

# research newsletter



Eastern Mediterranean University

*A journey on  
land and sea with  
Chelonia mydas &  
Caretta caretta*



# Editor's Message

## **Editor-in-Chief**

Bahar Taneri

## **Associate Editor**

Donna Ruzzano

## **Editorial Assistants**

Olusegun A. Olugbade

Fatih Parlak

## **Research Newsletter Secretariat**

Office of the Research Advisory Board

Eastern Mediterranean University

Famagusta, North Cyprus

Phone: +90 392 630 1251

Fax: +90 392 365 1604

e-mail: research.newsletter@emu.edu.tr

## **Research Advisory Board**

Ayhan Bilsel (Chair)

Ali Hakan Ulusoy (Vice Chair)

Hulusi Demir

Tuğrul İlter

Osman Karatepe

Derya Oktay

Şener Uysal

Feryal Varanoğulları

Elvan Yılmaz

EMU Research Newsletter is published quarterly through the office of the Research Advisory Board. The information presented in the *News Highlights* and *Recent Publications and Presentations* sections are as they are submitted by faculty members.

## **Cover Photograph:**

Burak Ali Çiçek

## **Printed by:**

Eastern Mediterranean University

Printing-House T. No: 504068

May 2008



Dear Colleagues,

As the new editor-in-chief, I welcome all existing and new readers of *EMU Research Newsletter* to the first issue of 2008. *EMU Research Newsletter* has been an important part of the Research Advisory Board's goal towards promoting and advancing the research culture at our university since 2005. Previous editors-in-chief Derya Oktay and Dizem Arifler have done great jobs to this extent.

With *EMU Research Newsletter*, our aim is of three fold. Firstly, by highlighting the important research activities that take place at our university, we would like to emphasize that research is of utmost importance at EMU, as for all institutions of higher education which strive to be competitive at an international level. Secondly, we will serve as a platform whereby research ideas are shared and in doing so we hope to promote the establishment of new research collaborations, particularly for multidisciplinary projects. And last but not least, we would like to inform our undergraduate students about ongoing research at EMU and introduce them to the research world.

With this first issue of 2008, we are bringing interesting research projects to your attention. Ecologist Burak Ali Çiçek takes us on a journey with the newborn *Chelonia mydas* and *Caretta caretta* of the Karpaz shores. Çiçek paints a picture of the current threats faced by these two species of endangered sea turtles. With this article, we are hoping to raise awareness about these two endangered species and the environmental threats that the Karpaz shores are facing.

Developmental Psychologist Biran Mertan brings interesting insights to the influence of the order of language acquisition on spelling accuracy in Turkish-French bilingual children. Even though language processing in bilingual children has been a topic of interest for researchers for several decades now, Mertan and her colleague from Cambridge, UK, are approaching this question from an all-together new angle by investigating the bi-literate spelling from an orthographic transparency perspective.

Finally, Chemistry graduate student Zülal Yalınca takes us to the troubled, yet ever evolving world of gene therapy. Much international effort and funding are being devoted towards achieving a safe gene transfer method, which promises worldwide biomedical applications and a significant impact on medicine. Yalınca and supervisors aim to tackle the issue of gene delivery by designing a new synthetic vector via modification of chitosan.

As evident from the research articles presented in this issue, EMU is home for talented researchers from a wide range of disciplines, investigating topics of interest both at the local and global communities. I hope you will enjoy reading these articles.

Many thanks to all those who have contributed to this issue of *EMU Research Newsletter*.

With best regards,

Bahar Taneri



---

<b>News Highlights</b>	<b>3</b>
------------------------	----------

---

<b>Research Spotlight: Engineering and Sciences</b>	<b>9</b>
---	----------

An ecological investigation of endangered sea turtles *Chelonia mydas* and *Caretta caretta* in Karpaz shores  
*By Burak Ali Çiçek*

---

<b>Research Spotlight: Arts, Humanities and Social Sciences</b>	<b>12</b>
---	-----------

Written picture naming of cognates as a function of orthographic transparency: Evidence from Turkish-French bilingual children  
*By Biran Mertan*

---

<b>Student Research Profile</b>	<b>15</b>
---------------------------------	-----------

An alternative approach to gene delivery in gene therapy  
*By Zülal Yalınca*

---

<b>Fall 2007-2008 Postgraduate Degrees</b>	<b>17</b>
--	-----------

---

<b>Recent Publications and Presentations</b>	<b>19</b>
--	-----------

---

### Research @ EMU

#### ■ An International Symposium on Underwater Research held at EMU

The Second International Symposium on Underwater Science and Research organized by the Eastern Mediterranean University Underwater Research and Imaging Center (EMU URIC), took place at EMU during 20-22 March 2008. The symposium brought together many well-known academicians. There were about 60 participants, from Russia to Portugal, working on different aspects of underwater research such as marine biology and underwater archaeology. Team members of the famous Captain Cousteau, Andre Laban and team leader Bernard Delemotte who are the co-inventors of underwater housing attended the Symposium as Guests of Honour.

A wide range of topics were covered at the symposium including diving physiology, diving safety and first aid, ecology of coral reefs, artificial reef construction, marine pollution, coastal zone management, marine mapping and navigation. One of the main topics during the symposium was underwater medicine and healing techniques. Joined by experts and doctors from the Burhan Nalbantoğlu Nicosia State Hospital, the panelists had a vivid discussion about the implementation of underwater healing techniques in North Cyprus.

The symposium not only created an opportunity for researchers from different fields to exchange scholarly information but also aided in raising awareness about the current ecological concerns of the Mediterranean Sea. This symposium brought forward the issue about species living in North Cyprus coastal zones which are protected by international agreements. Current protection and research activities about these species such as Monk Seals and Sea Turtles were discussed. Symposium participant Bayram Öztürk of İstanbul University and Türk Deniz Araştırmaları Vakfı (TÜDAV – Turkish Sea Research Foundation), emphasized that it is not enough to protect only the terrestrial parts of the Karpaz Peninsula and that special



attention must be given to the Karpaz shores and the seas around the Karpaz Peninsula as part of global responsibility.

All scientists and academicians who attended the symposium have agreed that in particular the Karpaz Peninsula, which has a unique wealth of eco-diversity, and the Eastern Mediterranean as a whole must be under continuous protection. Symposium attendees aim to further extend their studies and establish new research collaborations in line with this goal.

#### ■ EMU hosts 12<sup>th</sup> Symposium on Mediterranean Archaeology

The 12<sup>th</sup> annual Symposium on Mediterranean Archaeology (SOMA) took place at EMU during 5-8 March 2008. SOMA symposiums have been organized at different universities around the world since 1997. EMU Underwater Research and Imaging Center had the privilege to host SOMA 2008 where 60 papers and posters were presented. Participants of the symposium included researchers coming from 14 different countries: Austria, England, Germany, Israel, Italy, North Cyprus, Norway, Poland, Romania, Russia, Serbia, Spain, Turkey and USA. Keynote speakers of the conference were Ehud Galili and Baruck Rosen of Israel Antiquity Authority, Israel, Zaraza Freidman of Zinman Institute of Archaeology, Haifa University, Israel and Levent Zoroğlu of Selçuk University, Turkey. Overall a wide range of topics covering Management of Archaeology, Semiotics and Archaeology, Archaeoseismology, Natural Hazards and Archaeology, Archaeogeophysics and Archaeometry were discussed at the symposium. First meeting of General Association on Mediterranean Archaeology also took place during the symposium. Further details on SOMA 2008 are accessible via <http://soma2008.emu.edu.tr>.



## ■ EMU Archaeologist Takes Part in Harbour Excavation of Kelenderis

Kelenderis is located on the Mediterranean coast of ancient Rough Cilicia, where today Aydıncık, a town of Turkey is located. Recent excavations at Kelenderis have proved that the settlement there goes back to the Bronze Age. Based on the suitable location of the town with its harbour on the sea routes between east and west, and between Asia Minor and Cyprus, Kelenderis developed rapidly and became one of the important ports on the Mediterranean Sea. The underwater survey of the ancient harbour of Kelenderis started in 2006. The project is being conducted by a team of researchers under the leadership of EMU archaeologist Hakan Öniz from the EMU Underwater Research and Imaging Center. The team first undertook the challenge of mapping the harbour area and successfully finished this in August 2006. Subsequently, the team worked on removing sand and other remnants by means of vacuum system to uncover the stones lying irregularly on the ground underwater. The whole area was uncovered and the plan of ruins was drawn in a short time. Based on the findings, researchers concluded that they uncovered the remains of a quay, which is measured nearly 25 meters long starting from the shore and is 5 meters wide. In 2007, the team continued the process of uncovering sand and little stones by airlifts. As of 2008, all remains of the quay have been uncovered. However, there are still some elements of the construction around the quay covered by sand and little stones. Researchers speculate that these elements could show the destruction reasons of the quay such as an earthquake or a tsunami. The group is currently continuing their field work and aim to find answers to questions about date of the remains and their functions.

## ■ International Conference on Middle East and North Cyprus provides a discussion platform on perspectives in political, economic and strategic issues



EMU Center for Strategic Studies organized an international conference on Middle East and North Cyprus during 20-22 March 2008. The conference aimed at strengthening the collaboration between EMU Center for Strategic Studies and likeminded strategic research centers in the Middle East with a

view to enhance the relations between North Cyprus and Middle Eastern countries. The conference brought together

world-class researchers, academicians and policy-makers and enabled a discussion platform for their research findings and ideas on political, economic and strategic status of Turkish Republic of Northern Cyprus (TRNC). Among the topics explored at the conference were means of enhancing the status of TRNC internationally. The conference started with the keynote speech on “The Dual Society Between Conflict and Concord: Lessons from Iraq, Cyprus and Somalia” delivered by Ali Mazuri of Binghamton University and State University of New York, USA.



Conference participants

In a ceremony Norton Mezvinsky of Central Connecticut State University, USA, was awarded an honorary doctorate from EMU. During the conference, Norton Mezvinsky chaired a session titled “Middle East and the Turkish Cypriot Experience” and delivered a speech on “Turkish Cypriots and Palestinians: A comparison of National Problems”. During the conference, a special session was organized in remembrance of Mehmet Tahiroğlu, former dean of EMU Faculty of Business and Economics.

## ■ EMU Researcher Participates in International Workshop Organization on Petri Net Tools

EMU Faculty of Arts and Sciences, Mathematics Department member Rza Bashirov took part in the organization of an International Workshop on Petri Net Tools and Applications (PNTAP 2008). Petri nets are mathematical and graphical modeling tools that are evolved from finite state automata to analyze the problems arising in scientific, engineering and industrial domains. Petri Nets software tools are successfully implemented in areas such as computer architecture, serial and parallel pro-



cessing, robotics, operating systems, communication protocols, performance evaluation, discrete industrial systems, holonic manufacturing systems, batch production systems, genetic engineering and bioinformatics. Bashirov served in the program committee of PNTAP 2008 together with 16 colleagues from 19 different universities representing eight European countries, USA, Canada and Australia. PNTAP 2008 was held in Marseille France during 3-7 March 2008, as one of the four satellite events of the ACM/IEEE International Conference on Simulation Tools and Techniques (SIMUTools 2008). Official website of this workshop is accessible via <http://www.pntap.org/>.

### ■ EMU Department of Architecture collaborates with the International Vernacular Architecture Unit at Oxford Brookes University

International Architectural Regeneration and Development Programme of the International Vernacular Architecture Unit at Oxford Brookes University has an annual international field trip as part of their program. This year the field trip took place in North Cyprus in collaboration with the EMU Faculty of Architecture between 27-30 January 2008. The field study was coordinated by Marcel Vellinga of the Oxford Brookes University, UK and Hifsiye Pulhan of EMU Department of Architecture. The field trip was organized by Aylin Orbaşlı of Oxford Brookes University, UK and following members of EMU Department of Architecture; Özlem Olgaç Türker, Özgür Dinçyürek and Resmiye Alpar Atun. The visiting student group from UK together with graduate students of the EMU Department of Architecture made observations and collected data in Akçiçek Village, Girne, one of the rural settlements of North Cyprus.



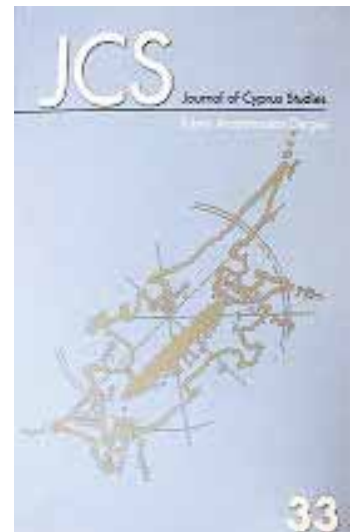
Akçiçek Village School

The aim of the trip was to develop Architectural Regeneration Projects. Field study was enriched with a series of lectures about the Traditional Environments of Cyprus given by the faculty members from the EMU Department of Architecture. This event was also supported by the Department of Antiquities and the District Administration of Girne Region as a part of the current study on Traditional/Vernacular rural buildings in the Girne Region. The Akçiçek Village school seen on the right has been renovated by the Department of Antiquities and the District Administration of Girne as part of this event. The proposed architectural regeneration projects as outcomes of this trip are to be presented in May 2008 at Oxford Brookes University where EMU Department of Architecture faculty members will be present.

### ■ Journal of Cyprus Studies 33<sup>rd</sup> issue is out

The 33<sup>rd</sup> issue of the Journal of Cyprus Studies (JCS) is now out. JCS is a refereed, international and interdisciplinary journal published twice a year by the EMU press the Center for Cyprus Studies. Editor Özlem Çaykent announces that the latest issue of the journal has the following articles:

Women, and the Pursuit of Power in the Thirteenth Century by Ahmet Kemal-Hilmi, Mr. Fenech's colony: Maltese immigrants in Cyprus 1878-1950 by Gail Hook, A Little Bit of History and a Lot of Opinion by Madeleine Leonard and Humanities in a "Postmodernist" Cyprus by John Wall. Notes section of the journal includes A Short Report on Three Newly Accessible Churches in the Syrian Quarter of Famagusta by Alan Langdale and Michael Walsh. A literature review titled Kıbrıs'ta Kadın/Toplumsal Cinsiyet Çalışmaları ve Kadın Hareketi Üzerine Bir Değerlendirme (Women in Cyprus, Gender Studies and Women's Movement) has been prepared by Hanife Aliefendioğlu. The 33<sup>rd</sup> issue of JCS includes 2 book reviews. Nursin Ateşoğlu Güney's book titled Contentious Issues of Security and the Future of Turkey is reviewed by Akça Ataç and Gül İnanç's book titled Büyükelçiler Anlatıyor, Türk Diplomasisinde Kıbrıs (Ambassadors Explain: Cyprus in Turkish Diplomacy) is reviewed by Niyazi Kızılyürek. The journal also covers the activity report of EMU Center for Women Studies for 8 March 2007, International Women's Day.



## ■ EMU Cyprus Policy Center Recent Activities

Following are some of the activities carried out by EMU Cyprus Policy Center (CPC) in chronological order:

- CPC organized a seminar on “Re-Imagining Cyprus: The Rise of Regionalism In Turkey’s Security Lexicon” given by Alper Kaliber of the Department of Political Science & International Studies, University of Birmingham on 8 November 2007.
- EMU CPC director Ahmet Sözen delivered a speech at the European Parliament on 7 December 2007 at a Conference organized by Nonviolent Radical Party, Transnational and Transparty, and the Alliance of Liberals and Democrats for Europe (ALDE).
- Ahmet Sözen moderated a panel on 18 December 2007 in a conference titled “Stability in the Balkans: New Developments in Kosovo” organized by Gregory Macris, Chief of Political Action at the U.S. Embassy in Nicosia. The panel took place at EMU, Faculty of Business and Economics.
- Barry Jacobs, director of Strategic Studies in the Office of Government and International Affairs and associate director of Asia and Pacific Rim Institute and Ahmet Sözen delivered speeches on 11 March 2008 on topics titled “The American Jewish Community: Turkey, Israel and the Eastern Mediterranean” and “A Paradigmatic Shift in Turkish Foreign Policy Making” respectively.
- CPC hosted Şahin Alpay of Bahçeşehir University, Turkey and Soli Özel of Bilgi University, Turkey on 14 March 2008. Alpay delivered a speech on the transition process towards liberal democracy in Turkey and Özel delivered a speech on the latest developments in Turkish Foreign Policy.
- Claudia Roth, the co-chair of German Greens Party delivered a speech on the relations of EU with Turkey and Cyprus on 18 March 2008. The seminar took place at the Student Activity Center of EMU.

## *Upcoming Research Events*

- **EMU Faculty of Law will host Prof. Dr. Aydoğan Özman Symposium: Recent Developments in Law of the Sea Related to Cyprus**

The EMU Faculty of Law is getting ready to host the Prof. Dr.

Aydoğan Özman Symposium, an event organized in memory of Aydoğan Özman, founder of EMU Faculty of Law. The two day symposium will start on 8 May and continue through 9 May, 2008. Main aim of the event is to provide an opportunity for presentation and discussion of recent developments in law of the sea related to Cyprus. Symposium topics will include geopolitical importance of and recent developments in the Eastern Mediterranean, navigation and maritime transport, protection of environment and self-contained regimes in the contemporary law of the sea. The symposium committee is proud to host eleven prominent speakers. Speeches will be given by professors Ata Atun, Sertaç Başeren, Yüksel İnan, Turgut Turhan, Wojciech Forsysinski, Hakan Karan, Kemal Şenocak, Cavid Abdullahzade, Şule Güneş, İsmail Demir and Ali Kurumahmut. The symposium will consist of 4 sessions and will start with a flute and guitar recital performed by Mehmet Sakarya and Evren Ufuk. On behalf of EMU Faculty of Law, the organizing committee kindly invites all those who are interested to attend this unique event. Further information on the symposium is provided at [http://hukuk.emu.edu.tr/html/sempozyum/aozman\\_semp.htm](http://hukuk.emu.edu.tr/html/sempozyum/aozman_semp.htm)

## ■ **Doctoral Studies on Housing, A Joint Symposium Organized by Eastern Mediterranean University and İstanbul Technical University**

Eastern Mediterranean University Faculty of Architecture, Housing Research, Education & Advisory Center (EMU HERA-C) and İstanbul Technical University, Faculty of Architecture Housing Research and Education Center (ITU HREC) are jointly organizing a symposium on “Doctoral Studies on Housing”. The conference will take place between 20-22 May 2008 at the EMU Faculty of Architecture, Hüseyin Ateshin Hall. The inspiration for organizing a joint symposium on Doctoral Studies on Housing emerged from the diversity and richness of the themes and issues in Housing Research Area. The symposium expects to attract many young researchers involved in postgraduate theses, as well as academicians who have recently completed their studies between 2002 and 2008. Organizers aim to set up a scientific platform to stimulate discussions in diverse topics of housing research. The symposium also aims to aid in establishing a network of housing researchers for exchanging ideas, identifying shared interests and forming academic partnerships and research collaborations. According to the information provided by the organizers as of March 2008, there are applicants to the symposium from 11 different countries including Colombia, Iran, Italy, Nigeria, North Cyprus, Norway, Poland, Romania, Spain, Turkey and United Kingdom. Organizers are honored to host the following professors as keynote speakers of the symposium: Gülsün Sağlamer (ITU-HREC Chair), Kemal

Gürüz (Former Director of Turkish Higher Education Council), Han Verschure (Catholic University of Leuven, Belgium), David Clapham (School of City and Regional Planning, Cardiff University, UK), Johannes Kramer (Berlin Technical University) and Yıldız Sey (ITU – HREC). Different sessions of the symposium will include opening speeches by moderators of each session: Mark Swenarton (Head of Department of Architecture, School of the Built Environment, Oxford Brookes University, UK), Magda Sibley (University of Liverpool, UK), Ahsen Özsoy (ITU-HREC Vice chair), Yurdanur Dülgeroğlu Yüksel (ITU-HREC), Nuran Zeren Gülersoy (ITU), Zerrin Yılmaz (ITU-HREC), Nesil Baytin (EMU - HERA-C Chair) and Nicholas Wilkinson (EMU – Faculty of Architecture).

## ■ EMU is getting ready to host FISER'09: An International Conference on Science and Mathematics Education

EMU is getting ready to host an international conference on undergraduate science and mathematics education; Frontiers in Science Education Research 2009 (FISER'09).

FISER'09 aims to bring together scholars from all around the world who investigate different aspects of undergraduate science and mathematics education. A wide range of topics such as undergraduate curricula and design, teaching and learning strategies, technology in teaching and learning, faculty development, teacher training and contemporary issues in the field including native language vs. foreign language of instruction and misconceptions in science will be covered during the conference.

Organizers of FISER'09 are very proud to announce that well-known researchers in the field including Lillian McDermott, Professor of Physics from University of Washington USA, David Hestenes, Professor of Physics from Arizona State University USA, and Cedric Linder, Professor of Physics Education from University of Uppsala Sweden are confirmed keynote speakers for the conference. FISER'09 is open to professional science and mathematics education researchers, educators, students and all others who are interested. The conference will start on 22 March 2009 and will continue through 24 March 2009 at Salamis Bay Conti Resort Hotel, one of the well located hotels on the shores of Famagusta. On behalf of the EMU Faculty of Arts and Sciences, organizers invite inter-



ested science education researchers to submit their papers and all those who are interested to participate in the conference. Official website of FISER'09 can be accessed via <http://fiser.emu.edu.tr/>.

## Arts @ EMU

### ■ CD Release by EMU Music Department Faculty Member

The Brussels based recording label Fuga Libera has recently released a CD featuring Nicolas Deletaille on both cello and arpeggione instruments. Nicolas Deletaille joined the EMU Music Department in September 2006 as a



cello senior instructor. The CD features two major works; the Arpeggione Sonata and the String Quintet in C and is dedicated to Franz Schubert. For this recording Deletaille established significant partnerships with the Viennese maestro Paul Badura-Skoda (world top specialist in both Schubert music and historical piano areas), and with the highly acclaimed Quatuor Rosamonde. The arpeggione instrument, invented in 1823 in Vienna, is a kind of guitar played with a bow. Today, there remain only half a dozen arpeggiones, mostly in museum collections. This explains why recordings of the Schubert arpeggione sonata played on arpeggione are very few. Nicolas Deletaille, who plays on an arpeggione built recently, is regarded as one of the major contributors to this field. The CD is distributed in more than 25 countries, including Turkey, United States, Japan, China, Australia, and all European countries and has already been reviewed positively by several international music journals and newspapers.

### ■ A New York Jazz Quartet at EMU

Faculty of Arts and Sciences Department of Music and Faculty of Education Music Teaching Program jointly organized a Jazz workshop and a concert on 10 March 2008 at the EMU Student Activity Center. Aslı Giray and Alexander Zabolotkov of the Music Department hosted the events, which were sponsored by the American Embassy in Cyprus. The visiting artists were the Chris Byars Jazz Quartet from New York, who held an active workshop with students from the Department of Music and



Music Teaching Program. Music student Erkan Erzurumlu, and alumnus Cahit Kutrafalı attracted much attention from the quartet and were asked to participate in their concert. The workshop was also attended by professional Turkish Cypriot jazz musicians Ersen Sururi, Kadir Evre (also an EMU Music Department alumnus), and Ahmet Elmas, who were invited by department vice chair Aslı Giray with the aim of forming bridges between EMU and the community artists. The Quartet expressed that they were impressed with the quality of music education at EMU, and the graduates of the Music Department, as well as the general level of jazz performance in North Cyprus.



Chris Byars Jazz Quartet

### ■ EMU Music Department organizes a workshop at Mehmetçik primary School

Aslı Giray from the Eastern Mediterranean University Music department organized a workshop on 21 March 2008 for the 4th and 5th graders and music teachers of Mehmetçik Primary School. The workshop took place in the EMU Music Department Concert Room. Instructors from the Music Department and the EMU Music Teaching Program demonstrated various instruments for the children. Followed by a concert presented by Aslı Giray (piano), Marc Heeg (piano), Nicolas Deletaille (cello), Hyunjin Min (guitar) and mezzo-soprano Dilshad Asadova, music department vice chair Giray provided the students with general knowledge on music and information about the instruments. Giray announced that such workshops will be carried out at other primary schools in the near future.



Deletaille with Mehmetçik Primary School students

### ■ Public Recital from EMU Music Instructors

Pianist Aslı Giray gave a recital with mezzo-soprano Dilshad Asadova on 24 March 2008 at the EMU Student Activity Center. In addition to operatic arias by Donizetti, Verdi, Handel and Saint-Saens, the artists interpreted contemporary songs from Azerbaijan, the song 'Yiğidim Aslanım' by Zülfü Livaneli, arranged for voice and piano by flute instructor Eran Raman, and the song 'Al Yemeni Mor Yemeni' written by Turkish Cypriot composer Kamran Aziz, arranged by Aslı Giray. The concert was open to the public and was attended by a large audience.



Pianist Aslı Giray in concert

# An ecological investigation of endangered sea turtles *Chelonia mydas* and *Caretta caretta* in Karpaz shores

By Burak Ali Çiçek

Today, all sea turtle species are faced with the threat of being eradicated from the oceans and shores of the Earth. On the shores of our country, there are two types of sea turtles; *Chelonia mydas* and *Caretta caretta* which are under the same threat (Fig. 1). Especially *Chelonia mydas* populations are reported to be below critical levels in the Mediterranean (Canbolat, 2004).



Figure 1: Newborn *Caretta caretta* on land in Karpaz shores

In order to protect the sea turtles, countries have signed agreements to protect these species and their habitats all around the world. In 1975, sixteen Mediterranean countries have approved and signed *Mediterranean Action Plan* under the supervision and guidance of the United Nations Environment Program (UNEP) and later on in 1976, the same countries signed a treaty titled *Protection of the Mediterranean from Pollution*.

This treaty is now known as the Barcelona Treaty and is signed by the European Community as a legal agreement. In 1982 as an annex to the Barcelona Treaty, the same countries have signed the *Specially Protected Areas in the Mediterranean* document (Groombridge, 1990; Laurent *et. al.*, 1995). In North Cyprus, even though not all agreements or treaties have been followed, Alagadi Beach, Ronnas Beach and Golden Beach have been designated as important nesting areas for sea turtles and they are announced as *Specially Protected Areas (SPA)* (Kusetogullari, 2007; Şenol, 2003).

Same countries, which have signed the *Mediterranean Action Plan*, created a new and a more specialized plan in 1989 for the protection of sea turtles, titled the *Mediterranean Sea Turtles Protection Action Plan* and brought forward the issues listed below for better protection of the sea turtles in the region:

- Protection and management of the nesting and wintering habitats,
- Minimization of accidental catching (by-catch) and banning applications which might result in accidental killing of the sea turtles,
- Searching for new nesting areas,
- Gathering information about new nesting beaches,
- Investigating and researching species behavioral patterns.

Taking a start from the statements in the *Mediterranean Sea Turtles Protection Action Plan*, Turkish Republic of Northern Cyprus (TRNC)

Ministry of Environment and Natural Resources and Eastern Mediterranean University Underwater Research and Imaging Center (EMU URIC) established a collaboration for investigation and protection of *Caretta caretta* and *Chelonia mydas*, which use the Karpaz shores for nesting. As part of this agreement, together with my colleagues, I have undertaken the biological and ecological investigation of these two species in the Karpaz shores. In Summer 2007, we started our field work and conducted research on behavioral patterns, number of nests, hatchling success of sea turtles in addition to carrying out protection exercises.

I was fortunate to have 25 students from EMU to volunteer. In addition, volunteers coming from several universities of England, Germany, Poland, Scotland, Turkey and United States took part in this project. During our field work, we have collected data on and facilitated protection of the existing nests for both species (Fig. 2).



Figure 2: Protection of sea turtle nests

In addition to the field work, students aided in statistical analysis of the collected data. Students worked hard and produced a lot of results given the physically exhausting nature of field work.

During the nesting period which covers June, July and August, we determined the nests in Karpaz shores. Overall, we did field work on 13 different beaches of the Karpaz Peninsula. We identified a total of 123 sea turtle nests (42 *Caretta caretta*; 73 *Chelonia mydas*; 8 unidentified). Once the nests were located they were taken under protection measures. In order for the nesting habitats not to be affected by human activities, high priority protection areas bordered with sand dunes were identified and these protected zones were shown on maps. Also, information we gathered on the existing nests enabled us to identify potential new nesting areas.

During the hatching period which is August, September and early October, we gathered data regarding the total number of eggs laid. Nests with live and dead hatchlings, predation rate, survival rate and hatchling behavior in the sea have been monitored and analyzed. Based on the data collected, we measured the success rate of *Caretta caretta* to be 53.9% and of *Chelonia mydas* to be 66.1%. Success rate is calculated based on the total number of live hatchlings which reach the sea. Hatchling success gives important clues about success of conservation because this rate generally depends on the methodology. It clearly indicates if the methodology applied is adequate and conservation measures are sufficient against predation, human impact etc. which let us improve current applications in the future.

Unique to our study is the newborn turtle analysis. After their release into the sea (Fig. 3), we monitored the newborns in the sea and gained valuable insight into their behavioral



Figure 3: Newborn *Chelonia mydas* being released to the sea

patterns through these underwater observational studies (Fig. 4).

In order to be able to continue protecting the sea turtles, in addition to international agreements, there needs to be a continuum in the ecological and biological research and data collection. In parallel with the



Figure 4: Newborn *Chelonia mydas* underwater

field work, I have initiated the first steps of a *Management Plan* for the nesting habitats of sea turtles and protection of the existing population. Implementation of such a plan is vital since North Cyprus has become a popular destination for settlement especially on the shores. Human population increase in these areas has resulted in an unexpected amount of pressure on both living and non-living ecological resources. Significantly, in recent years, advancement in the tourism industry resulted in

unplanned development, over-crowded settlements on the shores, non-proper usage of land for property development and pollution due to agri-industrial and/or light industry developments. Already, the negative effects of uncontrolled development on the eco-systems and the existing habitats are evident. The *Management Plan* for protection is currently being elaborated.

I would like to emphasize that satisfactory environmental protection results could only be obtained through sufficient financing and collaborative work of a wide pool of experts and volunteers. To this extent, collaboration of EMU URIC and TRNC Ministry of Environment and Natural Sources is a significant step towards better protection. We shared our data from Summer 2007 studies with respective government bodies, international media and other authorities and stakeholders to raise awareness about the endangered species at the Karpaz Peninsula.

Implementation of correct protection measures could only take place as results of long-term data collection and further biological and ecological investigations which will enable better understanding of these species and their habitats. Our ultimate aim with this project was to lay down the foundation for more comprehensive analyses of sea turtles and further development of the protection plans. We aim to extend our studies to population genetics, wintering habitats and migration routes in collaboration with local and international experts in these fields.

## REFERENCES

- Canbolat, A.F. (2004). A review of sea turtle nesting activity along the Mediterranean coast of Turkey, *Biological Conservation*, 116, 81-91.



Groombridge, B. (1990). Marine Turtles in the Mediterranean; Distribution, Population Status, Conservation. A report to the Council of Europe, World Conservation Monitoring Centre, Cambridge, UK.

Kusetogulları, H. (2007). Kuzey Kıbrıs Türk Cumhuriyeti'nde

deniz kaplumbağalarının korunması. II.Ulusal Deniz Kaplumbağaları Sempozyumu, 36-39. Dalyan Muğla. Turkey.  
Laurent, L., Bradai, M.N., Hadoud, D.H., and El Gomatai, H.M. (1995). Marine Turtle Nesting Activity Assessment on Libyan Coasts; Phase I: Survey of the

Coast Between Egyptian Border and Sirte. RAC/SPA (MAP-UNEP), Tunis.

Senol, A. (2003). Deniz Kaplumbağalarının İzlenmesi ve Korunması (Proje No: WSE-PS02-4164, UNOPS, UNDP, USAID). Proje Raporu, Turizm ve Çevre Bakanlığı, Lefkoşa, KKTC.

# Written picture naming of cognates as a function of orthographic transparency: Evidence from Turkish-French bilingual children

By Biran Mertan



*Experimental/cognitive psychologist I. Raman (on left) & developmental psychologist B. Mertan*

Here I describe a collaborative study as part of a larger ongoing research project on Development of Reading and Writing in Turkish, carried in part out at EMU Psychological Counseling Guidance and Research Center (EMU PDRAM). I am conducting this project in collaboration with İlhan Raman of the Department of Psychology, Anglia Ruskin University, Cambridge, United Kingdom.

In this study, we explored the role of orthographic transparency on written picture naming in bilingual children whose first language was Turkish (L1) and second language was French (L2). A further variable was whether children received their early primary education in Turkey or in France. The stimulus picture names were cognates in Turkish and in French with similar pronunciation and spelling in L1 and L2 (e.g., light bulb is *ampul* in Turkish and *ampoule* in French). Our aim was to explore whether the order of acquisition of writing systems by the bilin-

gual child will have an effect on their spelling accuracy.

The question of how children acquire literacy has been an important research topic of interest over the last three decades. A large body of research is primarily dedicated to understand how children acquire reading skills in their native language. One framework assumes that spelling-sound regularity is fundamental to processes involved in reading and spelling in all alphabetic orthographies and that there are two distinct ways of converting sound to print (Carr & Pollatsek, 1985; Coltheart, 1980; Coltheart *et. al.*, 1993; Coltheart *et. al.*, 2001; Besner, 1999; Baluch & Besner, 1991; Besner & Smith, 1992).

Learning to spell is assumed to mirror learning to read whereby children acquire to map phonological representations (sound) to orthographic representations (print). Conversely, the simplicity of the relationship between orthography and phonology will deter-

mine not only the rate of reading acquisition but also spelling acquisition. If spelling of words is highly predictable from their phonological representations, i.e. when a phoneme always maps onto the same grapheme(s) or letter(s), then learning to read and spell will presumably develop simultaneously and in parallel. If however spelling is not always directly predicted from phonology, as in the case of many European alphabetic writing systems, then learning to spell will be hindered in comparison to reading (Bosman & Van Orden, 1997; Geva *et. al.*, 1993; Sprenger-Charolles & Siegel, 1997).

In this respect, phonological awareness has been shown to be the most crucial determinant of normal reading and spelling development across languages studied thus far (Zeigler & Goswami, 2005). That is, the learner must be able to resolve the relationship between the smallest units of a predominately visual task (orthography) and the phonological representation in the spoken language to be able to 'read'. Some alphabets such as English have one-to-many relationship between orthography and phonology whilst some alphabets such as Spanish have an almost one-to-one relationship between print and sound. The impact of orthographic transparency on acquisition of literacy is clearly demonstrated by Seymour, Aro and Erskine's (2003) study of 14 European languages who analyzed children's reading skills at the end of Grade 1. Three basic tenets have been held responsible for explaining cross-language differences (Zeigler & Goswami, 2005) which are consistency of spelling-to-sound relations, granularity (grain size) of orthographic and phonological representations, and teaching methods. Orthographic transparency, i.e. sound to print regularity, has therefore played a central role in the development and imple-

mentation of models of spelling, such as the dual-route model of spelling (Ellis, 1984).

Cognates, i.e. words that are identical or similar in form and meaning in two languages, have been used heavily in the investigation of bilingual language processing. Evidence firmly established that bilinguals process cognates faster than non-cognates (Van Hell & de Groot, 1998).

In this work, we examined spelling in two contrasting orthographies, i.e. Turkish; an extremely transparent orthography vs. French; an opaque orthography, using cognates as described below. Although Turkish and French vary greatly on the orthographic transparency continuum, i.e. in the directness with which one can predict phonology from orthography (Fig 1), there are some shared characteristics. For instance, both scripts use the Latin alphabet and both are written and read from left to right.

The most salient aspect of the modern Turkish writing system is the completely transparent relationship between orthography and phonology in not only reading but also spelling. Reading and writing in Turkish rely upon a totally consistent, invariant and context independent mapping between orthography and phonology in reading and spelling. In comparison, French has an irregular orthography whereby deriving phonology from orthography, i.e. reading is comparably more predictable than spelling. One of the problems associated with difficulty in spelling French, unlike Turkish, is the large

number of silent letters.

Therefore, whilst one can achieve nonlexical reading from print and non-lexical spelling from sound in Turkish, the same cannot be said for French. However, this should not be taken to indicate that skilled reading and writing in Turkish is nonlexical. On the contrary, reading in Turkish has been shown to be heavily influenced by psycholinguistic variables such as word frequency (Raman *et. al.*, 1996; Raman *et. al.*, 2004) and imageability (Raman & Baluch, 2001).

An interesting feature between the two orthographies is that 23 letters are shared between Turkish and French (L1 and L2) alphabets. In brief, the overlap of orthography and phonology between L1 and L2 is substantial (Table 1).

Table 1: Turkish and French alphabets (letters in bold are unique to each alphabet)

Turkish alphabet	French alphabet
a b c <b>ç</b> d e f g <b>ğ</b> h i	a b c d e f g h i j k l
j k l m n o <b>ö</b> p r s <b>t</b>	<b>m</b> n o p <b>q</b> r s t u v <b>w</b>
u <b>ü</b> v y z	<b>x</b> y z

The aim of our study was to examine the role of orthographic transparency and primary language of instruction in spelling cognate picture names in French and Turkish bilingual children. Cognates in two different languages share the same etymology; they are conceptually, orthographically and phonologically similar. We wanted to investigate how cognate object names affect bilingual spelling performance in children.

We predicted that children were to conduct more spelling errors in French overall due to the opaque relationship between orthography and phonology compared to the totally transparent relationship between orthography and phonology in Turkish. Moreover, we predicted errors to reflect children's early language instruction in L1: those who received their L1 training in Turkey were predicted to make more spelling errors in French compared to Turkish. Similarly, children who received their L1 training in France were predicted to make more spelling errors in Turkish compared to French. An interaction between Turkish and French languages was also predicted in relation to their L2 spelling proficiency. This is because while mappings between orthography and phonology in Turkish are totally transparent and consistent, in French they are relatively opaque and inconsistent.

The participants were 10-11 year old Turkish speaking children all residing in France. A total of 28 children were selected from a sample of 103 who were matched on socio-economic background, age and scholastic attainment. The 20 stimulus picture names were heterographic cognates in Turkish and French with similar pronunciation and spelling in L1 and L2, e.g., piano is *piyano* in Turkish and *piano* in French. In addition, all pictures were rated to have name agreement, familiarity and similar complexity by independent judges. In a counterbalanced design, children were instructed to write the picture names down in French and Turkish.

An analysis of the spelling error data show that children educated in Turkey in their early years made more errors in French than Turkish [ $t(13)=4.58, p<0.001$ ]. Children who received their early education in France made three times more errors on average in Turkish than French [ $t(13)=11.29, p<0.0001$ ]. There was a significant difference between the two education groups on Turkish errors



Figure 1: Orthographic transparency continuum based on mappings between print and sound in alphabetic writing systems (Raman, 1999)



[ $t(26) = 5.76, p < 0.025$ ] as well as French errors [ $t(26) = 7.08, p < 0.0001$ ]. Children who received their early education in French made more spelling errors in Turkish than children who received their education in Turkish. Formal analysis confirmed the main effect between French and Turkish errors [ $F(1,26) = 5.89, p < 0.02$ ] and also showed a significant interaction between the disproportionate errors two education groups make in the two languages [ $F(1,26) = 101.23, p < 0.0001$ ].

Our analysis of the spelling error data showed that Turkish educated children made more errors in French than Turkish and French educated children made three times more errors on average in Turkish than French. Our results provide insight to a bilingual model of spelling from a developmental perspective and the transferring of phonological and orthographic skills between L1 and L2.

## REFERENCES

- Baluch, B & Besner, D. (1991). Visual word recognition: Evidence for strategic control of lexical and nonlexical routines in oral reading. *Journal of Experimental Psychology: Learning, Memory and Cognition*, 17, 644-652.
- Besner, D. (1999). Basic processes in reading: Multiple routines in localist and connectionist models. In P. A. McMullen & R. M. Klein (Eds.), *Converging methods for understanding reading and dyslexia*. Cambridge, MA: MIT Press.
- Besner, D. & Smith, M. C. (1992). Basic Processes in reading: Is the orthographic depth

- hypothesis sinking? In R. Frost & L. Katz (Eds.), *Advances in psychology: orthography, phonology, morphology and meaning*. North-Holland.
- Bosman, A.M.T. & Van Orden, G.C. (1997). Why spelling is more difficult than reading. Charles A Perfetti, Rieben, Laurence & Fayol, Michel (Eds). *Learning to spell: Research, theory, and practice across languages*. (pp. 173-194). xv, 370 pp. Mahwah, NJ, US: Lawrence Erlbaum Associates, Publishers.
- Carr, T. H. & Pollatsek, A. (1985). Recognizing printed words: A look at current models. In D. Besner, T.G. Waller, and G.E. MacKinnon (eds.) *Reading Research: Advances in Theory and Practice*. Academic Press.
- Coltheart, M. (1980). Reading, phonological recoding and deep dyslexia. In M. Coltheart, K. Patterson & J.C. Marshall (Eds.), *Deep dyslexia*. London: Routledge & Kegan Paul.
- Coltheart, M., Curtis, B., Atkins, P. & Haller, M. (1993). Models of reading aloud: Dual route and parallel distributed processing approaches. *Psychological Review*, 100, 589-608.
- Coltheart, M., Rastle, K., Perry, C., Langdon, R., Ziegler, J. (2001). DRC: A dual route cascaded model of visual word recognition and reading aloud. *Psychological Review*, 108, 204-256.
- Ellis, A.W. (1984). Reading, writing, and dyslexia: a cognitive analysis. London: Lawrence Erlbaum.
- Geva, E., Wade-Woolley, L. & Shany, M. (1993). The concurrent development of spelling and decoding in two different orthographies. *Journal of Reading Behavior*. 25(4), 383-406.
- Raman, I. (1999). Single-word naming in a transparent alphabetic orthography. Unpublished PhD thesis, Middlesex University
- Raman, I. & Baluch, B. (2001). Semantic effects as a function of reading skill in word naming of a transparent orthography. *Reading and Writing. An Interdisciplinary Journal*, 14, 599-614.
- Raman, I., Baluch, B. & Besner, D. (2004). On the Control of Visual Word Recognition: Changing Routes Versus Changing Deadlines. *Memory and Cognition*, 32 (3), 489-500.
- Raman, I., Baluch, B. & Sneddon, P. (1996). What is the cognitive system's preferred route for deriving phonology from print? *European Psychologist*, 1, 221-227.
- Sprenger-Charolles, L. & Siegel, L.S. (1997). A longitudinal study of the effects of syllabic structure on the development of reading and spelling skills in French. *Applied Psycholinguistics*. 18(4), 485-505.
- Seymour, P.H., Aro, M. & Erskine, J.M. (2003). Foundation literacy acquisition in European orthographies. *British Journal of Psychology*, 94(2), 143-74.
- Van Hell, J. G., & de Groot, A. M. (1998). Conceptual representation in bilingual memory: Effects of concreteness and cognate status in word association. *Bilingualism*, 1, 193-211.
- Ziegler, J.C. & Goswami, U. (2005). Reading Acquisition, Developmental Dyslexia, and Skilled Reading Across Languages: A Psycholinguistic Grain Size Theory. *Psychological Bulletin*. 131(1), 3-29.

# An alternative approach to gene delivery in gene therapy

By Zülal Yalınca

Gene therapy provides possible treatment opportunities for many diseases that are currently considered as incurable in the fields of medicine, pharmaceutical sciences and biotechnology (Li *et. al.*, 2002; Conwell, & Huang 2005; Park *et. al.*, 2006). Gene therapy is an evolving technique aiming to treat many diseases such as genetic diseases, cancers, and AIDS (Wong *et. al.*, 2007; Rissanen & Herttualla 2007). The medical procedure of gene therapy involves correction of the disorder by replacement of malfunctional and/or nonfunctional genes with normal genes.

Gene delivery depends on the encapsulation of the gene of interest and its delivery to the target cell. After absorption by endocytosis (uptake of molecules into cells), the DNA must be released into the target cell in order for gene expression to take place. Gene expression is the process by which inheritable information from a gene is made into a functional product, such as protein or RNA. Gene expression involves transcription (synthesis of RNA under the direction of DNA) and translation (process by which ribosomes synthesize protein using the RNA transcript produced during transcription). Gene delivery systems should be designed to protect the genes from degradation in blood until they reach their target cell (Li *et. al.*, 2002; Conwell & Huang 2005).

The current available gene delivery carriers are mainly of two types; viral and non-viral vectors. Viral vectors are biological carriers. They are used to infect cells and thus the transfer of their genetic materials into the cells that they infect is enabled. Even though viral vectors have

more efficient gene expression, one of the significant disadvantages of viral delivery systems is the generation of immune responses against the expressed viral proteins. As a result of the immune response, target cell is killed and the therapeutic gene product is not produced. Another disadvantage is the high cost of producing large amounts of viral vectors (Li *et. al.*, 2002; Conwell & Huang 2005; Park *et. al.*, 2006; Wong *et. al.*, 2007).

In attempts to overcome the problems of viral delivery systems, synthetic (non-viral) vectors such as cationic lipids and polymers have been developed as gene carrier molecules. Non-viral vectors are more cost effective and are easier to produce than viral vectors. Furthermore, non-viral vectors are less hazardous in terms of antigen-specific immune response.

However, current non-viral vectors used could lead to certain problems. The characteristics of the encapsulating polymer or lipid, such as their chemical structures (length, saturation or branching of the polymer) may cause toxicity in non-viral vector mediated systems. The more biodegradable and biocompatible the vectors are, the less toxicity they produce. The ideal gene delivery carriers would

have desired properties such as cell-specificity, minimal immune response generation, efficient release of DNA into cells and large DNA capacity (Li *et. al.*, 2002; Conwell & Huang 2005; Park *et. al.*, 2006; Wong *et. al.*, 2007; Godbey & Mikos 2001; Lutén *et. al.*, 2008).

Having completed my masters degree under the supervision of Elvan Yılmaz and Osman Yılmaz on preparation, characterization and metal adsorption properties of chitosan tripolyphosphate gels, I have gained background information and some experience on chemical and physical properties and potential application areas of the biopolymer chitosan.

Chitosan is a  $\beta$ -1-4 linked copolymer of glucosamine and N-acetyl glucosamine as shown in Figure 1, and is obtained by the alkaline deacetylation of chitin, which is the second most abundant natural polymer. Chitin is found in the exoskeletons of crustaceans and insects (Sashiwa & Aiba 2004). It has been considered to be a good gene carrier candidate, because of its low toxicity, low immunogenicity, biocompatibility and biodegradability (Sashiwa & Aiba 2004; Shi *et. al.*, 2006). Its cationic polyelectrolyte nature provides the ability to bind effectively with negatively charged DNA molecules. However efforts to improve, the cell-specificity and transfection (expression of a gene that has been introduced into a target cell to change an existing function or to introduce a new function) efficiency of chitosan are necessary for its improvement as a gene carrier candidate. In my Ph.D. thesis work which will be supervised by Elvan Yılmaz and Osman

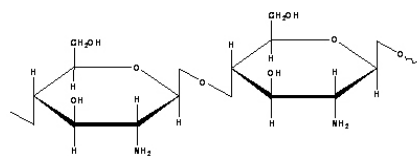


Fig. 1: Chitosan structure

Yilmaz in collaboration with Hasan Uludağ from University of Alberta, Canada, we aim to overcome current problems associated with existing non-viral delivery vectors. We are working on chemical modification of chitosan to tailor a new non-viral gene carrier with optimum transfection efficiency of the chitosan-DNA complex. Optimization of molecular weight, degree of deacetylation as well as achieving a balance between hydrophilicity and hydrophobicity are the specific aims of my doctoral dissertation project.

The optimum use of modified chitosan as a non-viral gene carrier will expand the application of gene therapy. We aim to design a modified chitosan gene carrier with multiple properties such as high transfection, low immunogenicity and low toxicity.

## REFERENCES

- Conwell, C.C. and Huang L. (2005). Recent Advances in Non-Viral Gene delivery in Nonviral Vectors for Gene Therapy. Part 1. *Advances in Genetics*, Edited by L. Huang, M.C. Hung, E. Wagner, 53.
- Godbey, W.T., and Mikos A.G. (2001). Recent progress in gene delivery using non-viral transfer complexes. *Journal of Controlled Release*, 72, 115–125.
- Jeong, J.H., Kim S.W., and Park T.G. (2007). Molecular design of functional polymers for gene therapy. *Progress Polymer Science*, 32, 1239–1274.
- Li, S., Ma Z., Tan Y., Liu F., Dileo J., and Huang L (2002). Targeted gene delivery via lipidic vectors in Vector Targeting for Therapeutic Gene Delivery. Edited by D.T. Currel and J.T. Douglas.
- Luten, J., Van Nostrum C.F., De Smedt S.C., and Hennink W.E. (2008). Biodegradable polymers as non-viral carriers for plasmid DNA delivery. *Journal of Controlled Release*, 126, 97–110.
- Park, T.G., Jeong J.H., and Kim S.W. (2006). Current status of polymeric gene delivery systems. *Advanced Drug Delivery Reviews*, 58, 467–486.
- Rissanen, T.T. and Hertzulla S.Y. (2007). Current status of cardiovascular Gene Therapy. *Molecular Therapy*, 15, 1233–1247.
- Sashiwa, H. and Aiba S. (2004). Chemically modified chitin and chitosan as biomaterials. *Progress in Polymer Science*, 29, 887–908.
- Shi, C., Zhu Y., Ran X., Wang M, Su Y., and Cheng T. (2006). Therapeutic potential of chitosan and its derivatives in regenerative medicine. *Journal of Surgical Research*, 133, 185–192.
- Wong, S.Y., Pelet J.M., and Putnam D. (2007). Polymer systems for gene delivery—Past, present, and future. *Progress in Polymer Science*, 32, 799–837.



## Fall 2007-2008 Postgraduate Degrees

The following is a list of students who have successfully completed their postgraduate degrees in Fall 2007-2008 academic year. The list has been provided by EMU Institute of Graduate Studies and Research. On behalf of EMU family, we congratulate our graduates and wish them continued success.

### ■ MA ■

#### **International Relations**

Dilşat Hüdaverdioğlu

*Thesis Title:* The Concept of Self-Defence In Theory and Practice of International Law

*Supervisor:* Wojciech Forsysinski

#### **Turkish Language and Literature**

Gökçin Billuroğlu

*Thesis Title:* Kıbrıs Ağzında Şart ve Dilek Kipleri

*Supervisor:* Vügar Sultanzade

### ■ M.Arch. ■

#### **Architecture**

Azin Dilmaghani

*Thesis Title:* A New Interpretation of Spatiality In Terms of Archetypes as Transitional Elements in Architecture

*Supervisor:* Hifsiye Pulhan

Sourina Mehryar

*Thesis Title:* Division of Interior Spaces (an Assessment on Frank Lloyd Wright's Buildings Interiors)

*Supervisor:* İbrahim Numan

### ■ MBA ■

#### **Business Administration**

Mohammad Hassan Kheiravar

*Thesis Title:* The Role of SMEs on Employment Creation: The Case of Iran

*Supervisor:* Şule Aker

### ■ M.Ed. ■

#### **Educational Sciences**

Bircan Şimşek

*Thesis Title:* The Influence of the Social Skill Education Course on Students Character Development

*Supervisor:* Nalan Ş. Richard

### ■ MS ■

#### **Applied Mathematics and Computer Science**

Hasan Rüstemoğlu

*Thesis Title:* Mathematical Achievements of Ancient Mesopotamia, Egypt, India and Greece

*Supervisor:* Hüseyin Etikan

#### **Chemistry**

Özbir Akbaşak

*Thesis Title:* Fluorescence Resonance Energy Transfer (FRET) with Chiral Perylene Dyes

*Supervisor:* Huriye İcil

#### **Civil Engineering**

Mani Zahed Anaraki

*Thesis Title:* Comparison and Optimal Design Selection of Steel and Reinforced Concrete Framed Building Based on Life Cycle Costing

*Supervisor:* Mürüde Çelikağ

*Co-Supervisor:* Abdulrezak Mohamed

#### **Computer Engineering**

Laika Karşılı

*Thesis Title:* A Radon Transform and PCA Hybrid for High Performance Face Recognition

*Supervisor:* Adnan Acan

#### **Economics**

Umut Soyaş

*Thesis Title:* Economic Convergence Analyses across the Regions and Provinces of Turkey:1975-2001

*Supervisor:* Sevin Uğural

#### **Electrical and Electronic Engineering**

Ahmet Emre Göküş

*Thesis Title:* Object Recognition Using Video Sequence on Conveyer Line

*Supervisor:* Hasan Demirel

#### **Industrial Engineering**

Mohammad Mesgarpour

*Thesis Title:* Developing a Simulated Annealing Model to Minimize Total Flowtime and Total Tardiness in Two-Machine Flowshop Scheduling Problems

*Supervisor:* Nureddin Kırkavak

*Co-Supervisor:* Hakan Özaktas

## ***Mechanical Engineering***

Birol Arif Pekin

*Thesis Title:* Flow Structures Behind Bluff Bodies

*Supervisor:* Hasan Hacışevki

Mohammed Lawal Isa Yahaya

*Thesis Title:* Design and Analysis of a Low Pressure Thermal Desalination System

*Supervisor:* Hikmet S. Aybar

## ***Physics***

Hanifa Teimourian

*Thesis Title:* A Solution of a source free Maxwell Equation in the background field of a stationary cosmic string

*Supervisor:* Özyay Gürtuğ

## ***Tourism Management***

Alheri Bawa Magaji

*Thesis Title:* Sexual Harrassment of Students Undergoing Practical Training: Evidence from North Cyprus

*Supervisor:* İlkey Yorgancı

Deniz Çırakoğlu

*Thesis Title:* Social, Cultural and Economic Impacts of Second-home Owners on the Host Community: The Case of Yeni Erenköy

Erenköy

*Supervisor:* Mine Haktanır

Güven Feriha Baha

*Thesis Title:* Percieved Organizational Justice, Trust and Organizational Citizenship Behavior (OCB): A study of Front Line Employees in 3,4 and 5 star Hotels of Northern Cyprus

*Supervisor:* Hüseyin Araşlı

Hakan Mutlucan

*Thesis Title:* Social, Cultural and Economic Impact of Educational Tourism on Host Population: A Case of EMU, TRNC

*Supervisor:* İlkey Yorgancı

Lindsay Fishburn

*Thesis Title:* Peacebuilding through Christian Heritage Tourism Development in the TRNC: Perceptions from both Sides of the Green Line

*Supervisor:* İlkey Yorgancı

Lorina Bekteshii

*Thesis Title:* The Effects of Work-Family Conflict and Facilitation on Frontline Employee Outcomes: A Study in the Albanian Hotel Industry

*Supervisor:* Osman Karatepe

Yusuf Çocuk

*Thesis Title:* Performance Measurement Application in 4 and 5 Star Hotels in Northern Cyprus

*Supervisor:* Mine Haktanır

## ■ LLM ■

## ***Law***

Mine Vehit

*Thesis Title:* Avrupa İnsan Hakları Sözleşmesinin 6. Maddesinde Yer Alan Adil Yargılanma Hakkı Işığında KKTC Askeri Mahkemeleri

*Supervisor:* Turgut Turhan

Rasiha Erçakıca

*Thesis Title:* Türk Hukukunda ve Kıbrıs Türk Hukukunda Boşanmada Tazminat ve Nafaka

*Supervisor:* Ali Erten

## ■ Ph.D. ■

## ***Computer Engineering***

Öykü Akaydın

*Thesis Title:* Efficient Parallel Algorithm for Modelling Open Region Finite Difference Time Domain

*Supervisor:* Omar Ramadan

## ***Mechanical Engineering***

Mahdi Arhami Ashkan

*Thesis Title:* Assessment of Mechanical Behavior of Two Different Aluminum Matrix-SiCp Reinforced Composites

*Supervisor:* Filiz Sarıoğlu

*Co-Supervisor:* Majid Hashemipour

## ***Architecture***

Kağan Günce

*Thesis Title:* A Method for Visual Analysis of Architectural Form

*Supervisor:* Zafer Ertürk

## Recent Publications and Presentations (October 2007 - March 2008)

### Journal Publications (SCI, SSCI, AHCI)

The journal publications listed here are those that are listed in Arts & Humanities Citation Index (A&HCI), Science Citation Index (SCI), Science Citation Index Expanded (SCI-Expanded), or Social Sciences Citation Index (SSCI).

Agarwal RP, Djebali S, Moussaoui T, Mustafa OG and Rogovchenko YV. (2007) "On the asymptotic behavior of solutions to nonlinear ordinary differential equations." *Asymptotic Analysis* 54(1-2): 1-50.

Aldabbagh LBY, Manesh HF and Mohamad AA. (2008) "Unsteady natural convection inside a porous enclosure heated from the side." *Journal of Porous Media* 11(1) 73-83.

Aliev RA, Fazlollahi B, Guirimov B and Aliev RR. (2007) "Fuzzy-genetic approach to aggregate production-distribution planning in supply chain management." *Information Sciences* 177(20): 4241-4255.

Aliev RA, Fazlollahi B, Aliev RR and Guirimov B. (2008) "Linguistic time series forecasting using fuzzy recurrent neural network." *Soft Computing* 12(2): 183-190.

Altincay H. (2007) "Decision trees using model ensemble-based nodes." *Pattern Recognition* 40(12): 3540-3551.

Bal M, Manesh HF and Hashemipour M. (2008) "Virtual-reality-based information requirements analysis tool for CIM system implementation: a case study in die-casting industry." *International Journal of Computer Integrated Manufacturing* 21( 3): 231-244.

Bengisu M, Yilmaz E, Farzad H and Reis ST. (2008) "Borate, lithium borate, and borophosphate powders by sol-gel precipitation." *Journal of Sol-Gel Science and Technology* 45(3): 237-243.

Daoud DS. (2007) "Overlapping Schwarz waveform relaxation method for the solution of the forward-backward heat equation." *Journal of Computational and Applied Mathematics* 208(2): 380-390.

Duman O and Ozarslan MA. (2007) "Szász-Mirakjan type operators providing a better error estimation." *Applied Mathematics Letters* 20(12): 1184-1188.

Duman O, Ozarslan MA and Aktuglu H. (2008) "Better error estimation for Szász-Mirakjan-Beta operators." *Journal*

*of Computational Analysis and Applications* 10(1): 53-59.  
Faustmann H and Kaymak E. (2007) "Cyprus." *European Journal of Political Research* 46(7-8): 916-928.

Gharebaghi M and Sezai I. (2008) "Enhancement of heat transfer in latent heat storage modules with internal fins." *Numerical Heat Transfer Part A-Applications* 53(7): 749-765.

Guler M. (2007) "Dissipative stochastic mechanics for capturing neuronal dynamics under the influence of ion channel noise: Formalism using a special membrane." *Physical Review E* 76(4): 041918.

Harpster M and Coureas N. (2008) "Codex Palatinus Graecus 367: A thirteenth-century method of determining vessel burden." *Mariners Mirror* 94(1): 8-20.

Mahmudov NI and Mckibben MA. (2007) "On a class of backward McKean-Vlasov stochastic equations in Hilbert space: Existence and convergence properties." *Dynamic Systems and Applications* 16(4): 643-664.

Mazharimousavi SH and Halilsoy M. (2007) "5D black hole solution in Einstein-Yang-Mills-Gauss-Bonnet theory." *Physical Review D* 76(8): 087501.

Mazharimousavi SH and Halilsoy M. (2008) "Einstein-Yang-Mills black hole solution in higher dimensions by the Wu-Yang ansatz." *Physics Letters B* 659(3): 471-475.

Miles C. (2007) "Modern occult rhetoric: Mass media and the drama of secrecy in the twentieth century." *Pomegranate* 9(2): 192-194.

Miles C. (2007) "The occult mind: Magic in theory and practice." *Pomegranate* 9(2): 198-199.

Mohamed ON and Deniz DZ. (2008) "Fixed and dynamic bandwidth allocation strategies for wireless mobile integrated services networks." *Wireless Networks* 14(1): 121-131.

Mustafa O and Mazharimousavi SH. (2008) "First-order intertwining operators with position dependent mass and eta-weak-pseudo-Hermiticity generators." *International Journal of Theoretical* 47(2): 446-454.

Ozarslan MA and Duman O. (2008) "Local approximation results for Szász-Mirakjan type operators." *Archiv Der Mathematik* 90(2):144-149.



Ramadan O and Akaydin O. (2008) "Efficient parallel PML algorithms for truncating finite difference time domain simulations." *Electrical Engineering* 90(3): 175-180.

Ramadan O. (2008) "Unconditionally stable locally one dimensional wave equation PML algorithm for truncating 2-D FDTD simulations." *Microwave and Optical Technology Letters* 50(1): 18-22.

Refiker HS, Merdivan M and Aygun RS. (2008) "Solid-phase extraction of silver in geological samples and its determination by FAAS." *Separation Science and Technology* 43(1): 179-191.

Salamah M and Doukhnich E. (2008) "An efficient algorithm for mobile objects localization." *International Journal of Communication Systems* 21(3): 301-310.

Sarper H and Aybay I. (2007) "A video locality based buffering mechanism for VoD systems." *IEEE Transactions on Consumer Electronics* 53(4): 1521-1528.

Shibliyev J and Osam N. (2008) "Language policy: Hidden agendas and new approaches." *Journal of Sociolinguistics* 12(1): 122-124.

Yorgancioglu F and Komurcugil H. (2008) "Single-input fuzzy-like moving sliding surface approach to the sliding mode control." *Electrical Engineering* 90(3): 199-207.

Zhang P. (2008) "Automorphisms of braid groups on S-2, T-2, P-2 and the Klein bottle K." *Journal of Knot Theory and its Ramifications* 17(1): 47-53.

## ■ Other Refereed Journals ■

Aker S. (2008) "Major Determinants of Imports in Turkey." *Turkish Studies* 9(1): 131-145.

Ghosh BN. (2008) "Rich Doctors and Poor Patients: Market Failure and Health Care Systems in Developing Countries." *Journal of Contemporary Asia* 38(2): 259-276.

Guler M. (2007) "Channel noise induced transition from quiescence to bursting in the dissipative stochastic mechanics based model neuron." *Dynamics of Continuous Discrete and Impulsive System A, Supplement, Advances in Neural Networks* 14(1): 664-670.

Gunce K, Erturk Z and Erturk S. (2008) "Questioning the 'Prototype Dwellings' in the Framework of Cyprus

Traditional Architecture." *Building and Environment Journal* 43(12): 823-833.

Karatepe OM, Arasli H and Khan A. (2007) "The Impact of Self-Efficacy on Job Outcomes of Hotel Employees: Evidence from Northern Cyprus." *International Journal of Hospitality and Tourism Administration* 8(4): 23-46.

Karatepe OM and Uludag O. (2008) "Affectivity, Conflicts in the Work-Family Interface, and Hotel Employee Outcomes." *International Journal of Hospitality Management* 27(1): 30-41.

Karatepe OM and Uludag O. (2008) "Role Stress, Burnout and their Effects on Frontline Hotel Employees' Job Performance." *International Journal of Tourism Research* 10(2): 111-126.

Matis TI, Rangan A and Thyagarajan D. (2007) "Optimal replacement policies of repairable systems subject to shocks." *International Journal of Industrial and Systems Engineering* 2(3): 286 - 298.

Prykarpatsky AK, Bogoliubov NN, Golenia J and Taneri U. (2008) "Introductory Backgrounds to Modern Quantum Mathematics with Application to Nonlinear Dynamical Systems." *The Abdus Salam International Centre for Theoretical Physics (ICTP)*.

Vural Y and Peristianis N. (2008) "Beyond Ethno-Nationalism: Emerging Trends in Cypriot Politics after the Annan Plan." *Nations and Nationalism* 14(1): 39-60.

## ■ Conference Papers ■

Amca H and Celebi E. "Using Mobile Telephone as an Operator Independent, Secure Micro-Payment Tool." in *Proceedings of International Joint Conferences on Computer, Information, and Systems Sciences, and Engineering (CISSE2007)*, California, USA, December 2007.

Atasoğlu E. "Engineering Education: Globalization Efforts - Challenges And Achievements On A Small Divided Island." in *Proceedings of the ASEE 6th Global Colloquium on Engineering Education (GC 2007-106)*, Istanbul, Turkey, October 2007.

Badakhshan M and Arifler D. "Simulation Based Analysis of Spreading Dynamics of Malware in Wireless Sensor Networks." in *Proceedings of International Conference on Sensor Technologies and Applications (SensorComm 2007)*, pp. 164-169, Valencia, Spain, October 2007.

Celebi SI. "An experimental study of argument strength and source credibility on advertising effectiveness." in *Proceedings of the International Colloquium on Business and Management (ICBM)*, Bangkok, Thailand, November 2007.

Demirel H and Anbarjafari G. "Pose Invariant Face Recognition Using Image Histograms." in *Proceedings of The 3rd International Conference On Computer Vision Theory and Applications (VISAPP 2008)*, pp. 282-285, Portugal, January 2008.

Douknitch E and Salamah M. "Simple hardware-oriented algorithms for typical 2-d positioning problems." in *Proceedings of IEEE International Symposium on Intelligent Signal Processing (WISP 2007)*, pp. 1-5, Wales, UK, October 2007.

Emirzade E and Bitirim Y. "Resim Arama Motorlarının Sorgu Sözcük Sayısına Göre Performans Değerlendirmeleri." in *Proceedings of Değişen Dünyada Bilgi Yönetimi Sempozyumu (BY)*, pp. 99-104, Hacettepe University, Ankara, Turkey, October 2007.

Erbilek M and Toygar O. "Reducing the Effect of Partial Occlusions on Iris Recognition." in *Proceedings of 3rd International Conference on Computer Vision Theory and Applications (VISAPP08)*, Funchal, Madeira, Portugal, January 2008.

Erbilek M and Toygar O. "Iris Recognition on Partially Occluded Images." in *Proceedings of 22nd International Symposium on Computer and Information Sciences (ISCIS07)*, Ankara, Turkey, November 2007.

Khaddar MM. "Muslim Countries, the Middle East and Turkish Cypriot People of North Cyprus: The Organization of the Islamic Conference (OIC) and the Turkish Republic of Northern Cyprus (TRNC)." in *Proceedings of the International Conference on Middle East and North Cyprus: Perspective in Political, Economic and Strategic Issues*, pp. 123-139, Eastern Mediterranean University Center for Strategic Studies, TRNC, March 2008.

Komurcugil H. "Passivity-Based Control of Single-Phase PWM Current-Source Inverters." in *Proceedings of the 33rd Annual Conference of the IEEE Industrial Electronics Society (IECON'07)*, pp. 545-550, Taipei, Taiwan, November 2007.

Marans WR, Stimson R, Turkoglu H, Keul A and Oktay D. "A Multi-City Program of Research on Quality of Urban

Life." in *Proceedings of 8th Conference of the International Society for Quality-of-Life Studies (ISQOLS 2008)*, San Diego, California, USA, December 2007.

Nadiri H and Tumer M. "An Empirical Study to Measure Service Quality for Retail Stores: LEMAR Retail Chain Stores." in *Proceedings of the 12th Annual National Marketing Conference on Competition, Marketing and Retailing*, pp. 297-320, Sakarya, Turkey, October 2007.

Opiyo B, Gorpe S and Celebi SI. "Public diplomacy & the quest to end international isolation by the Turkish Republic of Northern Cyprus (TRNC)." in *Proceedings of The 12th Annual AUSACE International Conference: Communication at the Crossroad of Globalization*, Zayed University, Dubai, United Arab Emirates, October 2007.

Salamah M, Douknitch E and Bayramer C. "A Dynamic Hardware-Oriented Algorithm for Angle of Arrival Positioning Technique." in *Proceedings of the IEEE International Conference on Signal Processing and Communication (ICSPC07)*, pp. 201-204, Dubai, UAE, November 2007.

Shibliyev J. "Lingua-symbolic Reflection of Power: the Linguistic Landscape of Azerbaijan." in *Proceedings of The 8th CESS Annual Conference*, University of Washington, Seattle, WA, USA, 18-21 October 2007.

Sozen A. "New Principles of Turkish Foreign Policy Making" in *Proceedings of the 49th International Studies Association Annual Conference*, San Fransisco, California, March 2008.

Sultanzade V. "Aslı Bozulmuş Aşık Şiiri Metinlerinin Bir Tamir Usulü." in *Proceedings of IV. Uluslararası Türk Dili Kurultayı Bildirileri*, pp. 1633-1637, Ankara, Türkiye, Ekim 2007.

Sultanzade V. "Ünlü Uyumu Türleri meselesi ve Kıbrıs Ağzında Ünlü Uyumu." in *Proceedings of Türk Dil ve Kültürünün En Eski Dönemleri - Tarihi Gelişme Çizgisi - Kırs'a Ulaşması - Bugünkü Durumu Uluslararası Bilgi Şöleni Bildirileri*, pp. 104-111, Kyrenia TRNC February, 2008.

Tanyeli N. "How Efficiently can Web Assist English Language Instruction?" in *Proceedings of the International Technology, Education, and Development Conference (INTED2008)*, Valencia, Spain, March 2008.

Tumer M and Nadiri H. "Market Orientation and Competition: An Empirical Study in Production Sector of the Turkish Republic of Northern Cyprus." in *Proceedings of the 12th Annual National Marketing Conference on Competition, Marketing and Retailing*, pp. 99-112, Sakarya, Turkey, October 2007.

Yorgancioglu F and Komurcugil H. "Fuzzy Moving Sliding Surface Approach to the Hierarchical Sliding Mode Control." in *Proceedings of the 33rd Annual Conference of the IEEE Industrial Electronics Society (IECON'07)*, pp. 659-664, Taipei, Taiwan, November 2007.

## ■ Conference Presentations ■

Cakal H. "I Do Not Speak Your Language: Majority-Minority Research Problems and Solutions." *International Conference on Studying Ethnic Minorities – Methodological Approaches in Qualitative Research*, SFI – The Danish National Centre for Social Research, Copenhagen, Denmark, December 2007.

Cakal H. "Accumulated contact and prejudice in Pyla, Cyprus." *International Symposium: Intergroup contact and the Building of Trust: The case of Northern Ireland and Cyprus*, the AD HOC committee of the Association of Social Psychology, Ledra Palace Buffer Zone, Nicosia, Cyprus, November 2007.

Chefranov AG. "One-Time Password Authentication with Infinite Hash Chains." *International Joint Conferences on Computer, Information and Systems Sciences and Engineering (CIS2E 07), IEEE, Third International Conference on Telecommunications and Networking (TENE 07)*, University of Bridgeport, USA, December, 2007.

Erhurman T. "Kıbrıs'ta Demokrasi ve Siyasal Yapı." *Kıbrıs'ı Anlamak Sempozyumu*, İstanbul, Mart 2008.

Erozan F. "Linguistic Landscape as a Marker of Language Power: Cyprus." *The 8th CESS Annual Conference*, University of Washington, Seattle, WA, USA, October 2007.

Ilic S. "The Mawlawihane of Sarajevo and the Mawlawi Culture of the 17th Century Ottoman Bosnia." *International Maulana Jalal-ad Din Rumi Conference*, Tehran, Iran, October 2007.

Ilic S. "The Legacy and the Influence of Mevlana Jalal al-Din Rumi and Mevlevism in the Post-Ottoman Bosnia." *International Symposium on the Traces of Mevlana Jalal al-Din Rumi in the World*, Konya, Turkey, December 2007.

Kunt N. "Who are using the communication strategies more effectively?" *14th International Conference Greek Applied Linguistic Association on Advances in Research on Language Acquisition and Teaching*, Thessaloniki, Greece, December 2007.

Onurkan G, Basri F and Unveren Z. "Error correction symbols: do they really work?" *EgyptTesol 2007: Best Practice in TEFL*, Cairo, Egypt, November 2007.

Sultanzade V and Billuroglu G. "Kıbrıs Ağzında Şartın İfade Vasıtaları." *Uluslararası Kıbrıs Araştırmaları Kongresi*, Famagusta, TRNC, October 2007.

Sururi A. "Friendship and Self-Love: Can the Stoic Wise be A Genuine Friend." *2nd Global Conference, Persons, Intimacy and Love: Probing the Boundaries*, Salzburg, Austria, March 2008.

Tanyeli N and Guncan M. "Changes in the Patterns of Language Teaching." *International Technology, Education and Development Conference*, Valencia, Spain, March 2008.

Wall J. "The Topology of the Marginalized Voice." *Defining Space Conference*, Dublin, October 2007.

Wall J. "Medbh McGuckian's The Face of the Earth: the Identity and the Indigestible Bits." *IDEOGRAMA: To Be or what to Be*, Nicosia, March 2008.

## ■ Books ■

Aliev RA and Aliev RR. (2007). *Control Theory*. Baku, Chashioglu.

Bayraktar N, Binbir B, Karakus C, Hurol T, Sahin Y, Tekkaya O and Poursani E. (2008). *Çocuk ve Mimarlık, Toplumsal bir Eğitim Modeli*. Ankara: TMMOB Mimarlar Odası Ankara Şubesi ve Heinrich Böll Stiftung Derneği.



Erhurman T. (2007). *Kıbrıs'ta Akıl Tutulması (Kıbrıslı Türklerde Modernleşme ve Hukuk)*. Lefkoşa: Işık Kitabevi Yayınları.

Sozen A. (2007). *Reflections on the Cyprus Problem: A Compilation of Recent Academic Contributions*. Famagusta: EMU Publishing.

Turhan T. (2008). *Avrupalı Üniversite (Yükseköğretimde Güncel Yönelimler/Eğilimler)*. Famagusta: EMU Publishing.

## ■ Book Chapters ■

Colak Y. (2008). "Neo-Ottomanism, Cultural Diversity and Contemporary Turkish Politics." in R. Detrez & B. Segarh. *The EU & the Historical Legacies in the Balkans* (pp. 143-156). Brussels: Peter Lang.