Editor's Message

Dear Colleagues,

For the past two years, *EMU Research Newsletter* has played a critical role in conveying an overview of various research activities at The University. I am glad to be taking over as the new editor-in-chief of the newsletter, a position successfully held by Derya Oktay since the inaugural issue back in 2005.

Excelling in advancement and transfer of knowledge is only possible through maintaining a strong research culture. An academic institution can achieve a competitive status if and only if it has a significant presence in the research community. The aim of *EMU Research Newsletter* will be to keep its readers widely interested in basic and applied research, and to promote interaction and collaboration among researchers from different fields. We are seeking to move away from formal and structured presentation of research activities; instead, we would like to provide the researchers an opportunity to actively contribute to the newsletter.

Starting with this issue, the newsletter is getting a new 'look' as well as a new 'inside'. One change you will notice is that each issue will feature three research articles written by researchers themselves. Two of these articles will appear in sections titled *Research Spotlight*; one will be focused on engineering and sciences and the other will be focused on arts, humanities and social sciences. I expect that these articles will give an in-depth description of some of the exciting research projects that are currently underway and will provide an insight into the potential impact of the projects described. The importance of student involvement in research activities cannot be overstressed. The third featured article will appear in section titled *Student Research Profile* and will focus on a graduate or an undergraduate student who is actively involved in research. The main goal of this section is to reveal some of the research opportunities offered to university students.

The featured articles in this issue of the newsletter cover a host of topics: Elvan Yılmaz, Osman Yılmaz and Murat Bengisu describe synthesis of gels from biopolymers that can potentially be used to fight diseases including Thalassemia or to treat contaminated waters; Müge Şevketoğlu helps us take a look back at ancient architecture; and finally, İdil Candan presents a model to tackle call management in mobile wireless networks. We have also continued the old traditions of communicating other significant research-related activities in *News Highlights* and providing a list of recent publications and presentations in order to keep the readers updated on the research output of The University.

I hope you will enjoy reading this issue and we welcome your feedback on any aspect of the newsletter.

With best regards,

Dizem Arifler

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Fall 2006 Ministry of Education and Culture project award recipients announced

In the Fall of 2006, the TRNC Ministry of Education and Culture approved financial support for seven research projects from EMU. These projects will be funded jointly by the Ministry within the framework of 'Support for Scientific Activities in Higher Education' and by the Eastern Mediterranean University. Below is a list of the principal investigators whose projects were approved, the project titles, and the total amount of funding for each project:

- Hüseyin Araslı (Tourism and Hospitality Management)
Project Title: Strategic Planning and Management: Some Applications on TRNC Schools
Amount: 6,000 YTL

- Halil Güven (Mechanical Engineering)
Project Title: First-Order Magnetic Phase Transitions and Magnetic Cooling
Amount: 14,285 YTL

- Kudret Özersay (International Relations)
Project Title: The Position of De Facto States in International Law and the Problem of Lifting the Isolations over Turkish Cypriots
Amount: 12,100 YTL

- İbrahim Sezai (Mechanical Engineering)
Project Title: Development of a General Computer Program for the Simulation of Flows in Complex Geometries
Amount: 9,770 YTL

- Cem Tanova (Business Administration)
Project Title: Human Resource Management Strategies and Practices in North Cyprus: A Comparative Study
Amount: 4,000 YTL

- Ekrem Varoğlu (Computer Engineering)
Project Title: Building Interaction Networks of Proteins Coded by Alternatively Spliced Genes Using Text Mining Approaches
Amount: 10,000 YTL

- Osman Yılmaz (Chemistry)
Project Title: New Chitosan-Based Super-Absorbant Hydrogels
Amount: 14,028 YTL

'Step By Step Seventh Framework Workshop' organized by EMU FP7 Office

EMU FP7 Coordination Office was established in October 2006 under the auspices of the Faculty of Engineering with the main goal of assisting EMU researchers to participate in the European Union Seventh Framework Programme (FP7). The office serves to identify suitable research topics from FP7 calls, to inform researchers about any funding opportunities, and to help the researchers with any official procedures and documents necessary for participation in FP7 projects. In line with this mission, a workshop was organized jointly by the FP7 Coordination Office and the Turkish Cypriot Chamber of Industry. The event titled 'Step By Step Seventh Framework Workshop' took place on January 19, 2007 at EMU Technopark Amphi with nearly a hundred participants from various universities in northern Cyprus and from the industry. Invited speakers included Didem Çelikkanat, O. Gürcan Ozan, and Tuba Turan from TÜBİTAK, The Scientific and Technical Research Council of Turkey. The presenters provided valuable information about the general purpose of FP7, project proposal preparation, project review and evaluation, project management, and project partner search. Several presentations focused on specific FP7 activity areas such as information and communication technologies, transportation, energy, and environment. Those who missed the workshop can access electronic copies of these presentations at http://fp7.emu.edu.tr.

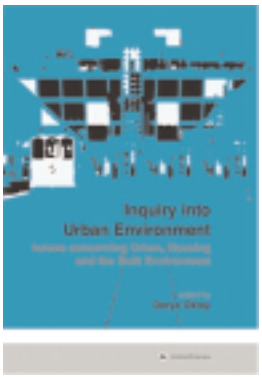
EMU becomes a founding member of *MEDITERRANEO NOSTRO*

Mediterranean Castles and Walled Towns International Meeting took place in Catania, Sicily (Italy) between November 29 and December 2, 2006. The meeting was organized by the Istituto Italiano dei Castelli - Sezione Sicilia, the Sicily Branch of the Italian Institute of Castles, and by the Scientific Council of Europa Nostra, the pan-European Federation for Cultural Heritage. Naciye Doratlı from the Faculty of Architecture represented EMU and undersigned the agreement protocol for the establishment of *MEDITERRANEO NOSTRO*, Federation of the Institutions and Organizations for the Safeguard of the Fortified Heritage in the Countries of the Mediterranean Basin. Members of this international association proclaim interest and confirm their support in promoting the preservation of the patrimony of fortifications in countries located in the Mediterranean basin.

EMU affiliate contributes to a documentary about the architecture and history of Templers

Danny Goldman from the Department of Architecture served as an expert for Israel National Television during the production of *The Templers' Secret in Tel-Aviv*, a recently completed 80-minute documentary film about the architecture and history of Templers, Christian settlers of the Holy Land in the 19th century. Danny Goldman acted as research consultant, historical architecture contributor, as well as film and still image contributor. In the film, he expresses his views regarding the Templers and their architecture and history.

EMU Press publishes book on urban environment



Inquiry into Urban Environment: Issues concerning Urban, Housing and the Built Environment, a 164-page book initiated by the Urban Research & Development Centre (KENT-AG) in 2005, brings together texts that cover various dimensions of the city, from urban scale to housing and building scale, and accordingly helps create a comprehensive perception of urban environment. All articles included in this publication are revised forms of papers presented by guest speakers at the EMU Urban Research and Development Centre (URDC / KENT-AG), between 2000 and 2005. The authors of these articles are R. Bademli, M. Çubuk, R. Keleş, F. Nunes da Silva and B. Condessa, M. da Costa Lobo, M. C. Childs, M. Bricocoli, P. G. Raman, and K. Pontikis.

Since the environment within which we live is an ever-changing one, and cities have been changing over time by accommodating new developments as well as by adapting existing urban fabrics to new uses, and since the negative impacts of city design, patterns of urban life and production on the environment are well recognized, 'urban design for sustainability' has emerged as a significant concept and challenge for planners and architects at the beginning of the new millennium. In this context, ecological and environmental concerns have become central to recent debates about the city as they have to a number of readings in this book. What is important in this context is the need to perceive the city as a stage for ever-changing performances, led by economic, social and cultural forces, where different actors involved in the process of change have an increasingly important role to play in the improvement or the decay of their habitats.

Inquiry into Urban Environment: Issues concerning Urban, Housing and the Built Environment, edited by Derya Oktay and published by the EMU Press in 2006, can be used as a reference guide in various areas of urban planning/design and housing design, or as a companion text in courses that are focused on one of these topics.

Books or book chapters by EMU researchers

The following is a list of recent books and book chapters written or edited by EMU researchers. The list provided here may not be comprehensive as it has been put together based on e-mails sent to the newsletter staff between March 1, 2007 and March 15, 2007.

- E. Bashirov and Z. Mazhar, "On asymptotical behavior of solution of Riccati equation arising in linear filtering with shifted noises," in *Mathematical Methods in Engineering*, K. Taş, J. A. T. Machado, and D. Baleanu, Eds., pp. 141-149, Springer (2007).

- H. Çancı, *Büyük Karara Doğru*, İstanbul Kum Saati Yayınları (2007).

- B. N. Ghosh, *Gandhian Political Economy: Principles, Practice and Policy*, Ashgate Publishing, UK (2007).

- A. Sözen, "Terrorism and the Politics of Anti-Terrorism in Turkey," in *National Counter-Terrorism Strategies - Legal, Institutional, and Public Policy Dimensions in the US, UK, France, Turkey and Russia*, R. W. Orttung and A. Makarychev, Eds., pp. 155-164, IOS Press, Washington DC (2006).

- J. Wall, Ed., *Music, Metamorphosis and Capitalism: Self, Poetics and Politics*, Newcastle-upon-Tyne: Cambridge Scholars Press (2007).

- J. Wall and D. Hammer, "The Material Experience of Abstraction: Morton Feldman and the Experience of Silence," in *Music, Metamorphosis and Capitalism: Self, Poetics and Politics*, J. Wall, Ed., Newcastle-upon-Tyne: Cambridge Scholars Press (2007).

- J. Wall and D. Jones, "The Body of the Voice: Corporeal Poetics in Dada," in *Dada Culture: Critical Texts on the Avant-Garde*, D. Jones, Ed., Amsterdam-New York: Rodopi (2006).

Metal 'trappers' and ceramic 'casters': Biomedical, environmental, and industrial applications

By Elvan Yılmaz, Osman Yılmaz and Murat Bengisu

Osman Yılmaz (left) and Elvan Yılmaz (right) in their lab located in the basement of Arts and Sciences building

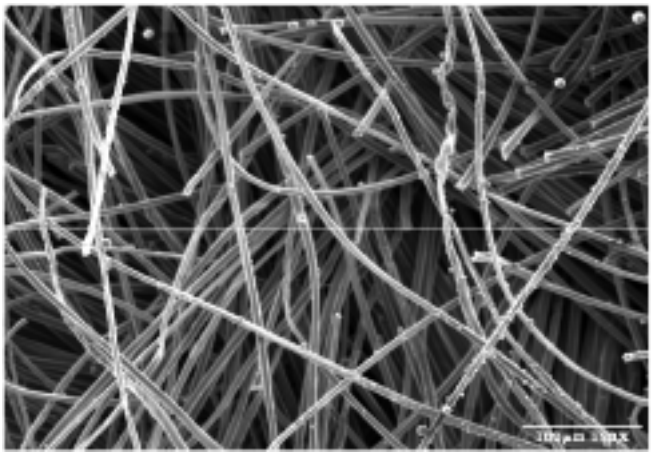
Let alone multidisciplinary research, even very simple experimental research at EMU was almost dreaming the impossible when we (E.Y. and O.Y) first joined The University's Chemistry Department in 1991. With limited infrastructure and resources at hand, polymerization reactions under high vacuum or studies that required sophisticated analysis techniques were out of question. So, we turned our attention to the rapidly growing area of biopolymer research. Rather than doing research on diverse topics which would necessitate establishment of several different laboratories, we chose to form a collaborative but focused research team that would be most suitable for a university with a low research budget. Today, our research group led by three main investigators, two polymer chemists Elvan Yılmaz and Osman Yılmaz and one materials engineer Murat Bengisu (currently employed at Yaşar University, İzmir, Turkey) is working on preparation and characterization of multifunctional gels ranging from derivatives of the biopolymers chitin and chitosan to silica and borate glasses for biomedical, environmental, and industrial applications.

Chitosan is a biopolymer that has been increasingly drawing the attention of scientists since the 1980s. Its precursor chitin is a component of the exoskeleton of marine animals like crabs and shrimps. When complexed with multivalent ions such as copper, lead, iron, cadmium, and mercury, chitosan gels out from solution. Further, it is possible to adjust the gel particle size to micro- and even nanoscales by controlling the reaction conditions. These properties suggest that gels derived from chitosan can serve as heavy metal adsorbents of both environmental and biological interest.

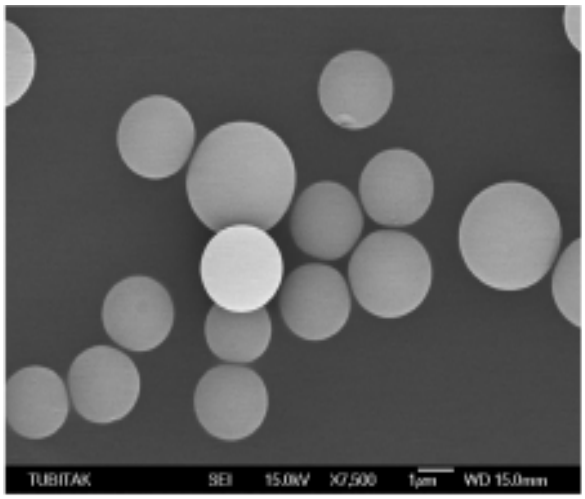
Chitosan research has led to some exciting results since we have initiated our first project on the modification of this polymer in 1996. The project was funded by TÜBİTAK, The Scientific and Technical Research Council of Turkey (TBAG-AY/178;198T065) and the results were first published in 1998 [1]. We have shown since then that chitosan derivatives can serve as antibacterial agents [2] and can be applied for iron removal from aqueous solutions, even from the blood plasma of Thalassemia patients *in vitro* [3]. Two M.S. theses completed recently and a research project funded jointly by the TRNC Ministry of Education and Culture and the Eastern Mediterranean University (MEKB-05-02) have revealed that chitosan tripolyphosphate gels are superior to unmodified chitosan in iron removal from solution. Iron chelation therapy is not only essential in the treatment of Thalassemia patients but can also prove useful in preventing tumor cell growth or fighting diseases such as adult respiratory distress syndrome, myocardial ischemia and malaria. Currently used iron chelators are expensive, poorly absorbed by the gastrointestinal route, and most importantly, have toxic side effects. Therefore, development of more effective and nontoxic iron chelators is of great interest. In fact, the above-mentioned problems are not specific only to iron chelators; other heavy metal chelators suffer from similar problems. Being a biocompatible and biodegradable material, chitosan has significant potential to be applied as a novel metal chelating agent. In collaboration with toxicologist Hande Gürer-Orhan (Faculty of Pharmacy, Ege University, İzmir, Turkey), we are currently working on a new project on preparation and *in vitro* as well as *in vivo* characterization of chitosan nanoparticles to be applied in treatment of lead toxicity.

On a different note, iron adsorption onto chitosan can be exploited to form iron oxide-impregnated chitosan gels that can be used for arsenic removal from contaminated waters. We have recently established an international collaboration with Szelena2, a company in Budapest, Hungary, to initiate a research project on treatment of arsenic contaminated ground waters.

Chitosan gels are not only of bio-



Electron micrograph of chitin fibers (The image shown has been acquired using a scanning electron microscope at a TÜBİTAK research facility in Turkey; the scale bar on the lower right corner represents 100 microns)



Electron micrograph of silica microspheres obtained by sol-gel technique and used in drug entrapment (The image shown has been acquired using a scanning electron microscope at a TÜBİTAK research facility in Turkey; the scale bar on the lower right corner represents 1 micron)

logical or environmental interest but also of industrial importance. Gelcasting is an emerging technique that can be employed to fabricate complex-shaped ceramic parts used for dentures or mechanical parts such as seals, nozzles, spark plugs, and sensors. The chemicals used in the process are usually toxic and expensive. Chitosan gels offer a nontoxic and economical alternative in this regard. Gelcasting of ceramics like alumina and zirconia using chitosan as a sol-gel medium [4] proved to be a feasible method with potential industrial applications. Our team also showed for the first time that carbon fibers can be obtained from chitosan fibers by a pyrolysis method similar to that used industrially to obtain carbon fibers from rayon [5]. This method opened the door for other interesting applications such as fabrication of hollow carbon nanospheres and nanofiber carbon-chitosan nanofilms [6, 7] and biomimetic synthesis of superconducting nanowires [8].

Drug entrapment into silica microspheres is another outcome of the multidisciplinary research carried out by our research team [9]. We have devised a simple procedure to produce silica microspheres containing various anti-inflammatory drugs for controlled drug delivery applications. We hope to expand our research and continue to address different challenges in biomedicine.

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Reconstruction of a 10,000-year-old Neolithic house at Tatlısu: A look into the past

By Müge Şevketoğlu

Project team working on reconstruction of a 10,000-year-old Neolithic house

The United Nations Development Programme "Partnership for the Future" has funded a unique project in northern Cyprus: Reconstruction of a 10,000-year-old Neolithic house at Tatlısu (Akanthou). The site is expected to become one of the tourist and educational attractions. Similar projects already exist in a larger scale in the southern part of the island at Lemba and Khirokitia, declared as world heritage sites by UNESCO.

The earliest human habitation in Cyprus is still a subject of debate. The earliest evidence of human activity on the island dates back to the Paleolithic period (11,000 BC) at the site of Akrotiri, where bones of hunted pigmy hippopotamus were discovered. The evidence for the earliest settled community of farmers and hunters belongs to a period called Aceramic Neolithic dating 8500-7000 BC. The period was named after the technological characteristics of this time, when stone tools were used and ceramic technology was not yet known. This period is one of the most important stages of human social evolution. Changes in the climate towards warmer temperatures allowed establishment of early farming and continuation of the old hunting tradition. Settled lifestyles led to the development of more permanent architecture. The earliest architectural remains (8200 BC) in the north of the island were uncovered at Tatlısu. Remains of houses with various shapes and building materials were brought to light after a painstaking rescue excavation by a team from the Department of Archaeology and Art History at EMU.

Mixing mud and hay

Laying down the roof with cane, saddle grass and mud

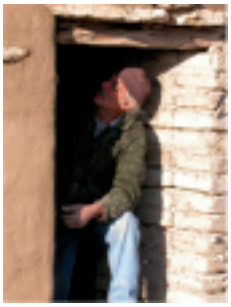
Molding bricks

Rendering by throwing mud on the outer walls

First layer of the roof construction

Beating down the render cracks on the wall

The resulting evidence as well as evidence from other roughly contemporary sites within the region was put together in creating a reconstruction



İsmail Cemal (an expert in traditional building crafts) working at the doorway

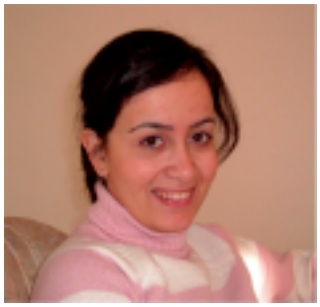
of a Neolithic house. The aims of the project were manifold: To understand ancient construction techniques; to relive and record the experience during the reconstruction process for a better interpretation of the technology of this period; to explore the capabilities and local resources for the materials used; to educate the public by displaying a one-to-one reconstruction of what a Neolithic house may have looked like, bringing to life the fragmentary evidence that a non-archaeologist may have difficulty in understanding. The project was carried out with strict adherence to archaeological evidence. No modern vehicle or materials were used during the reconstruction.

The reconstruction of the Neolithic house was accomplished with enormous help of the staff, graduates and many undergraduates of the Department of Archaeology and Art History at EMU, as well as many volunteers who contributed to mixing the mud or plastering the walls. As the team who worked on this project, we have grown to respect our ancestors who put so much knowledge, experience and hard work into building such houses in the past that provided shelter for bringing up future generations. We hope that you will enjoy visiting the site as much as we enjoyed building it.

Reconstruction of a 10,000-year-old Neolithic house at Tatlısu

Tackling call management in mobile wireless networks

By İdil Candan



İdil Candan

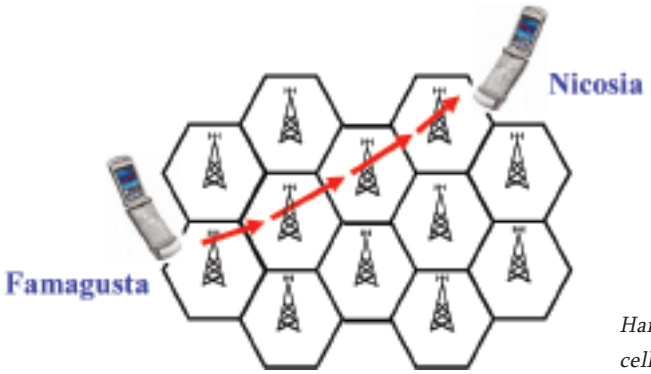
Are there mobile users who would not like an uninterrupted mobile phone conversation? Or, are there service providers who do not wish to utilize the given limited bandwidth efficiently?" The answer to both of these questions is, "No, there aren't!"

İdil Candan, a computer engineering graduate student, is two years into her doctoral studies. As a research assistant under the supervision of Muhammed Salamah, she primarily focuses on resource allocation, management and performance evaluation in wireless networks. Currently, she is developing a scheme that balances satisfactions of mobile users and service providers.

One of the major challenges in mobile wireless communications is to efficiently utilize the scarce resource (i.e. bandwidth) while at the same time guaranteeing the quality of service (QoS) of the ongoing calls. However, establishment and management of connections are crucial issues in QoS-sensitive cellular networks due to user mobility. A wireless cellular network consists of a large number of cells and mobile users with various movement patterns. At the center of each cell is a base station to which all mobile users are attached. Handoff is the mechanism that transfers an ongoing call from one base station to another as the user moves across the cells.

There are three generic and crucial QoS parameters that need to be considered when planning cellular networks. These are namely the handoff dropping probability, new call blocking probability, and bandwidth (channel) utilization. In previous studies, researchers have mostly focused on prioritizing handoff calls at the expense of blocking new calls [1, 2]. The common claim is "forced termination of ongoing calls is more annoying than blocking new calls". İdil Candan and her supervisor believe that this is only true to some extent since "annoyance" is a fuzzy concept and depends on the elapsed time of the ongoing call. For instance, dropping an ongoing voice call is very infuriating if it has not lasted for a moderate duration, whereas it is not as annoying if the call is about to come to an end. Further, priority is usually associated with pricing; customers having normal conversations that are not critical, for example, may tolerate handoff dropping if they pay a lower price.

Motivated by these arguments, İdil Candan and her supervisor introduced a novel bandwidth allocation scheme for voice calls [3] which is based on fairness among calls and outperforms other traditional schemes. Their time-threshold based scheme (TTS) involves monitoring the real elapsed time of voice calls and a handoff call is either prioritized or treated as a new call depending on a time threshold parameter. In TTS scheme, both users' and service providers' satisfactions are balanced. In addition, TTS can be implemented easily since it uses the real elapsed time of a call which is already recorded in billing systems.



Handoff in a wireless cellular network

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The following is a list of students who completed their master or doctoral degrees in Fall 2006-2007 and has been provided by the Institute of Graduate Studies and Research.

LLM

Eldeniz Agayev (Law)
Thesis Title: Uluslararası Hukuk Çerçevesinde Dağlık Karabağ Sorunu
Supervisor: Seymen Atasoy

İsmail K. Arslan (Law)
Thesis Title: İade-Restitution: Doğu Avrupa'da Ortaya Çıkan Örnekler ile "Annan Planı"ndaki Düzenlemenin Karşılaştırması ve Öneriler
Supervisor: Kudret Özersay

Münüre Dağlar (Law)
Thesis Title: Avrupa İnsan Hakları Mahkemesi Kararları Işığında Adil Yargılanma Hakkı ve KKTC'de İdari Davalarda İstinaf
Supervisor: Tufan Erhürman

Hande Güzoğlu (Law)
Thesis Title: T.C'de ve K.K.T.C.'de İşçinin Bireysel Sendika Özgürlüğü ve Korunması
Supervisor: Süleyman Başterzi

MA

Menang Akongmo (Banking and Finance)
Thesis Title: Appraisal of the El-Kureimat Combined Cycle Power Plant
Supervisor: Glenn P. Jenkins

Yana Boyko (Communication and Media Studies)
Thesis Title: Poems, Images and Mysteries: The Analysis of Yuri Norstein's Films
Supervisor: Melek Atabey

Khizar Hayat (Banking and Finance)
Thesis Title: Cost Benefit Analysis of Health Sector Projects: A Case Study of Benquet General Hospital Philippines
Supervisor: Glenn P. Jenkins

Yalda F. Sadri (Communication and Media Studies)
Thesis Title: Potential of Buzz Marketing in Iranian Marketplace
Supervisor: Chris Miles

Sultan Şanlıdağ (Banking and Finance)
Thesis Title: The Impact of Financial Development and The Istanbul Stock Exchange in the Case of Turkish Economy
Supervisor: Salih Katırcıoğlu

Suzan Yılmaz (English Literature and Humanities)
Thesis Title: Nineteen Eighty-Four: Reading the Novel as a Film
Supervisor: Prakash R. Kona

MBA

Marzieh Arad (Business Administration)
Thesis Title: The Effects of Organizational Justice, Leader Member Exchange (LMX), Job Satisfaction and Organizational Commitment on Turnover Intention: A Study of Iranian Hotel Employees
Supervisor: Cem Tanova
Co-Supervisor: Tarık Timur

Muhammed Gildir (Business Administration)
Thesis Title: An Inquiry into Adoption of E-Commerce in SMEs in North Cyprus
Supervisor: Mehmet İslamoğlu

Neraida Hoxhaj (Business Administration)
Thesis Title: Changing Firm Culture of Industrial Firms into Quality Culture in Dynamic Markets: Proposition of Integrated Quality Corporate Culture Model
Supervisor: Hulusi Demir

Mohammed T. Ibrahim (Business Administration)
Thesis Title: The Impact of National Economic Empowerment Development Strategy on the Nigeria's Economic Development
Supervisor: Özay Mehmet
Co-Supervisor: Şule Aker

Rassim Karibov (Business Administration)
Thesis Title: Increasing Competitive Performance of Manufacturing Small and Medium Sized Enterprises in Kazakhstan through Implementation of Selected Business and E-commerce Strategies: Application of an Integrated E-Strategy Model
Supervisor: Tayfun Turgay

M.Ed

Ozan S. İnamlık (Educational Sciences)
Thesis Title: Electronic Portfolios in Foreign Language Learning: Creating a Motivating Writing Context in an EFL Elementary Class via Student Webfolios
Supervisor: Hüseyin Yaratan

MS

Nemika Cellatoğlu (Physics)
Thesis Title: Experimental Determination of Incident Radiation Power
Supervisor: Eser Aydıroğlu

Elmira Emsia (Economics)
Thesis Title: Brain Drain from Iran to the US (1970-2000)
Supervisor: B. N. Ghosh

Maryam H. E. Z. Gharebaghi (Mechanical Engineering)
Thesis Title: Numerical Investigation of Phase Change Process of PCM in a Thermal Energy Storage System with Fins
Supervisor: İbrahim Sezai

Simge Gutan (Economics)
Thesis Title: The Role of Banking in the Growth of the TRNC Economy
Supervisor: Hasan Güngör

Shima Izadpanahi (Computer Engineering)
Thesis Title: Multi-Frame and Single-Frame Super-Resolution Methods: Analysis and Implementation
Supervisor: Manuel Carcenac

Nagehan İlhan (Computer Engineering)
Thesis Title: Solving the Teacher Relocation Problem Using Constraint Logic Programming
Supervisor: Zeki Bayram

Havva Kaffaoglu (Mathematics)
Thesis Title: Inequalities and Differential Equations on Time Scales
Supervisor: Nazım Mahmudov

Elif Kaya (Economics)
Thesis Title: Financial System Development and Economic Growth: The Case of Turkey
Supervisor: Eralp Bektaş

Saman Khajoui (Industrial Engineering)
Thesis Title: A Study on Burn-in, Warranty and Maintenance Based System Design
Supervisor: Alagan Rangan
Co-Supervisor: Nureddin Kırkavak

Banafsheh Khosravi (Industrial Engineering)
Thesis Title: Simulated Annealing Application on Capacitated Lot Sizing Problem with Backlogging and Set up Carry over Considerations
Supervisor: Nureddin Kırkavak

Babak Khosravifar (Computer Engineering)
Thesis Title: Reducing the False Alarm Rate of Network Attacks Using Honey Pots with an Agent-based Intrusion Detection System
Supervisor: Alexander Kostin

Mehmet Kızıldağ (Computer Engineering)
Thesis Title: Performance Analysis and Tracking of Mobile Nodes in Location Sensing Wireless Networks
Supervisor: Erden Başar
Co-Supervisor: Muhammed Salamah

Erinda Malaj (Economics)
Thesis Title: The Effectiveness of Financial Reforms in Attaining Economic Sustainability in Turkey
Supervisor: Hasan Güngör

Sepanta Naimi (Mechanical Engineering)
Thesis Title: Computerized Multi-Purpose Pumps Testing
Supervisor: Hasan Hacışevki

Busaina Nazzal (Physics)
Thesis Title: Physics of Tsunamis
Supervisor: Mustafa Halilsoy

Ali G. Nejad (Tourism Management)
Thesis Title: Measuring Customer Satisfaction in Travel Agencies: Case of Gazimağusa/TRNC
Supervisor: Habib Alipour
Co-Supervisor: Rüçhan K. Vaziri

Mehrshad Radmehr (Tourism Management)
Thesis Title: Destination Satisfaction from the Perspective of International Tourists: Some Evidence from Iran
Supervisor: Hüseyin Araslı
Co-Supervisor: Salime M. Smadi

Ali Tüzel (Computer Engineering)
Thesis Title: Optimal Estimation of Ensemble Member Weights Using Bounded Neural Networks
Supervisor: Hakan Altınçay

Edwin M. Vughaingmeh (Tourism Management)
Thesis Title: Attitudes of Residents Regarding the Socio-Cultural Effects of Casino Gambling: Case Study of Kyrenia, Turkish Republic of Northern Cyprus (TRNC)
Supervisor: Habib Alipour

Kerim Ö. Yel (Industrial Engineering)
Thesis Title: Developing Meta-heuristic Models for Solving Mixed-Model Assembly Line Balancing Problem: Experimental Results for Comparison
Supervisor: Nureddin Kırkavak

Ph.D

Ayşe Pekrioğlu (Civil Engineering)
Thesis Title: Use of High Volume Fly Ash Grout Material in Granular Media: Laboratory Simulation and Analysis
Supervisor: Ata G. Döven

Journal Publications (ISI)

The journal publications presented are limited to those that are listed in Arts & Humanities Citation Index (A&HCI), Science Citation Index Expanded (SCI-Expanded), or Social Sciences Citation Index (SSCI). A search was performed on March 15, 2007 to automatically extract the indexed journal articles from ISI Web of Science®. The articles included in the list that follows have at least one author with EMU affiliation.

H. Akdur, Z. Yidit, A. Soezen, T. Cadatay, and O. Guven, "Comparison of pre- and postoperative pulmonary function in obese and non-obese female patients undergoing coronary artery bypass graft surgery," *Respirology* **11**(6), 761-766 (2006).

A. Al-Badawi and M. Halilsoy, "On the physical meaning of the NUT parameter," *General Relativity and Gravitation* **38**(12), 1729-1734 (2006).

D. Arifler, C. MacAulay, M. Follen, and R. Richards-Kortum, "Spatially resolved reflectance spectroscopy for diagnosis of cervical precancer: Monte Carlo modeling and comparison to clinical measurements," *Journal of Biomedical Optics* **11**(6), 064027 (2006).

E. Aydin and A. G. Doven, "Influence of water content on ultrasonic pulse-echo measurements through high volume fly ash cement paste-physicomechanical characterization," *Research in Nondestructive Evaluation* **17**(4), 177-189 (2006).

R. Bashirov and V. Crespi, "Analyzing permutation capability of multistage interconnection networks with colored Petri nets," *Information Sciences* **176**(21), 3143-3165 (2006).

J. P. Dauer, N. I. Mahmudov, and M. M. Matar, "Approximate controllability of backward stochastic evolution equations in Hilbert spaces," *Journal of Mathematical Analysis and Applications* **323**(1), 42-56 (2006).

M. M. Erginel, "Plato on a mistake about pleasure ('Republic IX')," *Southern Journal of Philosophy* **44**(3), 447-468 (2006).

M. D. Fethi, S. Fethi, and S. T. Katircioglu, "Estimating the size of the Cypriot underground economy - A comparison with European experience," *International Journal of Manpower* **27**(6), 515-534 (2006).

M. Garip, E. Erdil, and A. Bilsel, "Engineering faculty attitudes to general chemistry courses in engineering curricula," *Journal of Chemical Education* **83**(12), 1873-1878 (2006).

B. N. Ghosh and S. Aker, "Future of North Cyprus: An economic-strategic appraisal," *Futures* **38**(9), 1089-1102 (2006).

T. Ilter, "The otherness of cyberspace, virtual reality, and hypertext vis-a-vis "the traditional"," *Open House International* **31**(4), 95-99 (2006).

O. M. Karatepe and L. Baddar, "An empirical study of the selected consequences of frontline employees' work-family conflict and family-work conflict," *Tourism Management* **27**(5), 1017-1028 (2006).

O. M. Karatepe, U. Yavas, E. Babakus, and T. Avci, "Does gender moderate the effects of role stress in frontline service jobs," *Journal of Business Research* **59**(10-11), 1087-1093 (2006).

A. E. Kostin, "An anycasting protocol for anonymous access to a group of contents-equivalent servers in a distributed system," *Lecture Notes in Computer Science* **4243**, 377-386 (2006) [Also in *Proceedings of the 4th International Conference on Advances in Information Systems (ADVIS 2006)*, İzmir, Turkey, October 2006].

A. Kostin, "A simple and fast multi-class piecewise linear pattern classifier," *Pattern Recognition* **39**(11), 1949-1962 (2006).

O. Kukrer and A. Hocanin, "Frequency-response-shaped LMS adaptive filter," *Digital Signal Processing* **16**(6), 855-869 (2006).

M. Kusaf and A. Y. Oztoprak, "Higher stability limits for the symplectic FDTD method by making use of Chebyshev polynomials," *IEEE Microwave and Wireless Components Letters* **16**(11), 579-581 (2006).

N. I. Mahmudov and M. McKibben, "Approximate controllability of second-order neutral stochastic evolution equations," *Dynamics of Continuous, Discrete and Impulsive Systems, Series B: Applications & Algorithms* **13**(5), 619-634 (2006).

O. Mustafa and S. H. Mazharimousavi, "Quantum particles trapped in a position-dependent mass barrier; a d-dimensional recipe," *Physics Letters A* **358**(4), 259-261 (2006).

C. Pintea, "A measure of the deviation from there being fibrations between a pair of compact manifolds," *Differential Geometry and its Applications* **24**(6), 579-587 (2006).

O. Ramadan, "Complex envelope Crank Nicolson PML algorithm for band-limited electromagnetic applications," *Electronics Letters* **42**(23), 1325-1326 (2006).

O. Ramadan and A. Y. Oztoprak, "Unconditionally stable Crank-Nicolson wave-equation PML formulations for truncating FDTD domains," *Electrical Engineering* **89**(2), 89-93 (2006).

R. Sakthivel, J. H. Kim, and N. I. Mahmudov, "On controllability of nonlinear stochastic systems," *Reports on Mathematical Physics* **58**(3), 433-443 (2006).

P. Zhang, "Automorphisms of braid groups on closed surfaces which are not S-2, T-2, P-2 or the Klein bottle," *Journal of Knot Theory and Its Ramifications* **15**(9), 1231-1244 (2006).

Conference Papers and Presentations

The following list of conference papers and presentations may not be comprehensive as the information presented here has been put together based on e-mails sent to the newsletter staff by EMU researchers between March 1, 2007 and March 15, 2007.

R. R. Aliev and M. Soleymanlou, "Naive Bayes learning algorithm based prediction for a loan granting process," in *Proceedings of the 3rd International Symposium on Electrical, Electronic and Computing Engineering (ISEECE 2006)*, pp. 85-90, Near East University, Nicosia, Cyprus, November 2006.

S. İ. Çelebi, "Sequence of PR/Publicity and Advertising for Tangible Product Introductions in Turkey," in *Proceedings of the 10th Slovene Conference on Public Relations: Communication Evolution - From Information to Integration*, pp. 63-67, Ljubljana, Slovenia, October 2006.

Y. Çolak, "Neo-Ottomanism, Cultural Diversity and Contemporary Turkish Politics", The EU and the Historical Legacy in the Balkans, UCSIA & University of Antwerp, Belgium, November 2006.

K. Degtiarev, "An Empirical Comparison of First-Order Fuzzy Time Series Model Performance With and Without Hedging," in *Proceedings of the 3rd International Symposium on Electrical, Electronic and Computer Engineering (ISEECE 2006)*, pp. 275-281, Near East University, Nicosia, Cyprus, November 2006.

A. Günyaktı, E. Aksugür, H. A. Bıçak, and M. Zafer, "A proposal for marina development in Lefke coastal area," in *Proceedings of the 4th FAE International Symposium – Creating the Future*, pp. 239-243, European University of Lefke, Gemikonağı, Cyprus, November-December 2006.

A. Günyaktı and E. Özdemir, "The renewable energy and hydropower potential of Turkey," in *Proceedings of the 4th FAE International Symposium – Creating the Future*, pp. 245-252, European University of Lefke, Gemikonağı, Cyprus, November-December 2006.

N. İlhan and Z. Bayram, "A Constraint Logic Programming Solution to the Teacher Relocation Problem," in *Proceedings of the 2nd International Computer Engineering Conference Engineering the Information Society (ICENCO 2006)*, pp. 20-25, Cairo, Egypt, December 2006.

N. İlhan and Z. Bayram, "Two Different Approaches of Modeling the Teacher Relocation Problem in a Constraint Logic Programming System and their Comparison," in *Proceedings of the International Conference on Systems, Computing Sciences and Software Engineering (SCS2'06)* - organized as part of The International Joint Conferences on Computer, Information, and Systems Sciences, and Engineering (CIS2E'06), Internet presentation, December 2006.

O. Kükrer, H. Kömürcügil, and A. Doğanalp, "Sliding Mode Control of Single-Phase UPS Inverters Using a Three-Level Hysteresis Switching Function," in *Proceedings of the 32nd Annual Conference of the IEEE Industrial Electronics Society (IECON'06)*, pp. 331-335, Paris, France, November 2006.

N. O. Pagan, "Ibsen, Beckett, and Shepard: The Power of Triangles," Beckett after Ibsen Conference, Ankara University, Turkey, November 2006.

H. Pulhan and İ. Numan, "The Place of Asmaaltı: A Narrative of Migration, Identity and Heritage in Cyprus," in *Traditional Dwellings and Settlements Working Paper Series vol. 193*, IASTE, University of California, Berkeley, California, December 2006.

Ö. O. Türker and H. Pulhan, "Hyper-Cypriot Architecture: The Transformation of Local and Global Values", The 10th Conference of the International Association for the Study of Traditional Environments (IASTE), Thammasat University, Bangkok, Thailand, December 2006 [Printed in *Traditional Dwellings and Settlements Working Paper Series vol. 196 (Global Transformations and Local Traditions)*, IASTE, University of California, Berkeley, California, December 2006].