

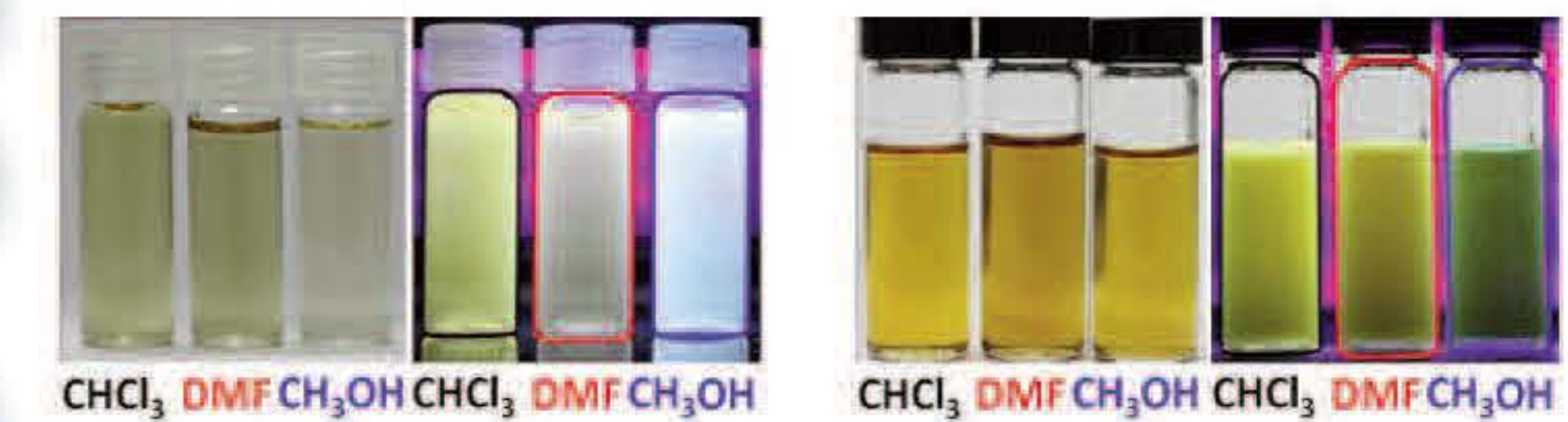
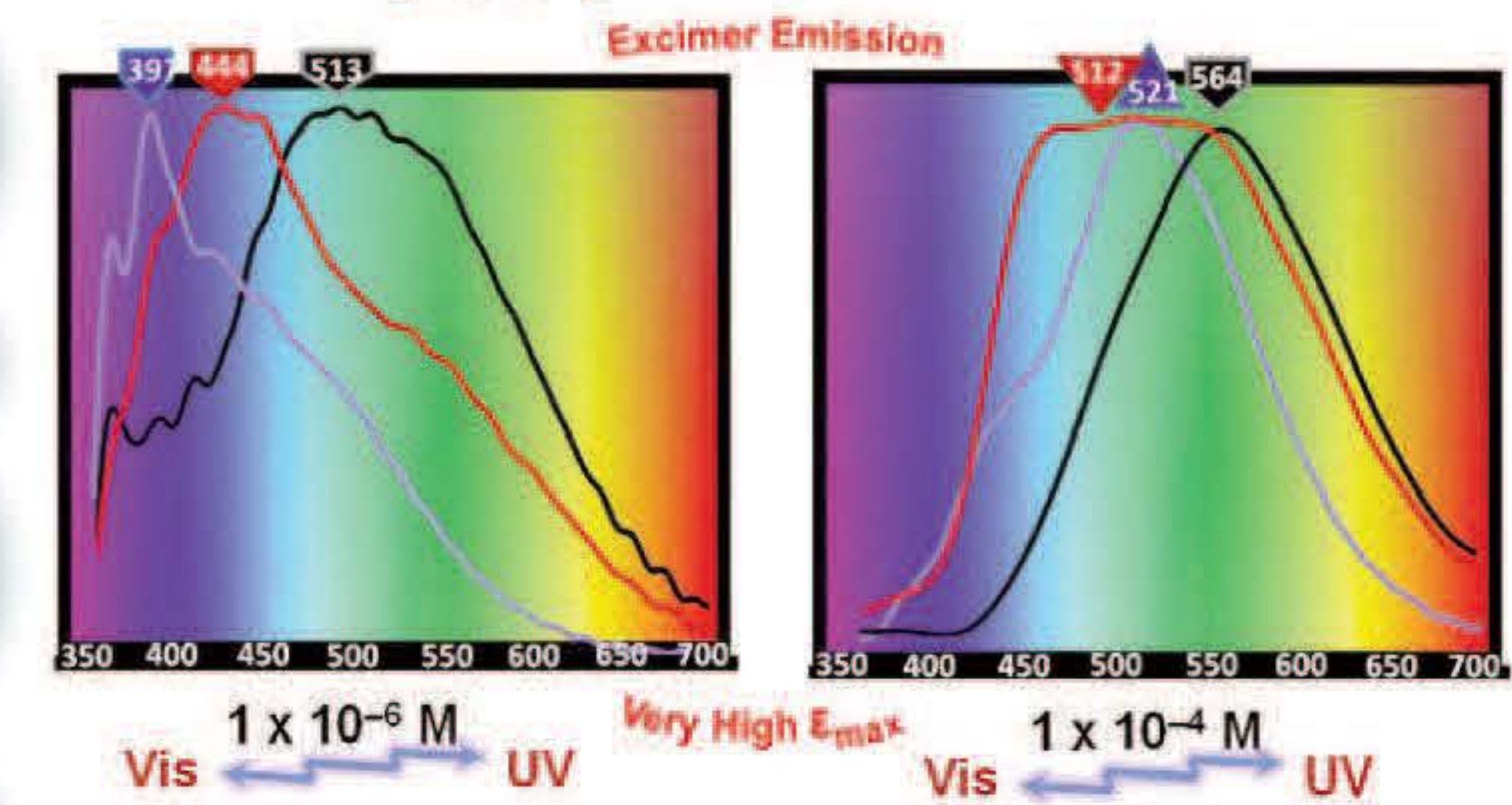


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# research newsletter

naphthalene oligomer



Organic-Based Electronics and Photovoltaic Systems

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Dear colleagues,

Welcome to the third issue of the academic year 2011/2012 which covers research activities carried out between July 2011 and September 2011. This issue also includes the post-graduate degrees obtained for the 2011/2012 academic year, spring semester.

The Research Newsletter is presently undergoing a transformation, and we have been given the responsibilities to act as the interim editorial team. Throughout this period, we hope to continue providing invaluable information concerning the ongoing research topics that our colleagues are involved in. Likewise, we hope to maintain the same exemplary standards set by the editors of the past issues. However, this transitional period has created some delays, and as a result, we have not been able to meet the expected publication deadline. Please accept our apologies for any oversight or inconvenience this may have caused.

We are pleased to announce that in this newsletter, we have included several articles dealing with current research issues: Two from the Faculty of Art and Sciences; Department of Chemistry and the Department of Arts, Humanities, and Social Sciences, and one from the Faculty of Architecture; Department of Architecture. Our research spotlight features an article co-authored by; Dr. Jagadeesh B. Bodapati and Professor Dr. Huriye Icil from the Department of Chemistry on Naphthalene-bisimide oligomer. Asst. Prof. Dr. Luca Zavagno, from the Department of Arts, Humanities, and Social Sciences was granted research leave in the summer of 2011 and wrote an article on the Economy of Cyprus in the seventh and eighth centuries. Another featured article written by Asst. Prof. Dr. Isaac Lerner, from the Department of Architecture, investigates the notion of Blind Creativity.

Our 'Interview' section introduces Prof. Dr. Osman M. Karatepe and his supervisee, Georgiana Cojocar, Ph.D. candidate from the School of Tourism and Hospitality, in Tourism Management. Once again, understanding the importance of collaborative research gives us another interesting insight into the pertinent aspect of Tourism and Management and will be a significant contribution towards future projects and research design.

Our alumnus in this issue is Kayode Dare Aleshinloye who is presently a Ph.D. candidate in the Tourism Science sector at Texas A & M University.

We believe that our readers will find the articles presented in this issue stimulating and thought provoking and we hope to continue presenting such interesting articles in the future issues of the Research Newsletter with your esteemed help.

We wish to express our appreciation and would like to thank all the contributors for providing us with their interesting material, without which the EMU Research Newsletter would never have materialized as an invaluable source of information. We look forward to working with our contributors again in the upcoming issues.

Finally, my personal thanks go to the Editorial Team member, Editorial Assistant Olusegun A. Olugbade for all his help and support especially during this interim period of transition.

Senior Instructor, Ulrike Lerner  
Associate Editor

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### *Research @ EMU*

#### ■ Prof. Dr. Derya Oktay was elected as the new President of SID-Lefkoşa

Prof. Dr. Derya Oktay, Director of EMU Urban Research & Development Center and an academic member in the Department of Architecture, was elected as the new President of the Society for International Development (SID), Lefkosa Chapter. The Executive Board members of SID-Lefkosa consists of Mr. Tahir Pirgaloğlu (Secretary General), Mr. Ayer Kaşif (Vice President), Mr. Martin Marancos (Vice President), Mr. İbrahim Yapıcıoğlu (Vice President), Dr. Cemil Atakara (Treasurer), Assoc. Prof. Dr. Turkan Uraz, Assoc. Prof. Dr. Zeynep Onur, Asst. Prof. Dr. Hassina Nafa and Mr. Serdar Sandıkçı. Based in Rome, Italy, SID is a global network of individuals and institutions concerned with sustainable development issues on a participative, pluralistic and sustainable levels. SID has over 3,000 members in 80 countries and 45 local chapters. It works with more than 100 associations, networks and institutions involving academia, political leaders, development experts, and students both at local and international levels.

The SID Lefkosa Chapter aims at fostering - through seminars, conferences and dialogues - the local national debate on sustainable development issues, contributing to building linkages between the national and the international communities, and - through encouraging place-based research projects - promoting sustainability of local environments and empowering the Cypriot Civil Society for a more equitable and sustainable future.

The central forces of activities led by the SID Lefkosa Chapter has been the environmental projects, such as marine debris, ecologically important areas, and population survey of feral donkeys in the Karpaz peninsula (this was published as a scientific paper in the European Journal of Wildlife). The current project "Oaks for the Future" is a bi-communal project funded by the EU Commission. The aim of the research is to find and record the existing Oak trees and correlate this information with the habitat. In the second stage of the project, saplings will be planted (managed to get 15000 saplings ready to be planted for winter of 2011), and in the final stage, educational and awareness building activities will be carried out. The Middle East Technical University and Lefke European University are the partner organizations in these projects.

*News submitted by: Prof. Dr. Derya Oktay*

#### ■ EMU Organic Photochemistry Research Group Article Amongst the Top 10 Accessed Articles

According to the editor of the 'Photochemical and Photobiological Sciences (PPS) Journal (Impact factor: 2.71), the article co-authored by Dr. Jagadeesh Babu Bodapati and Professor Huriye İcil met with a great deal of success as stated in the following letter:

Dear Professor Dr. Huriye İcil and Dr. Jagadeesh Babu Bodapati,

Congratulations! During the month of August, I'm delighted to say that your article entitled '*A new tunable light-emitting and p-stacked hexa-ethyleneglycol naphthalene-bisimide oligomer: synthesis, photophysics and electrochemical properties*' was amongst the top ten accessed articles from the online version of Photochemical & Photobiological Sciences during the month of August 2011. You can browse the full list of top 10 articles here.

<http://blogs.rsc.org/pp/2011/09/27/top-ten-most-accessed-articles-in-august/>

We look forward to receiving your next submission soon.

With best wishes

Sarah Ruthven

Editor, PPS

[pps-rsc@rsc.org](mailto:pps-rsc@rsc.org)

# A new tunable light-emitting and $\pi$ -stacked hexa-ethyl-ene glycol naphthalene-bisimide oligomer: synthesis, photophysics and electrochemical properties

By Prof. Dr. Huriye İcil and Dr. Jagadeesh Babu Bodapati  
Department of Chemistry, Faculty of Arts and Sciences



Huriye İcil (left)  
and Jagadeesh Babu  
Bodapati (Right)

## Introduction

Polyimides have highly attractive potential in many industrial fields due to their excellent thermal and photochemical stabilities, high mechanical strength, good film forming ability, conductivity and optical properties. Currently, a great deal of effort has been devoted to the development of novel perylene and naphthalene polyimides due to their highly favorable photochemical properties, excellent thermal and photo stabilities and photo-conductive properties. As described in the literature, the photo-physical properties of  $\pi$ -conjugated systems could have been heavily influenced by aggregation or excimer formation. More and more attention has been focused on the modification of naphthalene diimides in order to improve their optical and electrochemical properties. Additionally, molecularly well-defined  $\pi$ -conjugated oligomers containing a naphthalene chromophore remain ideal model systems for the investigation of photochemical and electrochemical properties which may bridge the gap between molecular and macroscopic applications. Diimide and poly (ethylene glycol)-based macrocycles presented successful assembly routes due to the capacity of forming intermolecular

C–H–O hydrogen-bonding interactions. Additionally, it has been shown that the cooperative interaction of intermolecular hydrogen bonds and donor–acceptor interactions could achieve selective switching between complicated hydrogen-bonded supramolecular oligomers and polymers. Self-assembly has recently emerged as a promising approach in chemical synthesis, nanotechnology, polymer science and engineering for the development of simple molecular building blocks useful for a wide range of applications. The forces that led to self assembly are non-covalent interactions such as  $\pi$ – $\pi$  stacking, hydrogen bonding, metal–ion coordination, van der Waals interactions, etc. This is particularly one of the most rapidly growing fields which could potentially play an important role in future technology. Many self-assembling systems including naphthalene chromophores have been developed for exploring the self-assembly behaviors for attractive possible potential applications. Notably, self-assembled naphthalene oligomers may be of great importance in exploring future applications. Incorporation of the flexible hydrophilic hexa (ethylene glycol) spacer within oligomer backbone could produce

well-established self-assembly systems.

In our current paper, we have reported the design, synthesis, characterization, self-assembly via  $\pi$ – $\pi$  stacking and hydrogen bonding interactions, photophysics, and electrochemical properties of a new tunable light-emitting and self-assembled naphthalene oligomer (naphthalene-1,4,5,8-tetracarboxylic acid–N,N'-bis(2-[2-(2-[2-(2-(2-hydroxyethoxy)ethoxy]ethoxy)ethoxy)ethoxy]ethyl) polyimide).

**The strengths of the article which cause a strong attraction:**

### 1. High solubility

Incorporation of the specially synthesized-flexible hydrophilic hexa (ethylene glycol) spacer within the oligomer backbone yielded remarkable solubility both in organic and aqueous media. In fact, many functional diimides and polyimides suffer from poor solubility which brings poor processability and thus utilization becomes difficult in many areas of application. *In this respect, our new naphthalene oligomeric diimide has a great advantage with high solubility both in organic and aqueous media.*

### 2. Molar mass data

Determination of molecular weight of the polyimides is an important necessity as it affects the molecular structure of the polymer and its properties. The molecular weight distribution of the synthesized oligomer was determined by GPC, the  $M_n$ ,  $M_w$  and poly-dispersity values were found to be 2030 g mol<sup>-1</sup>, 4430 g mol<sup>-1</sup>, and 2.20, respectively. The chromatograms show monomodal molar mass distributions and moderate polydispersity indices typical of classic step-growth polymerization. *The oligomer has about eight monomer units according to*

$M_w$ .

### 3. Very high absorption and absorption coefficient

A detailed characterization of photophysical properties was made and we found very exciting results. Such optical properties govern the compound toward organic-based electronics. Our results show that the naphthalene oligomeric diimide has a substantial potential in many photonic and electronic applications. This was summarized in the following paragraphs:

The UV-vis absorption spectrum of the oligomer in  $\text{CHCl}_3$  have three bands at 343, 361, 380, which are characteristic of all naphthalene diimide derivatives and two different shoulder bands at about 397 and 413 nm which are related to the intermolecular charge transfer interactions.

The molar absorption coefficient values measured in all solvents compared with those found in literature are unexpectedly high. Very high molar absorption coefficients for the  $0 \rightarrow 0$  bands ( $\epsilon_{\text{max}}$  ( $\text{CHCl}_3$ ):  $157\,400 \text{ L mol}^{-1} \text{ cm}^{-1}$  at 380 nm) are attributed to intermolecular charge transfer and  $\pi-\pi^*$  electron transitions of the conjugated molecule.

The absorption spectrum of oligomer in solid-state was different from those in solvents of different polarity in terms of spectral (broader) and peak position (most intensive absorption band:  $0 \rightarrow 1$  at 365 nm) which indicate different intermolecular interactions in both states.

### 4. Fluorescence properties

Interestingly, all the emission spectra of oligomer show a characteristically, broad and structureless excimer-like emission band ( $\lambda_{\text{exc}} = 360 \text{ nm}$ ) which was mostly redshifted in  $\text{CHCl}_3$  relating to  $\pi$ -stacked interaction.

The emission spectra of oligomer in all protic solvents are striking. Interestingly, planar oligomer exhibits very large bathochromic (red) shifts in all aprotic solvents ( $\lambda_{\text{em,exc}}$  ( $\text{CHCl}_3$ ): 513 nm, etc.) and likely due to excitation to the  $S_2$  state. Such a large and solvent-dependent red shift indicate that the lowest energy electronic transition for oligomer has substantial charge-transfer character and the intermolecular interactions in the ground and excited states are different.

On the contrary, the excimer-like bands shifted in higher energy in polar protic solvents. It is worthy of note that the emission band of the oligomer depends strongly on solvent polarity and proticity.

#### a) High quantum yields

The fluorescence quantum yields were measured as 0.017, 0.012, 0.022 and 0.032 in  $\text{CHCl}_3$ , DMF (dimethyl formamide), methanol (MeOH) and water, respectively, that were much higher in comparison to those in the literature. The fluorescence enhancement observed in nonpolar solvent  $\text{CHCl}_3$  compared to the ones in literature could be attributed to the increase in rigidity which reduces the loss of energy via radiationless thermal vibrations. Notably, the fluorescence of oligomer becomes more intense by increasing the proticity of the solvent. The emission spectra of oligomer at various concentrations in  $\text{CHCl}_3$ , NMP (N-methyl pyrrolidinone), MeOH and DMSO (dimethyl sulfoxide) showed a red-shifted emission peak at  $10^{-4} \text{ M}$  concentration which may be attributed to high concentration of hydrophobic units stacking and hydrogen bonding interactions.

#### b) Color Tunability

The oligomer showed concentration and solvent dependent fluorescent color tunability (Fig.1). Emission color changes with solvent polarity and proticity. Notably, oligomer exhibits a negative solvatochromism. It should be noted that the color of the oligomer at  $10^{-6} \text{ M}$  concentration is fluorescent yellow but changes to a fluorescent brown color at  $10^{-4} \text{ M}$  concentration in daylight. Further, its excimer emission color is solvent dependent and fluorescent intensity

increases with concentration. As can be seen from the color tunability figure (Fig. 1), the colors of the excimer emissions at  $10^{-6} \text{ M}$  concentration in  $\text{CHCl}_3$ , DMF and MeOH are light yellow, light blue and strong blue, respectively. Additionally, the intensive yellow color of excimer emission in  $\text{CHCl}_3$  and DMF at  $10^{-4} \text{ M}$  concentration is changed to green in protic solvent MeOH. Importantly, solvent and concentration dependent color tunability is evident. These results are very remarkable for future applications in photonic technology.

#### c) Fluorescence lifetime

The fluorescence lifetime of the oligomer is calculated as 80 ps which supports the ultra fast intersystem crossing from the singlet excited state. The fluorescence lifetime is considerably longer than many naphthalene compounds in literature which is explained by the formation of excimer type species and higher fluorescence quantum yields.

### 5. Thermal Stability

Thermal properties evaluated of the oligomer show that it is stable up to  $325 \text{ }^\circ\text{C}$  and exhibited degradation in three steps between  $0-900 \text{ }^\circ\text{C}$ . It exhibited gradual degradation; 2.5% compound remained (char yield) when heated up to  $900 \text{ }^\circ\text{C}$ . The compound showed high thermal stability in spite of the presence of flexible aliphatic spacers in the oligomer chain. It exhibits no glass transition temperature.

### 6. Conductivity properties by electrochemistry

The electrochemical characterization of oligomer was studied in detail using cyclic voltammetry (CV) in different solvents.

Cyclic voltammograms of the compound

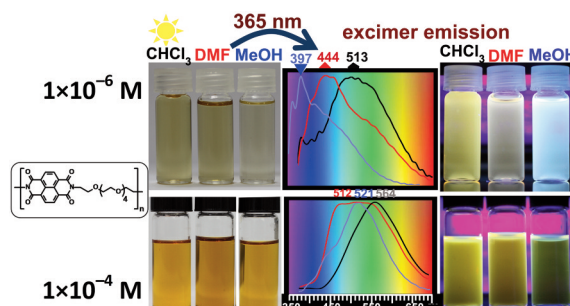


figure 1

have shown two reversible, one-electron reductions at  $-1.103$  and  $-1.457$  V (vs. ferrocene/ferrocenium couple, scan rate:  $100 \text{ mV s}^{-1}$ ) corresponding to the production of the radical anion and dianion in  $\text{CH}_2\text{Cl}_2$ .

Electrochemical stability of the oligomer was examined by measuring repeated cycles of redox processes. The synthesized compound has shown reversible reduction steps for the entire scanning rate in a region of  $50$  to  $500 \text{ mV s}^{-1}$ .

Interestingly, the electrochemical behavior in  $(50 : 50) \text{ CH}_3\text{OH}-\text{CH}_3\text{CN}$  binary solvent mixture was different. The cyclic voltammograms of the compound showed only one reversible and one electron reduction wave, implying the formation of anion at  $-0.917$  V (vs. ferrocene/ferrocenium couple, scan rate:  $100 \text{ mV s}^{-1}$ ). The reduction potential value is slightly more positive than that observed for oligomer in  $\text{CH}_2\text{Cl}_2$  solution indicating the easier reduction with higher reduction rate.

The optical band gap,  $E_g$  value, was calculated to be approximately  $3.12 \text{ eV}$  and  $2.71 \text{ eV}$  for the compound in the  $(50 :$

$50) \text{ CH}_3\text{OH}-\text{CH}_3\text{CN}$  binary solvent mixture and  $\text{CH}_2\text{Cl}_2$ , respectively. Solvent-dependent band-gap tunability is evident, which could be very important for optoelectronic applications.

#### Concluding remarks

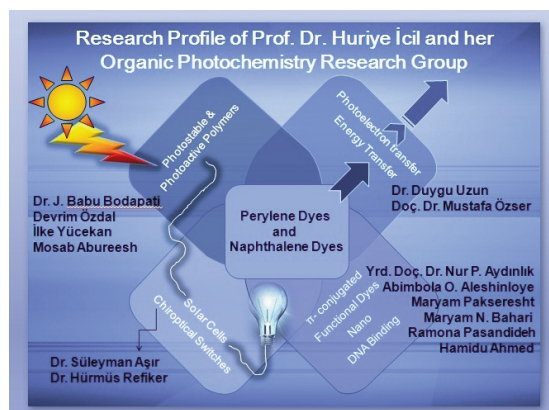
- We have reported the synthesis and detailed characterization of a specially designed flexible-rigid-flexible naphthalene oligomer
- It is highly soluble both in organic and aqueous media.
- The oligomer has good thermal stability ( $T_d = 325 \text{ }^\circ\text{C}$ ).
- It exhibited unexpectedly high molar absorption coefficient that could enable it to find use in applications like photovoltaic devices.
- The sensitivity of fluorescence to solvent character may make it useful in fluorescent labeling experiments.
- The oligomer shows excimer emissions in all kinds of solvents and solvent-dependent band-gap tunability.

- Most importantly, the compound has shown very interesting concentration and solvent dependent color tunability which is remarkable for future applications in photonic technology.
- An important increase of fluorescence quantum yield occurred upon increasing the solvent polarity.

Lastly, we note that further investigation of this very attractive oligomer involves its nanoparticle-based applications as electro-active components for organic-based electronics and photovoltaic systems.

#### Acknowledgments

The authors are thankful to the Turkish Scientific and Technical Research Council (TUBITAK) (Project No: 110T201) for scientific evaluation and monitoring of the project which was financially supported according to the cooperative protocol that was signed between Turkey and North Cyprus.



#### About the Researchers

*Prof. Dr. Huriye İcil* was born in Larnaca, Cyprus, in 1960. She received her Ph.D. in Organic Chemistry from Ege University of Turkey, in 1993. In 1993, 1995 and 2002 she was appointed as Assistant Professor, Associate Professor and full Professor, respectively, at the Eastern Mediterranean University (North-Cyprus). She directed many research projects funded by NATO, DFG, DAAD, CNRS, TUBITAK and DPT. She held the Visiting Scientist positions at the MPI for Bioinorganic Chemistry, Rochester University, and East Anglia University. Her research interests focus on design and synthesis of novel organic materials with remarkable electrical and optical properties.

*Dr. Jagadeesh Babu Bodapati* received his Ph.D. in Chemistry from the Eastern Mediterranean University in 2011 under the supervision of Prof. Dr. Huriye İcil. As the *first postdoctoral researcher* at EMU, he is currently working for the prestigious TUBITAK project (TBAG-110T201) with the project leader, Prof. İcil. This project is one of the biggest projects granted and supported by TUBITAK according to the cooperative protocol that was signed between Turkey and North Cyprus. During his MS and Ph.D. program at EMU, he worked as one of the members in scientific research for another TUBITAK project (TBAG-2371) (2004-2007) with the project leader, Prof. İcil. His research interests are photoactive polymers and their potential applications in photovoltaic cells.

# Blind Creativity: A Subliminal Bias towards Architecture and Urbanism in the Mechanical and Automated Periods of Design

By Asst. Prof. Dr. Isaac Lerner  
Department of Architecture



Isaac Lerner

## Abstract:

Lewis Mumford, in his book titled *Sticks and Stones: a Study of American Architecture and Civilization*, characterized the Modern period in terms of the dominant influence of mechanical industrialization and the consequent subliminal effect of inducing a 'blind creativity' among designers. That is, in this context he referred to the industrial assembly line as an archetype for regulating thought and practice in design. The bias of the assembly line subliminally prejudiced a new precedent in the production of building components and materials by means of mass production. These building elements and systems were available, in practice, through catalogues and other media that prejudiced values of standardization and uniformity just as mechanical mass production was a means of 'producing a million things all-the-same and very cheap'. For Mumford, the effective result was a bland homogeneous repetition of form in architecture and urbanism manifesting a 'blind creativity' induced by an environment of mechanical industrialization. The major consequence for architectural expression was a loss of a particular identity of built-works for that of a universal identity as epitomized by the concept of the International Style; a style which fundamentally valorizes an econocentric and technocentric aesthetic. In this regard, Mumford observed that communities were designed, for example, for the automobile and not for the more complex dimensions of a humanistic society imbued with the values of tradition, ritual and symbolic communication; i.e. a humane architecture on a human scale.

The concept of 'blind creativity' now applies to our contemporary postmodern automated culture. The mechanical assembly line has become automated essentially by means

of feedback, or information processing, so that production has changed in a two-fold manner. First, it has increasingly become contextually sensitive in the manner of 'bespoke design' and secondly, with the use of information processing this also provides a medium of communication that increasingly includes the user and consumer in the process of design and production. The automated industrial process, incorporates information as a new 'material' and consequently extends the parameters of design to include the social and the geographic context; i.e. sustainable design. Therefore, by means of feedback it is possible to produce 'a million things, all different, and very cheap'. However, these automated abilities have not extended contextual concerns to include the effects of either mechanization or automation on the psychological and sociological aspects of architecture or urbanism. Within this post-industrial framework, a lack of a human identity is compromised for the generation of forms that express the possibilities of extreme expressions facilitated by means of a new cyber-spatial dematerialized or virtual environment. The aim of this paper is to explore the formal cause and consequences of displacing the identity of local communities and their embodied values, in the dematerialized context of the Global Village, in design which can be qualified as 'buoyant' architecture. This is not a result of the mechanical means of design but rather, of an attitude and sensibility blindly prejudiced by the bias of the digital environment of the emergent electronic communication infrastructure.

## Précis of Original Paper

Lewis Mumford referred to a lack of understanding of the effects of industrial modernization on culture, and consequently upon design practice, in what could be paraphrased as 'blind creativity'<sup>1</sup>. One can infer from this phrase that blindness implies a mechanical practice, or a subliminally embedded cultural predisposition, that informs basic attitudes towards space and time and in turn their manifest architectural and urban representations. Consequently, the theme of this paper involves a discussion regarding the qualities of these respective cultural biases, towards time and space, as influenced by dominant technological infrastructures; such as the modern industrial and postmodern automated environments and how this clarifies Mumford's idea regarding blind creativity.

The work of the cultural and technological theorist, Marshall McLuhan, provides vital insight as to how major technological innovations, and their corresponding environments as total operative frameworks, subliminally prejudice or qualify cultural predispositions towards space. By definition, because total environments remain unperceived until changed



therefore, an unexamined spatial consensus prevails within cultures; as for example, the visual bias of the mechanical industrial worldview which is currently being displaced by an acoustic bias fostered in the emergent automated industrial environment. That is, a dominant technology always has with it a hidden ground influencing spatial attitudes and configurations. The nineteenth century railway infrastructure, as an urbanizing center-margin organization, is being reconfigured by means of rapid-rail networks; as the network becomes the archetypal organization of the information age<sup>2</sup>. The difference is due to the effect of speed-up which is one qualitative dimension of environments characterized as either an environment of visual or acoustic space.

The ground refers to the hidden environment as a totality. For example, the infrastructural ground of the automobile, are the material effects shaping society and consists of highway systems of various degrees, steel production, engineering and design, the petroleum industry and related political dimensions, etc. In this regard, a technological environment is an evolutionary formation whereby one is wholly, but subliminally, immersed in cultural evolution so that such practices as architectural design precludes awareness of environmental influences upon design; hence, the cultural blindness effecting design is induced by the unperceived environmental bias. Like a fish in water, that is not aware of its medium until pulled out, a theory of cultural change that attends to the effects of media or technological infrastructures can provide a gestalt analytic that reveals, for example, the subliminal factors informing spatial intuitions that in turn influence design.

A brief account of McLuhan's communication theory of cultural change will be provided below, and in this context, Mumford's critic of industrial modernism, as a kind of blind creativity, will be discussed. All cultures, as they adapt to the emergence and evolution of technological innovation and concomitant infrastructural environments remain mostly unaware of their effects, and this applies to the current realization of the electronically automated planetary culture that McLuhan termed the Global Village. In particular, a major side-effect of using electronic media in which space and time have disappeared, or virtually dematerialized, is manifest in architectural design as a quality which I refer to as 'buoyancy' and reflects a current dimension of blind creativity; buoyancy is an unintentional side-effect of the electronic environment. The effect of dematerialization, as a consequence of the increasing ubiquitous application of information technology, networking and the use of digital software and imagery, is an inherent feature of instant communications. This sense of buoyancy, or simulated weightlessness, is manifest in some current design as both a response and environmental adjustment to de-valoring natural embodiment for self-images in virtual reality. This is a result of the extreme condition of speed-up under electronic conditions whereby communicating at the speed of light transforms the embodied self-image into a virtual data-profile.

The heightened awareness of the subliminal factors by

means of cultural and environmental studies incorporates a deeper understanding of how space and time are culturally qualified and how this in turn informs design. An understanding of the co-productive relationship between the things we make and our self and world images in the context of their operational infrastructural environments, educates perception regarding qualitative changes of pattern, scale and pace of cultural forms.

Human productions, and in particular dominant technological environments, are not neutral. That is, an understanding of these ground-works, or perception of what 'stands-under' society as the conditioning environment of services and dis-services removes the blinders of how design was informed in the past, and also acts as a means of anticipating creative development in the present. By analogy, the study of the movement of an iceberg requires a gestalt analysis of its movement which means 'standing-under' the surface (since more than 90% of the iceberg is below the surface) to observe changes in water pressure, sea currents, temperature and salinity differentials that provide insight towards anticipating its movement. Just by surveying the tip of the iceberg and anticipating its change in space and time is a blind study, a study of content and not the effects of the medium regarding changes of position. Similarly, but more profoundly, in order to understand design in the context of culture requires more than the study of the history, geometries or production of architecture in space and time, but rather, a study of the movement of culturally acquired predispositions and conceptions of space and time; such as, the movement from the ideas of absolute space and time in the mechanical age towards the current concepts of relative space-time; e.g. the notions of literal and phenomenological space-time in the work of Siegfried Giedion and Slutsky & Rowe<sup>3</sup>.

What is revealed, by means of a gestalt analytic of culture and sustaining technological environments, are movements or the production of qualitatively distinct and culturally relative conceptions of spatiality and temporality that in turn, in-form manifestations of various styles of art, architecture and urbanism. Each culture, such as the modern industrial and the post-industrial automated societies of today, are prejudiced by their ground-works, or 'moved' (i.e. transformed) by their technological infrastructures, which are the qualifying contexts shaping perception and consequently design conceptions. For McLuhan, an understanding of sustaining, or self-qualifying technological environments as extensions of one's embodied self, is a manner of overcoming blind creativity by means of perceiving the major factors of cultural evolution.

The language of architecture represents the bias of a mindset that is not a product of ideology, but rather that of a mode of perception prejudiced by means of a self-qualifying environment. For McLuhan, the notion of logos is not that of rationalistic reason or logic, but he refers to the pre-Socratic insight of the co-creative, co-formative dialectic between the speaker and the world; oral cultures perceive that when 'a word is uttered a world is outered'; i.e. world-making and

language are synonymous as the means/medium for the construction of societies. McLuhan recognized that languages are technologies in the manner that they store and transmit knowledge and experience. In just this way, technologies such as planes, trains or computers are languages, because, by means of their operative infrastructural grammars they uniquely store and transmit objects and information (LM...). It is these grammars, when analyzed in terms of self-qualifying environments, which facilitate an understanding of how all communication systems mediate and shape meaning and being. In this regard, buoyancy satirizes weightlessness in order to maintain a human dimension as a local condition of our lives. Mumford felt that the human scale is a most vital design criterion when he wrote:

Home, meeting-place, and factory; polity, culture and art have still to be united and wrought together, and this task is one of the fundamental tasks of civilization. Once that union is effected, and the long breach between art and life, which began with the Renaissance [with the intensification of visual space after printing and resultant Cartesian mind-body substance dualism], will be brought to an end.....there is nothing to prevent our own civilization from recovering once more *its human base* – nothing, that is, except our desires, aims, habits, and ends<sup>4</sup>.

“Desires, aims, habits and ends” are subjective domains of societies rather than the inter-subjective; they constitute the tip of the iceberg, or content, rather than the qualifying dimensions of man-made environmental influences. Environmental context, as a self-qualifying framework, rather than content, shapes percept and percept in turn

in-forms concepts such as space and formal conceptions of art and architecture. Being predisposed to visual space or acoustic space as qualified by the mechanical and automated environments respectively, has engendered their respective social realities and concomitant blindness. Blind creativity, therefore, is a behavior inherent to all architectural periods and related design styles throughout history. But today, as technological change has accelerated, this behavior is becoming more transparent. In the information age we are experiencing extended self-qualifying abilities in the manner of pattern recognition as well as structural and systems analysis, while obsolescing cognitive abilities which privileged specialization and non-interdisciplinary study.

The extension of the nervous system and brain is fostering the ability to think about thinking (i.e. critical thinking about the cognitive correlates of environmental development) because knowledge can no longer be separated into particular subjects or fixed definitions. Critical thinking for McLuhan involves thinking about the self-qualifying groundwork, or human extensions, in terms of their effects as a way of anticipating blindness or the prejudices of environmental bias. In other words, environments, whether local, regional or global, are artifacts designed by means of ecology of media or technologies. However, for a sustainable ecology regarding not only material, but also psychological and sociological well-being as an effective response to blind creativity, then architectural and urban design must be understood in terms of the co-formative dynamics of self-qualifying environments. This approach could foster anticipatory rather than blind design in order to safeguard human scale and natural experience whatever innovative technological changes we produce.

1. Lewis Mumford, *Sticks & Stones: a study of American architecture and civilization* (New York: Dover Publications, Inc. 1955), 86.
2. Manuel Castells, *The Internet Galaxy* (London: Oxford University Press, 2002), 1-3.
3. Colin Rowe and Robert Slutsky, *Transparency* (Basel: Birkhauser, 1997)
4. Mumford, *Sticks & Stones*, 112.

## About the Researcher

*Asst. Prof. Dr. Isaac Lerner* has taught in Cyprus for about 14 years; initially for 1-1/2 years at Lefke University and the remainder at DAÜ in the Department of Architecture. He has professional degrees in Civil Engineering and Architecture from McGill University, Montreal, Canada. His teaching and research interests focus upon the effects of the interface between technologies and design in architecture and urbanism and his current work deals with issues regarding IT and networks in the formation of interactive spaces, such as, smart buildings, streets and cities.

# The Non-State Economy of Cyprus in the Seventh and Eighth Centuries: "Vessels" for Trade.

By Asst. Prof. Dr. Luca Zavagno  
Department of Arts, Humanities, and Social Sciences



Luca Zavagno

Asst. Prof. Dr. Luca Zavagno, from the Department of Arts, Humanities, and Social Sciences, was granted research leave in the summer of 2011. During this time, he was at Dumbarton Oaks Research Center for Byzantine Studies (Harvard University) in the US as a Summer Fellow, researching and writing his book on the history of Cyprus from the period of Late Antiquity to the early Middle Ages. Dr. Zavagno has recently published an article on the numismatic aspect of his research in the prestigious journal of *Byzantion*.

Fertile and strategically located along the shipping routes of the Eastern Mediterranean, the island of Cyprus [FIG. 1] has been recorded and praised for its wealth since Roman times. In the first century A.D., the geographer Strabo, for instance, wrote that, "in terms of excellence, Cyprus stands out above all the other islands: because it is rich in wine and oil and uses home-grown wheat. There are mines of copper [...] in which sulphate of copper and

copper-rust are produced which are also useful in the healing arts [...] the trees cut down are not only used as fuel for the melting of copper and silver; but also for shipbuilding"<sup>1</sup>. Lying in the middle of the gulf between Cilicia and Syria<sup>2</sup> and just one day away from Egypt as the crow flies, the island (whose circuit can be completed in twelve days according to the tenth century Arab geographers' al-Muqaddasi and Ibn Khurdādābeh<sup>3</sup>) was portrayed by the

sixth-century Synecdemos written by Hierocles<sup>4</sup> as endowed with fifteen cities. The literary sources of the Late Antique period repeatedly praised the island for its abundance of wine, oil and wheat<sup>5</sup>. Ammianus Marcellinus recorded some famous lines celebrating, "this Cyprus so fertile and rich in produce of every kind that without the need of any external assistance, by its nature alone it builds cargo ships from the keel to the topmast sail"<sup>6</sup>.

The fecundity of Cyprus as Metcalf and others have pointed out was heavily influenced by the soil type and local geology, which determined the existence of different types of landscape and varied level of agricultural produce<sup>7</sup>. Indeed, the island can be summarily divided into four geomorphological areas: The northern coastal strip (which has a humid climate, few impetuous rivers and two important harbors like Lambousa-Laptha and Kyrenia) stretching to the east into the Karpas peninsula with its gentle hills suitable for pasture); the Trodoos mountains (rich in forests, and located on the south-western part of the island, running parallel to the southern coast); the coastal plain of the southern coast (with its harbors Paphos, Amathus and Kourion- and coves) where the fertile soil allows for the cultivation of grain, vegetable and citrus fruit as it is watered by many rivers, and finally; the Mesaoria plan, famous for its extreme fertility and dotted with eastward looking

1. *Geographica*, Book XIV. 6 (cc. 681—685). translation in C. Cobham, *Excerpta Cyprica. Materials for a History of Cyprus*. (Cambridge, 1908): 3.

2. Pomponio Mela, *de Chorographia*. II, 102; translation in C. Cobham, *Excerpta Cyprica*, p.4.

3. Ibn Khurdādābeh, *Kitāb al-Masālik*: 112; al-Muqaddasi, *Kitāb Ahsan al-Taqāsīm fi Ma'rifat al-Aqālim*, translation in C. Cobham, *Excerpta Cyprica*: 5.

4. *Hieroclis Synecdemos*, 706-7. (E.Honigmann, *Le Synecdèmos d'Hiéroclès et l'opusculde géographique de Geores de Chypre* (Brussels, 1939): 49-70)

5. Palladas (fourth century), *Palatine Antology* 9.487; Synesios of Cirene, *Epistulae*, 148 (late fourth century); Nonnos of Panopolis *Dyonisicaca*, 5.611-15 ( first half of the fifth century); Flavius Corippus, *In Laudem Iustini* (sixth century). All the excerpts of these authors concerning Cyprus are included and translated by H.Pohlsander, *Sources for the history of Cyprus: 8 (Palladas); 20 (Synesios); 26 (Nonnos); and L. Roberts, Sources for the history of Cyprus: Vol. 8. Latin Text from the First Century B.C. to the Seventeenth Century A.D.* (Albany, 2000): 53 (Flavius Corippus)

6. Ammianus Marcellinus, *Res Gestae*, XIV 8, 14. (W.Hamilton (trans.) *The Later Roman Empire (AD 354–378)* (London, 1986).

cities like Kythera, Thamassos and the Salamis-Constantia<sup>8</sup>.

Unfortunately the number of sources witnessing the flourishing agricultural wealth of Cyprus and its role in shipbuilding activity (a direct consequence of its strategic location along the trans-Mediterranean routes) faded away during Late Antiquity into the early Middle Ages. Apart from the accounts of the Arab raids reporting the large booty stripped from the island<sup>9</sup>, the only available literary evidence which allowed us to surmise that Cyprus retained at least part of its former wealth was the treaty signed by the Byzantines and the Muslims in 686-8 A.D. The treaty reported that a stunning sum of 7000 *nomisma*<sup>10</sup> or dinars<sup>11</sup> was to be equally paid to the Emperor and Caliph as a result of the agreement based on the sharing of local tax revenues. This imposition was further increased under 'Abd al-Malik who added 1000 dinars to the Cypriot tax<sup>12</sup>. However, the original terms were later restored and kept until the Abbasid period as the Muslims had agreed to, "do justice to [the Cypriots] and not enrich ourselves by oppressing them"<sup>13</sup>. This large sum of money could infer that the maintenance and the high level of prosperity and wealth on the island pointed to the persistence and the capacity of the state fiscal structures of both the rival polities to extract and redistribute the local surplus.

In this sense, amphorae [FIG. 2] and their movement seems to support the

impression of persisting economic vitality<sup>14</sup>. Indeed, amphorae allow us to gain an invaluable insight into commercial networks and intra-regional socio-economic processes<sup>15</sup>: They were a receptacle for commodities such as wine, olive oil [FIG. 3] and less often, wheat.<sup>16</sup> Within this framework, a long-distance transportation of bulk goods was always regarded as cheaper by boat. In Cyprus, we witnessed local production and a conspicuous amount of imported products both of which continued well into the eighth century. The former was mainly centered on the so-called Late Roman 1 type, manufactured both on the island, in southern Anatolia and on the Levantine coast<sup>17</sup>. Indeed, in Cyprus, kilns for production of these amphorae have been found near Nea Paphos<sup>18</sup>, Amathus<sup>19</sup>, Kourion<sup>20</sup> including Akamas and two other places in Cyprus as well<sup>21</sup>. The Cypriot products were however, different in fabric from those manufactured elsewhere. Moreover, "a development in the production method and typology was documented: the usual forms were destroyed by the Arab invasions and the usual types cannot be found anymore"<sup>22</sup>.

Although, one may doubt that the change came so abruptly and could rather surmise a transition more along the lines of that experienced by Syrian and Palestinian material culture<sup>23</sup>, it is beyond doubt that the appearance of local copies of LR1 occurred in Cyprus during the late seventh century, as these were later to be replaced

by the so-called globular jugs (i.e. so-called post-Late Roman 2 amphoras type). A recent study comparing deposits of Sinai desert with that yielded by the excavations from the theatre in Paphos, have showed both late seventh century LR1 (also unearthed at Kourion<sup>24</sup>) and globular amphoras (which the petrographic analysis revealed as made in Cyprus) were found at Ostrakine (North Sinai<sup>25</sup>). The Egyptian link is further bolstered by the presence on the island of so-called Late Roman 7 Egyptian amphoras, labeled as the most common wine-container of the Mediterranean and documented in eighth-century layers stratigraphically excavated at Paphos<sup>26</sup>. Here too also bag shaped (or Late Roman 5) amphoras (dated to the late seventh-early eighth century) have been discovered by the archaeologists<sup>27</sup> and identified (according to their fabric) as coming from the Nile Delta and the Middle Nile valley. Complimenting this evidence, one should also consider both the diffusion of Egyptian red slipped ware (type A) in many Cypriot sites (Salamis-Constantia, Limassol and Kourion) whose exportation continued into the eighth century<sup>28</sup>, the mid-late seventh-century Cesarea type 1 amphoras (originated from Egypt) found at Kourion<sup>29</sup> and the Cypriot pottery found in abundance along the northern coast, central Delta and northern Sinai until the late seventh century<sup>30</sup>.

From this data one can easily start tracing the existence of a real commercial

7. D. Metcalf, *Byzantine Cyprus*: 61-8.

8. A. Guillou, "La Géographie historique" : 11-12; E. Malamut, *Les îles*: 51ff.

9. Dyonisius of Tel-Mahrè, *Chronicle*: 97; al-Kufi, *Kitâb*: 347-50

10. Theophanes, *Chronicle*:

11. al-Balâdhurî, *Kitâp*: 237. Also al-Tabarî, *Tarî kh VII*: 258; Qoudama b. Ja'far (writing in the tenth century) reports 7200 dinars (Qoudama b. Ja'far, *Kitâp al-Karâj*, M. de Goeje (ed.) (Leiden, 1967): 306).

12. al-Balâdhurî, *Kitâp*: 237-8.

13. *Ibid*.

14. L.Brubaker and J. Haldon, *Byzantium in the Iconoclast Era:History*: 495-7.

15. R.Smadar Gabrieli, M.P. Jackson and A. Kaldeli, "Stumbling into the darkness":793.

16. P.Armstrong, "Trade"<sup>158</sup>.

17. *Id.*, p.163; Touma and Hayes (M. Touma, "Chypre": 268; J. Hayes, "Pottery": 437) think the production of these amphoras ceased in the mid-seventh century but this conclusion has been recently re-discussed by new evidence yielded by eighth-century layers in Crete and Chios. See on this also L.Brubaker and J. Haldon, *Byzantium in the Iconoclast Era: History*: 498.

18. S.Domesticha and D. Michaelides, "The Excavation".

network involving Cyprus and the regions under Umayyad rule like Syria and Palestine. On the other side of the exchange link, a typical eighth-century Cypriot production of domestic and cooking wares (so-called Dhiorios cooking pots<sup>31</sup>) have been found in Umayyad deposits in Beirut and in eighth-century layers in Palestine<sup>32</sup>.

The interaction between the Umayyad neighboring regions and Cyprus as revealed by a tentative analysis of the ceramics would imply that there was a persistence in the movement of goods and contacts with Islamic centers of production. This movement, indeed, pairs with the data coming from other types of sources like the accounts of pilgrimage travels, the analysis of the so-called Arab-Byzantine coinage and eventually the examination of (later) literary and geographical reports by Arab authors.

Journeys like that of Willibald in the first half of the eighth century or that of Epiphanius the Monk in the ninth-century (both using Cyprus as a stepping stone for their trip to the Holy Land<sup>33</sup>), "contradicts the pervasive notion of the Islamic and Christian dominions as separate worlds

which interacted only through conflict"<sup>34</sup>. In fact, the movements of pilgrims (and diplomats like the Frangoumenoi) to the regions under Islamic sway can also be used with confidence as proxy data on merchant shipping<sup>35</sup>. Ceramic evidence suggests that intra-regional commerce used Cyprus as a convenient hub (more possibly than not taking advantage of the peculiar political status of the island); this assertion can be further bolstered by the examination of both the late-seventh-early eighth century Arab-Byzantine and post-reform coinage yielded at excavations in Cyprus<sup>36</sup>.

The material evidence for exchange commerce across the Eastern Mediterranean political boundaries<sup>37</sup> mirrors the references to the trade and commerce between Cyprus and the Muslim world transmitted by the Arab sources. Starting from the ninth and tenth centuries, the Arab sources repeatedly refer to the prosperity of the island. The tenth-century geographer Ibn Hawqal<sup>38</sup> for instance, mentions that, "in Cyprus there is mastic of good quality and abundant gum. One can find silk, flax, wheat, barley, cereals and so much abundance that cannot be

described"<sup>39</sup>. Much later (in the twelfth century), al-Idrissi<sup>40</sup> reports that in Cyprus one can find cultivated lands, villages, mountains, forests, crops and cattle. Reference to mercantile activities, however, are also common: al-Masudi, also writing in the tenth century, reports the adventures of an Arab former prisoner who sailed to Constantinople from Syria via Cyprus disguised as merchant. Although fictional<sup>41</sup>, the story reveals that at the time of the Umayyad caliphate, when the event is staged- direct trade relations between the Byzantines and the Umayyad empires via Cyprus were regarded as feasible. Eventually al-Muqaddasi in his tenth-century Description of Syria, mentions the island as offering many advantages to Muslims for their trade by reason of the great quantities of merchandise, stuff and goods produced there and the close distance from the coast (one night and day of navigation)<sup>42</sup>. Al-Muqaddasi also recounts the eighteen ships loaded with silver and gold brought from Cyprus for the decoration of the mosque of Damascus under the caliphate of al-Walid<sup>43</sup>.

To sum up, the evidence presented

19. M. Touma, "Chypre": 267.

20. J. Hayes, "Pottery": 437.

21. J. Lund, "Transport Amphorae": 788.

22. T. Papacostas, Byzantine Cyprus: 70.

23. A. Walmsley, Early Islamic: 48-70.

24. J. Hayes, "Pottery": 437

25. R.Smadar Gabrieli, M.P. Jackson and A. Kaldeli, "Stumbling into the darkness": 792.

26. P.Ballet, "Relations céramiques entre l'Egypte et Chypre à l'époque gréco-romaine et byzantine", in H. Meyza and Y.Mlynarczyk (eds.), Hellenistic and Roman Pottery in the Eastern Mediterranean- Advances in Scientific Studies. Acts of the II Nieborow Pottery Workshop. Nieborow 18-20 December 1993 (Warsaw, 1995): 17.

27. J. Hayes, "Hellenistic and Roman pottery": 495-502.

28. J. Hayes, "Problèmes": 377.

29. J. Hayes, "Pottery": 437.

30. P. Ballet, "Relations céramiques": 17; J. Hayes, "Pottery": 436.

31. H.W.Catling, "An early Byzantine pottery factory"; P.Armstrong, "Trade": 165-6.

32. P.Armstrong, "Trade": 165.

33. See above.

34. M. McCormick, Origins: 209.

35. Id., p. 274.

36. L. Zavagno, "Betwixt": 474-5.

37. L.Brubaker and J. Haldon, Byzantium in the Iconoclast Era: History: 510-11.

38. Ibn Hawqal was born in Nisibi and traveled a lot during the second half of the tenth century. He was asked by another famous contemporary geographer, al-Istakhri, to edit and complete his work, which he published with many alterations and personal additions often based upon eyewitness observations. He completed the maps drawn by his predecessors but paid more attention to the text which appears independent from the maps. See V. Christides, The Image: 127

would point to shipping and trade movements of an uncertain volume and with a partially unknown content, using Cyprus as a hub across trans-regional, regional and intra-regional networks.

This is not of course enough to countermand the general trend of localization and regionalization of monetary exchange experienced by the island (as well as the rest of the Empire) or the centrality of the Byzantine fiscal and military

apparatus in influencing the social, economic and political trajectories of the island or the decline in intra-regional exchange within the imperial boundaries in the passage from the Late Antiquity to the early Middle Ages. However, the economic prominence of Cyprus helps us to draw a different picture of the history of the island; a picture where the main currents of trade used Cyprus as a strategic stepping stone [FIG. 4]; a picture where a no man's land

becomes a rather highly frequented and attractive hub for travelers and goods: an island of populous cities, merchandise and goods as portrayed by al-Muqaddasi; a picture, eventually, where a supposed eastern Mediterranean caesura between two opposed empires can be regarded more as an unifying link between two different cultures.



Figure 1. Map of Cyprus



Figure 2. Exchange pattern of amphoras from and to Cyprus in the seventh and eighth century



Figure 3. Oil press at the so-called Hulierie complex in Salamis-Constantia



Figure 4. Cyprus coastline from Lambousa-Laptha

39. Ibn Hawqal, Kitāb, surat al-ard: 184 (J.-H. Kramers and G. Wiet, Configuration de la terre (Beirut-Paris, 1964).

40. al-Idrisi, Nuzat al-Moushtāq, E. Cerulli (ed.) (Naples, 1070-4): 643-44.

41. Mas'udi, Marūji al-Dhahab wa Ma'ādin al-Jawhar: 8. 75-88, translated in P. Lunde and C. Stone, The Meadows of Gold, (London-New York, 1989): 320-24. See also V. Christides, The Image: 130 and Mansouri, Chypre dans : 84.

42. C. Cobham, Excerpta Cypria: .5.

43. T. Papacostas, Byzantine Cyprus: 74.

## About the Researcher

*Asst. Prof. Dr. Luca Zavagno* was born in Venice, where he received his B.A degree in History from the University of Ca' Foscari; he completed his Ph.D. studies at the University of Birmingham on the Society, Culture, Economics and Politics of Byzantine Cities. He is currently an Assistant Professor in the Department of Arts, Social Sciences and Humanities at the Eastern Mediterranean University.

## Tourism Management Graduate Student and her Supervisor



*In this issue, EMU Research Newsletter hosts Assoc. Prof. Dr. Osman M. Karatepe (left) and his Ph.D. supervisee Georgiana Cojocar (right) from the School of Tourism and Hospitality Management.*

■ **Could you tell us a bit about yourself? Your nationality, academic and professional background, experience, research activities.....?**

**OMK:** My name is Osman M. Karatepe. I am Associate Professor of Marketing in the School of Tourism and Hospitality Management (STHM) at Eastern Mediterranean University (EMU). I am from Turkey and a Turkish Republic of Northern Cyprus (TRNC) citizen. I have a B.S. degree in Tourism and Hotel Management from Bilkent University, an M.S. degree in Production Management and Marketing from Gazi University, and a Ph.D. degree in Business Administration from Hacettepe University in Ankara, the capital city of Turkey. Before joining the STHM at EMU, I worked as a full-time instructor at Bilkent University, Baskent University, and Atilim University in Turkey and taught various courses that were associated with marketing and tourism and hospitality management. I was one of the founders of the EMU Center for Tourism Research and the EMU Journal of Tourism Research (JTR). I served as an Associate Editor and Co Editor-in-Chief of the EMU JTR. I also worked as one of the Vice Rector's Coordinators, one of the members of the Purchasing and Tender Committee, the Director of the STHM, and one of the members of the University Executive Board and the Senate at EMU. Currently, I serve as a member of the Research Advisory Board and the Research Ethics Board and teach marketing, strategic management, and research methods courses at the undergraduate and graduate levels in the STHM at EMU.

My research interests are in the areas of services marketing and management, internal marketing, and international

marketing. According to Park, Phillips, Canter, and Abbott's (2011) recent article published in the Journal of Hospitality and Tourism Research, I am listed as one of the most prolific researchers regarding the number of articles in the field of hospitality marketing and hospitality human resources management in six major journals from 2000 to 2009. Specifically, I rank second in Europe and eighteenth in the world. My research with an international focus (e.g., Turkey, TRNC, Nigeria, Jordan, Cameroon, Albania, the United Arab Emirates, Iran), has been published in a number of leading international journals such as the Journal of the Academy of Marketing Science, the Journal of Business Research, the International Journal of Service Industry Management, and Tourism Management.

My research (published in international journals) has been cited over 800 times in more than 150 peer-reviewed international journals. In addition, my research has been widely cited in various refereed proceedings, edited books, textbooks, and Ph.D. and master theses. I am an ad-hoc reviewer for various leading international journals (e.g., Cornell Hospitality Quarterly, The Journal of Business Research, The Service Industries Journal, Tourism Management) and sit on the editorial review boards of several leading refereed international (e.g., the International Journal of Contemporary Hospitality Management, the Journal of Hospitality Marketing and Management) and national Journals (e.g., Anatolia: Turizm Arastirmalari Dergisi).

**GC:** My name is Georgiana Cojocar. I am Romanian. I have a B.S. degree from 'Lucian Blaga' University of Sibiu, Romania in Arts and Science, in Foreign Languages: English Literature and Grammar and French Literature and Grammar. I have an M.S. degree in the field of Tourism Management from EMU. While completing my master program at EMU, I worked as a Research Assistant for the EMU Alumni Communication and Career Research Centre (MIKA). Some of the tasks that I was responsible for were: handling the approval of students' diplomas each semester, organizing Career Days Events for all students on the campus, keeping students informed about upcoming events. Such tasks enabled me to have frequent interaction with the EMU students. I also obtained various certificates such as 2010 Career Counseling Training (35 hours), UE VETLAM Project (financed by European Union and organized by GET German Education and Training GmbH Consortium), and Career Days 2011 Training Program entitled INNOVATION (organized by the Director of Alumni Communication and Career Development at EMU).

I co-authored an article with my supervisor Assoc. Prof. Dr. Osman M. Karatepe. The article was accepted for publication

in the Journal of Business Economics and Management. Currently, I continue my Ph.D. studies in the field of Tourism Management and work as a Ph.D. research assistant for the STHM at EMU.

■ **Could you please give us some information on your department and the post graduate programmes?**

**OMK:** The STHM is one of the best tourism and hospitality schools in the world. According to Severt, Tesone, Botorff, and Carpenter's (2009) article published in the Journal of Hospitality and Tourism Research, EMU (STHM) has been ranked nineteenth in the world among 100 universities in hospitality and tourism research. According to Park, Phillips, Canter, and Abbott's (2011) recent article published in the Journal of Hospitality and Tourism Research, EMU (STHM) has been ranked third in Europe and nineteenth in the world regarding the number of articles in the field of hospitality marketing and hospitality human resources management in six major journals from 2000 to 2009. As a World Tourism Organization TedQual Certified School, it has a two-year and a four-year programs in tourism and hospitality management. It has a two-year program in culinary arts and a four-year program in recreation and sports management. The STHM also offers a master program in tourism management with thesis and non-thesis options as well as a non-thesis master program in e-hospitality management. In the 2011-2012 academic year, it started its Ph.D. program in tourism management.

**GC:** Professor Karatepe has already provided significant information about the details of the programs in the STHM. It is also my strong belief that the STHM is one of the best tourism and hospitality schools in the world.

As it can be observed from my professional background, I started my education in the field of Foreign Languages. However, I took the decision of changing my field and obtaining a master degree in tourism management. Due to my accomplishments during the years in the master program and my supervisor's guidance and role model figure, I felt motivated to continue my studies and chose the academic life.

■ **Could you define 'good research' for us?**

**OMK:** I do not want to repeat what is already known in general. Therefore, let me give specific information about good research that is related to the model development and testing. That is, researchers should consider the following guidelines in their research: Selection of a topic that is in the researcher's interest area; definition of the purpose of the study and explanation of the study's significant contribution to the current literature; development of hypotheses based on well-established theoretical frameworks; selection of an appropriate sample; collection of data from multiple sources and/or using a temporal

separation for reducing common method bias; measurement of psychometric properties (convergent and discriminant validity and internal consistency reliability); assessment of relationships via appropriate techniques (e.g., structural equation modeling); discussion of findings, and implications for managers and future research.

**GC:** The aim of each researcher is to create or provide good research. Based on my apprenticeship, I may say that the subject matter that one chooses to focus on should make a significant contribution to the relevant literature.

■ **Could you tell us about the research you've been working on with your supervisee and its significance in your research field?**

**OMK:** We developed and tested a research model that examined the mediating role of job embeddedness in the relationship between the selected indicators of management commitment to service quality and performance outcomes. Data were gathered from a sample of full-time frontline hotel employees with a one-week time lag in Romania. Assessing these relationships is important, because the services marketing literature appears to be devoid of empirical studies pertaining to job embeddedness and its mediating role. In addition, since employee turnover is still a serious problem in the hospitality industry, the results of our research provide useful implications for managers regarding the retention of high performing employees in the organization.

**GC:** My research interests are in the field of services marketing. The research we focused on contributed to the literature by testing job embeddedness as a mediator of the effects of the selected indicators of management commitment to service quality on performance outcomes based on data obtained from frontline hotel employees in Romania. It also provided significant managerial implications.

■ **Do you have plans to promote this research to a wider audience? (conferences, publications)**

**OMK:** As Georgiana mentioned above, the article I co-authored with her was accepted for publication in the Journal of Business Economics and Management. According to the Thomson ISI Journal Citation Reports 2011, this journal had an impact factor of 3.866 (ranked 4 / 103 in business category) in 2010.

**GC:** The article will be published in this journal shortly.

■ **What has been the most fruitful aspect of the collaboration between you and your supervisee?**

**OMK:** Georgiana was one of my best students in the master



program. She always proved to be a competitive, hardworking, and self-efficacious individual. Therefore, I decided to supervise her during the thesis studies.

**GC:** The collaboration I had with my supervisor was very beneficial to me from many points of view: personally, academically and scientifically. I am very grateful first of all for accepting the initiative of being my supervisor. I feel indebted towards my supervisor's patience, advice, and guidance all the way. His personality, experiences, and talents have truly inspired me and motivated me to keep going and wanting for more. The reason why I continue my academic career is mainly influenced by my supervisor's feedback, thirst for knowledge and professional attitude towards research. That is why, I want to sincerely express my appreciation to my supervisor, Assoc. Prof. Dr. Osman M. Karatepe, and thank him for supporting me and showing me the way towards a resourceful and successful research adventure.

■ **What advice would you give to researchers involved in post-graduate research?**

**OMK:** The most critical issue is related to the contribution of the study to the relevant literature. There might not be any problems associated with issues pertaining to sampling, data collection, and measurement. However, if your study's contribution to the current knowledge base is limited, it is very difficult to make publications in top tier journals. Such a limited contribution would also be a problematic issue in a Ph.D. thesis. In addition, researchers should always take into consideration the ethical guidelines for their research.

**GC:** From my point of view, the most important step is the determination to be on the path of research by respecting all ethical rules. As I learnt from my supervisor, studies with limited theoretical contributions to the current literature cannot be published in leading journals.



***Kayode Dare Aleshinloye***

I completed my Master's degree at Eastern Mediterranean University, Northern Cyprus in the department of Hospitality and Tourism Management, 2009. The experience I gained during my stay really helped me academically, emotionally, and physically. Presently, I am pursuing my Ph.D degree in Tourism Science at the prestigious Texas A & M University, College Station, Texas, USA. As the first public institution of higher education in Texas, this school opened on October 4, 1876. My area of research is on Emotional Solidarity between Tourists and Residents. TAMU, as the university is fondly called, happens to be the sixth-largest university in the United States, and its enrollment for Fall 2011 was over 50,000 for the first time in school history. The school ranks in the top 20 American research institutes in terms of funding. The main campus is one of the largest in America, spanning 5,500 acres (22 km<sup>2</sup>), and includes the George Bush Presidential Library. Approximately one-fifth of the student body lives on campus. The student body represents all 50 U.S. states and 130 foreign countries. Texas residents account for 86% of the student population, and 28.9% are either of international origin or members of ethnic minority groups. The student body consists of 46.8% women and 53.2% men. The Recreation, Park and Tourism Science department which I belong to is part of the College of Agriculture and Life Sciences. The department boasts of many award winning academicians, is research oriented and generally friendly. I will always thank God for making me pass through EMU, North Cyprus because it was my second home and also prepared me for my present challenge. Everybody wants to know more about EMU and North Cyprus because I am the first student from EMU to study at Texas A & M University. Finally, I wish to give assurance to everyone, that the quality of education in EMU, North Cyprus ranks equal to any university in the world because I am living proof of that fact.

## Spring 2010-2011 Postgraduate Degrees (additional list)

Following is the additional list of students who have successfully completed their postgraduate degrees in Spring 2010 -2011. This list has been provided by EMU Institute of Graduate Studies and Research on 31 October 2011.

### ■ M.A. ■

#### **Communication and Media Studies**

Rıza Teke

*Thesis Title:* A Comparison of Facebook Addiction Between Social and Hard Sciences' Students

*Supervisor:* Bahire Özad

Pegah Khoei

*Thesis Title:* Investigating the Use of Interactive Media in Environmental Activism: The Case of Greenpeace Turkey

*Supervisor:* Hanife Aliefendioğlu

Shahryar Mirzaalikhani

*Thesis Title:* Iranian Graffiti During Political Transformation: A Semiotic Analysis of Graffiti Before and After Revolution

*Supervisor:* Melek Atabey

#### **Eastern Mediterranean Studies**

Merve Senem Arkan

*Thesis Title:* The Cartography of Post-Medieval Famagusta: From The 16<sup>th</sup> to the 19<sup>th</sup> Centuries

*Supervisor:* Michael Walsh

Ahmet Usta

*Thesis Title:* Evidence of the Nature Impact and Diversity of Slavery in the 14<sup>th</sup> Century Famagusta as seen through the Genoese Notarial Acts of Lamberto

*Supervisor:* Luca Zavagno

*Co-supervisor:* Michael Walsh

#### **English Language and Literature**

Şefik Hüseyin

*Thesis Title:* Orhan Pamuk in His Works: A Turkish Engagement with the West

*Supervisor:* Nicholas Pagan

#### **International Relations**

Mehtap Kara

*Thesis Title:* 'Axis Shift' in Turkish Foreign Policy During AKP Administration: New Fundamental Foreign Policy Principles and Challenges

*Supervisor:* Ahmet Sözen

Monique Elaebi Bowmanere

*Thesis Title:* The Legality of NATO Bombing, the Kosovo Declaration of Independence and the Development of International Law

*Supervisor:* Wojciech Forsysinski

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

Zümray Diran

*Thesis Title:* Halit Ziya Uşaklıgil'in Romanlarında Kadın Hakları

*Supervisor:* Ömer Faruk Huyugüzel

Sonay Akgün

*Thesis Title:* Türk Roman ve Hikayesinde Hapishane

*Supervisor:* Ömer Faruk Huyugüzel

Seren Aksu

*Thesis Title:* Reşat Enis Aygen'in Romanlarında Köy

*Supervisor:* Adnan Akgün

Evrin Dalyan Eberdes

*Thesis Title:* Tatar Türkçesi Atasözleri ile Türkiye Türkçesi Atasözlerinin Karşılaştırmalı İncelenmesi

*Supervisor:* Birsal Oruç Aslan

Mehmet Orhan Süslü

*Thesis Title:* Samim Kocagöz' ün Romanlarında Milli Mücadele

*Supervisor:* Adnan Akgün

### ■ M.Ed. ■

#### **Educational Sciences**

Makbule Nurtunç Köseoğlu

*Thesis Title:* Attitudes of English Preparatory School Students Towards Using Technology at the Students' Self Study Center

*Supervisor:* Bahire Efe Özad

Sertel Djelal Erkil

*Thesis Title:* Prospective Teachers' Attitudes Towards Computers in the Pre-Service Teacher Education Programmes at Eastern Mediterranean University

*Supervisor:* Hüseyin Yaratan

İpek Meneviş

*Thesis Title:* Adaptation of Multiple Intelligences to Turkish Cypriot Culture

*Supervisor:* Bahire Efe Özad

Yeliz Erdoğan

*Thesis Title:* An Investigation of the Relationship Among Parental Involvement, Socio Economic Factors of Parents and Students' Academic Achievement

*Supervisor:* Hüseyin Yaratan

Mine Ulaş

*Thesis Title:* Elementary School Teachers' Implementation of Differentiated Curriculum in Mixed Ability Classes

*Supervisor:* Hüseyin Yaratın

Müzeyyen Alasya

*Thesis Title:* High School Students' Learning Styles in North Cyprus

*Supervisor:* Bekir Özer

Gülşah İbrık

*Thesis Title:* Attitudes of Teacher Candidates Towards Professional Development Courses

*Supervisor:* Ahmet Konrot

## ■ MS ■

### **Architecture**

Timothy Onosahwo Iyendo

*Thesis Title:* Acoustic Control in a Multipurpose Hall: The Case Study of Lala Mustafa Pasa Sport Complex, Eastern Mediterranean University, Gazimagusa North Cyprus

*Supervisor:* Mesut Ozdeniz

Ehsan Reza

*Thesis Title:* Identification of Staircase House Type in Rural Architecture of Iranian Masouleh and Abyaneh Settlements

*Supervisor:* Özgür Dinçyürek

Shabnam Pazooki

*Thesis Title:* The Application of Formal by Architects and Interior Architects According to Their Own Ranking Performances

*Supervisor:* Kutsal Öztürk

Mehrnoosh Esmaeilpour

*Thesis Title:* Measurement, Prediction and Simulation Methods of Moisture Content in Buildings

*Supervisor:* Polat Hançer

Payam Eskandari

*Thesis Title:* Analysis of Traditional Iranian Houses of Kashan, Iran in Terms of Space Organization and Access Design

*Supervisor:* Guita Farivarsadri

### **Banking and Finance**

Mohammadali Erfani

*Thesis Title:* Applying Public Private Partnership on Water Project: Espirito Santo, Brazil

*Supervisor:* Glenn Jenkins

### **Chemistry**

Mosab Abu Reesh

*Thesis Title:* Synthesis of Novel Fluorescent Biopolymer for

Nanobionics

*Supervisor:* Huriye İcil

### **Civil Engineering**

Aydin Gharagozloo

*Thesis Title:* Seismic Performance Assessment of RC Building Case of "Bekir Paşa" High School

*Supervisor:* Serhan Şensoy

*Co-Supervisor:* Özgür Eren

### **Industrial Engineering**

Joubin Zahiri Khamaneh

*Thesis Title:* Occupational Noise Exposure in Small and Medium Sized Industries in North Cyprus

*Supervisor:* Emine Atasoylu

Hamed Hosseinian Gourabi

*Thesis Title:* Occupational Health and Safety in Iran: Accident Cost Analysis and the Importance of Education in Accident Prevention

*Supervisor:* Emine Atasoylu

Amir Hossein Habibi Onsorodi

*Thesis Title:* The Impact of Laptop and Desktop Computer Workstations on Human Performances

*Supervisor:* Orhan Korhan

### **Tourism Management**

Hasan Daşkan

*Thesis Title:* The Effect of Positive Affectivity and Support on Work Family and Family Work Conflict: A Study of Employees in Travel Agencies

*Supervisor:* Hasan Kılıç

### **Urban Design**

Elda İstillozlu

*Thesis Title:* Public Transportation for More Livable Cities: A Proposal for Famagusta

*Supervisor:* Naciye Doratlı

Mohsen Shojaee Far

*Thesis Title:* An Evaluation on Sustainable Brownfield Regeneration Opportunities in the Periphery Area of the Nicosia Buffer Zone

*Supervisor:* Resmije Alpar Atun

## ■ Ph.D. ■

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

Havva Kaffaoglu

*Thesis Title:* Szasz and Philips Operators Based on  $Q$ -Integers

*Supervisor:* Nazım Mahmudov

## Recent Publications and Presentations (April - June 2011)

### ■ 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). A search on ISI Web of Science was performed on 31 October 2011 to retrieve articles with at least one author having EMU affiliation. **This list may not be comprehensive as some articles could be deposited to ISI after the query date.**

Ahmad MS, Kukrer O and Hocanin A. (2011). "Recursive Inverse Adaptive Filtering Algorithm." *Digital Signal Processing*, 21(4): 491-496.

Aktuglu H and Bekar S. (2011). "Q-Cesaro Matrix and Q-Statistical Convergence." *Journal of Computational and Applied Mathematics*, 235(16): 4717-4723.

Altınçay H. (2011). "Improving the k-nearest Neighbour Rule: Using Geometrical Neighbourhoods And Manifold-Based Metrics." *Expert Systems*, 28(4): 391-406.

Dosiyev AA (2011). "New Properties of 9-Point Finite Difference Solution of the Laplace Equation." *Mediterranean Journal of Mathematics*, 8(3): 451-462.

Dosiyev AA. (2011). "New Properties of 9-Point Finite Difference Solution of the Laplace Equation." *Mediterranean Journal of Mathematics*, 8(3): 451-462.

El-khawajah MF, Aldabbagh LBY and Egelioglu F. (2011). "The Effect Of Using Transverse Fins On A Double Pass Flow Solar Air Heater Using Wire Mesh As An Absorber." *Solar Energy*, 85(7): 1479-1487.

Kaanoglu C and Ozarslan MA. (2011). "Some Properties of Generalized Multiple Hermite Polynomials." *Journal of Computational and Applied Mathematics*, 235(16): 4878-4887.

Kaanoglu C and Ozarslan MA. (2011). "Two-Sided Generating Functions for Certain Class of R-Variable Polynomials." *Mathematical And Computer Modelling*, 54(1-2): 625-631.

Katircioglu ST, Tumer M and Kilinc C. (2011). "Bank Selection Criteria in the Banking Industry: An Empirical Investigation from Customers in Romanian cities." *African Journal of Business Management*, 5(14): 5551-5558.

Katircioglu ST. (2011). "Tourism and Growth in Singapore: New Extension from Bounds Test to Level Relationships and Conditional Granger Causality Tests." *Singapore Economic Review*, 56(3): 441-453.

Komurcugil H. (2011). "Integral Sliding-Mode-Based Current-Control strategy for Single-Phase Current-Source Inverters." *Electrical Engineering*, 93(3): 127-136.

Kortun A, Ulusoy AH and Hocanin A. (2011). "Robust Decorrelating Detector in Multi-Path Fading Under Impulsive Noise." *Wireless Personal Communications*, 59(2): 205-216.

Mahmudov NI. (2011). "Approximation By Bernstein-Durrmeyer-Type Operators In Compact Disks." *Applied Mathematics Letters*, 24(7): 1231-1238.

Mahmudov NI. (2011). "Higher order limit q-Bernstein operators." *Mathematical Methods in the Applied Sciences*, 34(13): 1618-1626.

Mahmudov NI. (2011). "Q-Szasz-Mirakjan Operators Which Preserve  $x(2)$ ." *Journal of Computational and Applied Mathematics*, 235(16): 4621-4628.

Mazharimousavi SH and Halilsoy M. (2011). "Black hole solutions in  $f(R)$  gravity coupled with nonlinear Yang-Mills field." *Physical Review D*, 84(6): 064032.

Muazu J and Oktay D. (2011). "Challenges and Prospects for Affordable and Sustainable Housing: The Case of Yola, Nigeria." *Open House International*, 36(3): 108-118.

Mustafa O. (2011). "Radial power-law position-dependent mass: cylindrical coordinates, separability and spectral signatures." *Journal of Physics A-Mathematical and Theoretical*, 44(35): 355303.

Orhan N, Orhan IE and Ergun F. (2011). "Insights into Cholinesterase Inhibitory and Antioxidant Activities of Five Juniperus Species." *Food and Chemical Toxicology*, 49(9): 2305-2312.

Ozarslan MA. (2011). "Unified Apostol-Bernoulli, Euler and Genocchi polynomials." *Computers & Mathematics with Applications*, 62(6): 2452-2462.

Ozergin E, Ozarslan MA and Altin A. (2011). "Extension of Gamma, Beta and Hypergeometric Functions." *Journal of Computational and Applied Mathematics*, 235(16): 4601-4610.

Ramadan O. (2011). "General ADE formulations of SC-PML for modelling multi-term dispersive FDTD applications." *Electronics Letters*, 47(20): 1122-1123.

Ramadan O. (2011). "Systematic Split-Step Perfectly Matched Layer Formulations for Modelling Dispersive Open Region Finite Difference Time Domain Applications." *IET Microwaves Antennas & Propagation*, 5(9): 1062-1066.

Ramadan O. (2011). "Z-Transform-Based Complex Envelope Alternating Direction Implicit Perfectly Matched Layer Algorithm For Modelling Drude Dispersive Source-Free Wave Equation Finite-Difference Time Domain Applications." *IET Microwaves Antennas & Propagation*, 5(9): 1067-1072.

Sahin R and Altin A. (2011). "An Extension Of F(1), F(2), F(3) Appell's Hypergeometric Functions." *ARS Combinatoria*, 100: 97-105.

Sakalli I and Halilsoy M. (2011). "Chaos in Kundt Type-III Spacetimes." *Chinese Physics Letters*, 28(7): 070402.

Sakalli I. (2011). "Dilatonic Entropic Force." *International Journal of Theoretical Physics*, 50(8): 2426-2437.

Sakthivel R, Ren Y and Mahmudov NI. (2011). "On the Approximate Controllability of Semilinear Fractional Differential Systems." *Computers & Mathematics with Applications*, 62 (3): 1451-1459.

Sakthivel R, Mahmudov NI and Ren Y. (2011). "Approximate Controllability of the Nonlinear Third-Order Dispersion Equation." *Applied Mathematics and Computation*, 217(21): 8507-8511.

Taneri B. (2011). "Is there Room for Ethics within Bioinformatics Education?" *Journal of Computational Biolog*, 18(7): 907-916.

## ■ Conference Papers ■

Aybay I. "EMU Software Engineering program and Computer Engineering/Software Engineering Double Major Program" in *Proceedings of the 5<sup>th</sup> National Software Engineering Symposium*, 229-233, Ankara, Turkey, September 2011.

Alizadeh AV, Musayev and Aliev RR. "Application of the fuzzy optimality concept to decision making with imprecise probabilities." in *Proceedings of the Sixth International Conference on Soft Computing, Computing with Words and Perceptions in System Analysis, Decision and Control (ICSCCW- 2011)*, pp.373-382, Antalya, Turkey, September 1-2, 2011.

Aliev RR and Bodur EK. "Decision making on loan granting with imprecise probabilities." in *Proceedings of the Sixth International Conference on Soft Computing, Computing with Words and Perceptions in System Analysis, Decision and Control (ICSCCW- 2011)*, pp.291-299, Antalya, Turkey, September 1-2, 2011.

Mirzaei F and Toygar Ö. "Facial Age Classification Using Subpattern-based Approaches." *The 2011 International Conference on Image Processing, Computer Vision and Pattern Recognition (IPCV2011)*, Nevada, USA, July 18-21, 2011.

Nadiri H. "University Students' Perception of Service Quality offered by Travel Agencies." in *Proceedings of the 14<sup>th</sup> QMOD Conference: "From LearnAbility, InnovAbility and SustainAbility"*, pp. 1297-1311, San Sebastian, Spain, August 2011.

Oktaç, D. and Marans R. W., "Neighbourhood Satisfaction Among Diverse Groups of Inhabitants: Findings from Famagusta Area Study", *23<sup>rd</sup> ENHR Conference: 'Mixité': an urban and housing issue?*, Toulouse, France, 5-7 July 2011.

Turhan, T. "KKTC Yurttaşlık Yasası Değişiklik Yasa Tasarısı Taslağı (Eleştirel Bir Değerlendirme)", *Adalet* 1(2), 2-11 (Eylül 2011).

## ■ Conference Presentations ■

Gourabi HH and Atasoylu E. "Accident Cost Analysis and the Importance of Education in Accident Prevention" XIX World Congress on Safety and Health at Work, Istanbul, Turkey, September 11-15 2011.

Topal S and Atasoylu E. "Occupational Injuries and Occupational Safety and Health in Northern Cyprus Construction Industry" XIX World Congress on Safety and Health at Work, Istanbul, Turkey, September 11-15 2011.

Khamaneh JZ and Atasoylu E. "Occupational Noise Exposure in Small and Medium Sized industries in Northern Cyprus" XIX World Congress on Safety and Health at Work, Istanbul, Turkey, September 11-15 2011.

## ■ Book ■

Abdu AI and Salamah M. (2011). "*Energy-Aware Transmission Scheme for Wireless Sensor Networks*." *Recent Trends in Wireless and Mobile Networks*, ISBN: 978-3-642-21937-5, pp. 135-144..

G. Sarisin, and M. Salamah, "*Cone Tessellation Model for Three-Dimensional Networks*." *Recent Trends in Wireless and Mobile Networks*, ISBN: 978-3-642-21937-5, pp. 159-169, 2011.

## ■ Book Chapters ■

Aker A and Aker SL. (2011). “*The Food Crisis in Turkey.*” In Ghosh BN. (Ed.) *Global Food Crisis*, (pp.187-213). Wisdom House Publications Ltd., England (UK).

Oktay D and Rüstemli A. (2011). “*The Quality of Urban Life and Neighbourhood Satisfaction in Famagusta.*” In Marans RW and Stimson R. (Ed.) *Investigating Quality of Urban Life: Theory, Methods, and Empirical Research.* (pp 233-249). New York.

## Conferences organized by / in collaboration with EMU

**Conference Name:** ASIA Pacific International Conference on Environment-Behaviour Studies (AicE-Bs 2011 Famagusta)

**Date:** 06-08 December 2011

**Web Address:**  
<http://urdc.emu.edu.tr/Internationalconference.htm>

**Conference Name:** 3<sup>rd</sup> International Conference in Communication and Media Studies (Re)Making and Undoing of Peace/Conflict

**Date:** 11-13 April 2012

**Web Address:** <http://fcms.emu.edu.tr/mupc2012/>

**Conference Name:** 6<sup>th</sup> International Seminar on Vernacular Settlements-2012 Contemporary vernaculars: Places, Processes and Manifestation (ISVS-6)

**Date:** 19-21 April 2012

**Web Address:** <http://isvs-6.emu.edu.tr/index.html>

**Conference Name:** 8<sup>th</sup> International Congress On Cyprus Studies

**Date:** 25-27 April 2012

**Web Address:** <http://www.cyprusstudies2012.org/>