, Dr. Gilha Yoon, expressed, “If this test had not been a blind test, it is certain our results would be different. Because, pre-judgment disturbs our real taste.” “The test results are very prominent for promotion of the aquaculture industry in Oman because if consumers prefer aquaculture products then the industry is sure to be a success, he added.

As Ahmed bin Said Al-Souti, assistant supervisor of this project commented, “This project is unique and gave evidence to consumers on the importance and quality of farmed fish as a source of protein for the Omani table” and this group has been farming in concrete ponds and fed manufactured feeds mimic the requirements of fish for grower found in nature.

Mr. Al-Gheilani said: “It is a trend of the world to grow fish in farms and also, Oman, need to grow fish to overcome the decline in the wild fish population but the process may be discouraged by the big number of people who have a biased idea on taste for aquaculture products. I really want to know why people think this way, whether it is based on facts or the pre-judgment. Thus, our team has plans to carry out further tests in busy places such as shopping centers because then we can acquire extra accurate results coming from the judgment of more panels with a variety of cultural and personal backgrounds, tastes and other possible environmental factors rather than the limited diversity only inside of the university.”
Straight Talk

Horizon: How do you explain your personal links with Oman?
H.E. Mitzi: In fact, my father had the honour of being the first non-resident Ambassador to the Sultanate of Oman to present his credentials to His Majesty Sultan Qaboos, back in 1973. It marked the beginning of the formal bilateral relations between Brazil and Oman. Almost three years ago, it was my time to have the honour to present my credentials to His Majesty the Sultan, as the first resident Brazilian Ambassador to the Sultanate. I feel that I am living in one of the most welcoming and friendliest countries in the world. The friendliness of our peoples is just one of the many similarities that Brazil and Oman share. Both countries know how to make a foreigner feel at home, both countries welcome expatriates and are ever willing to help out in any way they can. This is the true meaning of friendliness.

Horizon: How do you comment on the bilateral relationship between the two countries?
H.E. Mitzi: Economically, Brazil and Oman are both developing countries and are heavily investing in efforts to raise the living standards of their peoples. Brazilian-Oman bilateral trade volume stands at a historic high of 1.12 billion US dollars, making this country one of our main trade partners in the Arab World. Trade in the first six months of this year has increased by another 6% in spite of the current international economic downturn. You will find a lot of Brazilian brands in most of Oman’s supermarkets. Oman’s national carrier, Oman Air, now flies Brazilian Embraer aircraft to several destinations in the region. Brazil’s Vale started its iron pelletizing plant in Sohar in 2011. Vale’s contribution to Oman’s economy is well documented and respected in the Al Batinah region. Vale Oman has almost reached a 70% Omanization rate and promotes the training of their Omani employees in Brazil. I hope that a lot of students from SQU can be part of Vale Oman in the future.

Horizon: Can you elaborate on other shared characteristics of Brazil and Oman?
H.E. Mitzi: There are certain similarities between the two nations in the political realm. Both countries support peaceful resolution of all conflicts, the importance of diplomatic dialogue and negotiation, the protection of human rights and respect for the sovereignty of the individual nations. Both countries strive to facilitate dialogue between belligerent countries so as to minimize conflicts and foster peace and security worldwide.

Horizon: Brazil is known to many Omanis as the land of football. Can you share your views on this?
H.E. Mitzi: Of course. Both Oman and Brazil share the passion for the legendary game of football. I hear the wild cheering of Omanis every time there is a football match on television. I hear the same roar and excitement when Brazilian teams are playing. We were all very sad to learn that Oman will not be participating in the World Cup next year, but I am sure that many, many Omanis will be visiting Brazil to watch the games. I dearly hope that we may all celebrate the World Cup on the streets of Rio, Sao Paulo and Muscat!

Horizon: Does the Embassy of Brazil have any plans to further boost its relations with SQU, the premier higher educational institution in Oman?
H.E. Mitzi: Yes, we certainly do. There is a proposal for an educational agreement to be signed between Brazil and Oman which was presented by Brazil some time ago and is still under consideration of the Omani side. We hope it will come to fruition soon. There is also a proposal made by the Omani Minister of Education, when she was in Brazil, to enable Brazilian students to come to Oman to learn Arabic and this may involve SQU. There is also the possibility of “sandwich” courses offered by Brazil for Omani Master Degree students that will enable them to spend a year in Brazil studying their fields and gain use of these credits to graduate later herein Oman. This possibility also depends on the recognition of these courses by Omani educational authorities.