Cyprus University of Technology

ANNOUNCEMENT FOR POSTGRADUATE STUDIES

DOCTORAL LEVEL

The Cyprus University of Technology announces the opening to apply for limited positions of postgraduate studies at doctoral level that will begin January 2018. The Departments with their doctoral positions are as follows:

DEPARTMENT OF AGRICULTURAL SCIENCES, BIOTECHNOLOGY AND FOOD SCIENCE

- **One (1) position in the topic: «Application of bacteriophage for the detection and biological control of foodborne pathogens»**

  Short description of the project: Bacteriophage are viruses that infect and can destroy bacteria. This project will focus on the isolation and characterization of strictly lytic bacteriophage from animal-origin food processing and farming establishments. The survival and working ability of phage in food matrices and food contact surfaces will be explored, towards rapid detection and the biological control of foodborne pathogens in the food chain.

  Qualifications: Candidates should hold a Bachelor's and a Master's degree from accredited Universities in Microbiology, Biology, Food Science, Agriculture or other related scientific fields. The candidates should enjoy performing a combination of applied/field and basic research, whereas experience in molecular and microbiological assays will be considered an asset. Candidates should also perform very well in English (writing and verbal skills).

  Funding: The qualified candidate will be funded from existing funding sources of the research advisor. Moreover, depending on his/her field of expertise and qualifications, the candidate may be offered a teaching assistantship for lab-based courses of the Department, receive internal scholarships based on excellence and participate in funded research grants.

  Research Advisor: George Botsaris, Assistant Professor, george.botsaris@cut.ac.cy

- **One (1) position in the topic: «Novel antimicrobial agents against the survival and virulence of Listeria monocytogenes in food»**

  Short description of the project: *Listeria monocytogenes* is an important foodborne pathogen with high mortality rate in humans. The aim of this project is to explore new antimicrobial agents and their combination with new technologies against the pathogen for the food industry. The effects on the virulence of different *L. monocytogenes* strains will also be investigated in an attempt to effectively control the pathogen in food.

  Qualifications: Candidates should hold a Bachelor's and a Master's degree from accredited Universities in Microbiology, Biology, Food Science, Agriculture or other related scientific fields. The candidates should enjoy performing a combination of applied/field and basic research, whereas experience in molecular and microbiological assays will be considered an asset. Candidates should also perform very well in English (writing and verbal skills).

Funding: The qualified candidate will be funded from existing funding sources of the research advisor. Moreover, depending on his/her field of expertise and qualifications, the candidate may be offered a teaching assistantship for lab-based courses of the Department, receive internal scholarships based on excellence and participate in funded research grants.

Research Advisor: George Botsaris, Assistant Professor, george.botsaris@cut.ac.cy

- **One (1) position in the topic: "Cyprus vineyard ecotypes as sources of beneficial microorganisms for the alleviation of biotic and abiotic stressors"**

  Short description of the project: Both rhizosphere and phyllosphere microbiomes are known to provide protection against plant pathogens through a variety of mechanisms ranging from niche displacement, production of antimicrobial compounds and interference with microbial signaling systems. In addition, plant growth promoting bacteria in the rhizosphere, can activate induced systemic resistance and subsequent enhanced plant responses, leading to systemic defense priming and tolerance to pathogens and adverse abiotic factors.

  Cyprus is characterized by a longstanding viticulture history, with vineyards dominated by native cultivars adapted to a semi-arid environment and grown mostly under unfavorable soil conditions. The scope of the thesis is to characterize the microbiome of the Cyprus vineyard ecotypes, aiming to develop an optimized microbial system for the alleviation of biotic and abiotic stressors, commonly faced under marginal Mediterranean cropping systems.

  Qualifications: Candidates should hold a Bachelor's and a Master's degree from accredited Universities in Agriculture or Environmental Microbiology or other related scientific fields. The candidates should enjoy performing a combination of applied/field and basic research, whereas experience in molecular and microbiological assays will be considered an asset. Candidates should also perform very well in English (writing and verbal skills).

  Funding: The qualified candidate will be funded from existing funding sources of the research advisor. Moreover, depending on his/her field of expertise and qualifications, the candidate may be offered a teaching assistantship for lab-based courses of the Department, receive internal scholarships based on excellence and participate in funded research grants.

  Research Advisor: Loukas Kanetis, Assistant Professor, loukas.kanetis@cut.ac.cy

- **One (1) position in the topic: "Grapevine trunk diseases - Etiology, epidemiology and management under Cyprus conditions"**

  Short description of the project: Grapevine trunk diseases (GTD) are the consequence of a fungal complex, described as early as the end of the 20th century and are currently considered the most destructive biotic factors limiting vineyard productivity and longevity around the globe, with substantial economic losses to the grape and the wine industry.

  The scope of the thesis is to unravel and characterize the composition of the fungal microbiome associated with GTD in Cyprus vineyards. The candidate will conduct field epidemiology studies on dominant causal agents causing GTD under Cyprus conditions. Research on aspects of disease

management will be also performed in order to support the national stakeholders implicated in viticulture and the wine industry.

Qualifications: Candidates should hold a Bachelor's and a Master's degree from accredited Universities in Agriculture or other related scientific fields. The candidates should enjoy performing a combination of applied/field and basic research, whereas experience in molecular and microbiological assays will be considered an asset. Candidates should also perform very well in English (writing and verbal skills).

Funding: The qualified candidate will be funded from existing funding sources of the research advisor. Moreover, depending on his/her field of expertise and qualifications, the candidate may be offered a teaching assistantship for lab-based courses of the Department, receive internal scholarships based on excellence and participate in funded research grants.

Research Advisor: Loukas Kanetis, Assistant Professor, loukas.kanetis@cut.ac.cy

- **One (1) post on the topic: "Dairy Science and Technology"**

  Qualifications: Bachelor's and Master's degree from an accredited University in Agricultural/Food or Dairy Science or related disciplines. Fluency in English language is required.

  Funding source: Qualified candidates could be funded as teaching assistants, receive internal scholarships based on excellence when and if available or by participating in funded research grants.

  Research Advisor: Photis Papademas, Assistant Professor, photis.papademas@cut.ac.cy,

- **One (1) post on the topic: "Seed priming of angiosperm plants using chemical agents towards improved growth and protection under stress conditions"**

  Qualifications: Bachelor's and Master's degree from an accredited University in Agricultural/Biological Sciences. Fluency in English language is required.

  Funding source: Qualified candidates could be funded as teaching assistants, receive internal scholarships based on excellence when and if available or by participating in funded research grants.

  Research Advisor: Vassilis Fotopoulos, Assistant Professor, vassilis.fotopoulos@cut.ac.cy, http://plant-stress.weebly.com

- **One (1) post on the topic: "Physicochemical study of the redox stability of wines"**

  Description: Phenolic components of wines are important compounds that contribute to the oxidative stability of wines during storage and aging. Factors that affect their composition and their redox stability in wine will be investigated, and will be correlated with their organoleptic properties.

Qualifications: Candidates are required to own bachelor diploma and Master diploma obtained from internationally recognized Universities on one or more of the following disciplines: chemistry, oenology, and food science. Master diploma in oenology will be an advantage. Very good knowledge of English is required. The employment will be full time.

Funding: Depending on the candidate's expertise, she/he may be funded as teaching assistant for the laboratory experimental courses of the undergraduate level studies. Depending on her/his excellence, candidate will be able to participate in internal scholarships and funding research programs.

Research Advisor: Chryssoula Drouza, Lecturer, chryssoula.drouza@cut.ac.cy,

Information:
Department Secretary
Tel.: 25002436, Fax: 25002767

DEPARTMENT OF ENVIRONMENTAL SCIENCE AND TECHNOLOGY

- **One (1) post on the following topic: "Economic Analysis of Energy and Environmental Policies"**

  Qualifications: Candidates should possess an undergraduate degree in a field of Natural Sciences or Engineering, and an MSc degree related to energy or environmental economics, policy or management. Experience in economic analysis of energy systems is a prerequisite.

  Research advisor: Theodoros Zachariadis, Associate Professor, t.zachariadis@cut.ac.cy

- **One (1) post on the following topic: "Restoration of surface waters contaminated with cyanobacterial harmful algal blooms (Cynao-HABs)"**

  Cyanobacteria (blue-green algae) are phototrophic microorganisms and represent an essential component of the food web in all aquatic ecosystems. However, certain strains of cyanobacteria have the ability to produce bioactive secondary metabolites (also known as cyanotoxins) that have detrimental effects on mammalian health. The effects of climate change and anthropogenic activity are contributing to more frequent and prolonged appearance of cyanobacterial harmful algal blooms (Cyano-HABs) across the globe, adding further pressure on scarce fresh water supplies. Lake Taihu in China and Lake Erie in Toledo Ohio, USA comprise characteristic examples of cyano-HABs persistence that restricted drinking water supply to millions of people. In order to mitigate the effects of cyanobacteria and cyanotoxins measurements need to be taken at source. This study aims to apply various methods for restoring cyanobacterial contaminated sites including physical, chemical, and phytoremediation.

  Qualifications: Successful candidates must possess a Bachelor's degree from an accredited University in Chemistry, Environmental Engineering, Chemical Engineering and/or a postgraduate degree (Master level) from an accredited University in the field of Environmental Chemistry,

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Analytical Chemistry, Environmental Science or Environmental Engineering. The candidates must be fluent in English. Previous experience in the above-mentioned research topic will be considered as an advantage. Funding opportunities are available for exceptional candidates.

Research advisor: Maria G. Antoniou,Assistant Professor, maria.antoniou@cut.ac.cy

- **One (1) post on the following topic: "Treatment of cyanotoxin-contaminated water with Advanced Oxidation Processes (AOPs)".**

  The presence and subsequently the removal of micropollutants like pesticides, hormones, medical drugs and naturally occurring toxic metabolites (cyanotoxins) from water resources comprises a challenge for the water and wastewater industry. In order to remove micropollutants in trace concentrations from water resources chemical oxidation technologies such as ozonation and advanced oxidation processes (AOPs) are increasingly used to treat different types of source water and wastewater. The aim of this thesis is to explore the potential application of various AOPs for the removal of a group of natural toxins produced from the toxic strains of cyanobacteria, commonly known as cyanotoxins. The study aims to determine the tested AOPs efficiency and energy demands, toxicity of end product and unveil the transformation products. This will be a collaborative project with the CYANOSOL group of the Robert Gordon University in Aberdeen, UK.

  Qualifications: Successful candidates must possess a Bachelor's degree from an accredited University in Chemistry or Chemical Engineering and/or a postgraduate degree (Master level) from an accredited University in the field of Environmental Chemistry, Analytical Chemistry, Environmental Science or Environmental Engineering. The candidates must be fluent in English. Previous experience in the above-mentioned research topic will be considered as an advantage. Funding opportunities are available for exceptional candidates.

  Research advisor: Maria G. Antoniou, Assistant Professor, maria.antoniou@cut.ac.cy

- **One (1) post on the following topic: "Probing metal-biosurface interactions by FTIR imaging and Raman spectroscopy"**

  Qualifications: Candidates should possess Bachelor's in either Environmental Science and Technology or Chemistry or Biology or Chemical Engineering from accredited Universities.

  Research advisor: Constantinos Varotsis, Professor, c.varotsis@cut.ac.cy

- **One (1) post on the following topic: "Probing Maillard reactions in Foods by FTIR and Raman spectroscopy"**

  Qualifications: Candidates should possess Bachelor's in either Environmental Science and Technology or Chemistry or Biology or Chemical Engineering from accredited Universities.

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Research advisor: Constantinos Varotsis, Professor, c.varotsis@cut.ac.cy

- **One (1) post on the following topic: "Probing the Biodegradation of pollutants by time-resolved FTIR spectroscopy"**

  Qualifications: Candidates should possess Bachelor's in either Environmental Science and Technology or Chemistry or Biology or Chemical Engineering from accredited Universities.

  Research advisor: Constantinos Varotsis, Professor, c.varotsis@cut.ac.cy

- **One (1) post on the following topic: "Integrated Bioprocesses: Production of Succinic Acid and Bacterial Cellulose from Winery Waste"**

  The proposed thesis deals with two important environmental issues concerning the development of sustainable alternatives to the production of materials and chemicals from petrochemical processes, as well as the management and treatment of wine waste streams (WWS). The aim of the post is to demonstrate the valorization of WWS, through the development of an integrated bioprocess for the production of succinic acid and bacterial cellulose. The successful candidate will explore the potential of wine lees to form yeast extract through enzyme treatment, the hydrolysis of other WWS (such as grape pomace, stems and prunings) to form a cost-effective feedstock rich in sugars and its consequent utilization as fermentation media for manufacturing succinic acid and bacterial cellulose.

  Qualifications: Candidates should possess a Bachelor's and postgraduate degree of Master's level from accredited Universities in Chemical Engineering, Chemistry, Biology, Environmental Engineering or any other related field.

  Research advisor: Michalis Koutinas, Assistant Professor, michail.koutinas@cut.ac.cy, or website: http://enblab.weebly.com/

- **One (1) post on the following topic: "Valorization of high value added products from anaerobic sludge"**

  Anaerobic sludge generates in high amount from municipal wastewater treatment plants (WWTPs). The use or disposal of anaerobic sludge to the environment has many risks as anaerobic sludge contains pathogens, organic compounds and heavy metals. The aim of the PhD research is to experimentally investigate the recovery of high value added products from anaerobic sludge such as: phosphorous, ammonia, bioethanol, biodiesel and organic acids.

  Qualifications: Successful candidates must possess a Bachelor's degree from an accredited University in Environmental Science and Technology, Chemistry or Chemical Engineering or Biology or Chemical Engineering. They should possess a postgraduate degree (Master's level) from an accredited University in the field of Environmental Chemistry, Analytical Chemistry, Environmental Science or Environmental Engineering. Candidates must be fluent in English. Previous experience in the above-mentioned research topic, such as anaerobic biological processes and analytical techniques for assessment of water quality, will be considered as an advantage.

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Research Advisors:
Ioannis Vyrides, Assistant Professor, Ioannis.vyrides@cut.ac.cy
Michalis Koutinas, Assistant Professor, michail.koutinas@cut.ac.cy

Information:
From the Department Secretary
Tel.: 25002178, Fax: 25002636

DEPARTMENT OF COMMUNICATION AND INTERNET STUDIES

- **One (1) position in the research field "Social Deviance and the Media"**

  Description: The proposed field of study resides in the sociology of deviance and social control. Social deviance includes behaviors, conditions or ideas that deviate from what is defined as "normal" and social control refers to processes (informal or formal) that control deviance. The media play a key role in the social construction of reality, within which deviance is defined, and as means of social control. The proposed study is expected to focus on a specific form of deviance and approach the subject matter from a critical point of view by analyzing media content and public perceptions and attitudes. It is also expected that the study will focus on the new media, while focus on traditional media will not be excluded. The level of analysis is open but special consideration will be given to proposals that will seek to establish a link between the macro level (e.g., media discourses, media as institutions) and the micro level (e.g., perceptions, attitudes, behaviors).

  Qualifications: (a) Bachelor's degree in a social science field with grade "Excellent" or equivalent; (b) Master's degree in a social science field (preferably sociology or criminology or communication or media studies) with grade "Excellent" or equivalent (degrees in other relevant fields can be accepted in special cases); (c) Excellent knowledge of Greek and English (candidates should be able to deliver their doctoral dissertation in one of the two languages). Candidates with good knowledge of qualitative and quantitative research methods in the social sciences and candidates with prior research experience in relevant fields will be given priority. Applications should be accompanied by a description (up to two pages) of the candidate's research interests in English or Greek, a detailed CV and full transcripts of both degree programs.

  Financial Support: For the above position there is scope for engaging students in teaching or related research programs, given that their specialty fits the Department's needs.

  Research Advisor: Stelios Stylianou, Associate Professor, stelios.stylianou@cut.ac.cy

- **One (1) post on the topic: "Computational thinking, innovation, and learning"**

  Description: This Ph.D. thesis work will investigate computational thinking using digital applications, especially as it relates to the promotion of goals for developing capacity for innovation and learning in STEM areas (Science, Technology, Engineering, Mathematics)

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Qualifications: To be considered, candidates should have an undergraduate degree in Computer Science, Computer Engineering, Electrical Engineering or a related field, and a graduate degree in one of the above areas, or social sciences, with strong methodological background. They should be highly proficient in spoken and written Greek and English. The successful candidate will be interested in the empirical investigation of computational thinking using digital applications and have a genuine interest in exploring the pedagogical and design aspects of computational thinking learning environments. The submission of a detailed CV, along with a brief (2 page) description of relevant background and research interests, to assess the fit with the proposed research topic is kindly requested.

Financial Support: Depending on their field of expertise and qualifications, candidates may be offered teaching assistant positions in the department for lab-based courses. Moreover, funding may be available through on-going research projects.

Research Advisor: Eleni A. Kyza, Associate Professor, Eleni.Kyza@cut.ac.cy

- **One (1) post on the topic: "Development and empirical investigation of mobile and/or augmented reality apps"**

Description: This Ph.D. thesis work will lead to the development and empirical investigation of inquiry-based learning with mobile and/or augmented reality devices.

Qualifications: To be considered, candidates should have an undergraduate degree in Computer Science, Computer Engineering, Electrical Engineering or a related field, and a graduate degree in one of the above areas, or social sciences, with strong methodological background. They should be highly proficient in spoken and written Greek and English. The successful candidate will be interested in developing mobile or augmented reality apps for use with Android or iOS operating systems. The submission of a detailed CV, along with a brief (2 page) description of relevant background and research interests, to assess the fit with the proposed research topic is kindly requested.

Financial Support: Depending on their field of expertise and qualifications, candidates may be offered teaching assistant positions in the department for lab-based courses. Moreover, funding may be available through on-going research projects.

Research Advisor: Eleni A. Kyza, Associate Professor, Eleni.Kyza@cut.ac.cy

- **One (1) post on the following topic: "Critical Internet Studies"**

Description: Internet technologies have created a communication ecosystem where power relations are being created and recreated by various communication actors. This doctoral research will examine empirically how the internet constitutes a space of struggle, where economic, technological, sociopolitical and discursive forms of power and resistance are being established at the individual or collective level. Indicative concepts that can be examined within this research are algorithmic power, surveillance, the use of user data for accumulation of economic or political

power, the changes in the perception of sociality and privacy, the inequalities regarding visibility and influence of expression online, algorithms' effects on journalism, algorithmic media's effects on identity etc. as well as the forms of oppositional action by internet users to these practices such as data activism.

Qualifications: Candidates must hold an undergraduate and a postgraduate degree in Communication Studies/ Media Studies / Internet Studies or a relevant field. Previous knowledge of or familiarity with internet technologies is desired. Due to the interdisciplinary nature of the topic, applicants with background in Computer Science who wish to conduct doctoral research in the field of social sciences / humanities are welcome to apply. Fluency in Greek and English is essential. Candidates should be able to deliver their doctoral thesis in Greek or English. Priority will be given to candidates with a) Sufficient knowledge of qualitative and quantitative research methods in social sciences and in particular in the field of Communication b) Prior research experience in related fields, with emphasis on critical approaches to communication and communication technologies and c) Experience in writing and submitting research proposals. The application of each candidate should include a description of research interests (maximum 2 pages) in English or Greek.

Financial Support: Depending on their field of expertise and qualifications, candidates may be offered teaching assistant positions. Moreover, funding may be available through research projects.

Research Advisor: Dimitra Milioni, Assistant Professor, dimitra.milioni@cut.ac.cy

- **One (1) post on the following topic: "Automating the process of mapping the political dialogue"**

Description: The aim of the proposed dissertation is to map the political dialogue in a country or group of countries with a view to identifying the main dimensions of ideological conflict therein. In the age of Big Data, it is envisaged that a variety of data sources could be used that include social media (e.g. Facebook and Twitter) as well as tracking traditional media, which is increasingly available online. Other sources that could be used to mine public opinion could include data generated from online opinion surveys, such as voting advice applications. Given the Departments' experience in the deployment of such tools, experimental methods involving the development of innovative applications or research methodologies would be strongly encouraged. The dissertation lies at the intersection of the social sciences and computer science and will involve engaging with social science theories related to political polarization, the implementation of data mining/crawling tools using programming languages (preferably Python), and learning computational methods of content analysis.

Qualifications: Candidates much have strong interdisciplinary interests and an undergraduate and/or a postgraduate degree in fields such as Communication sciences, Social sciences and/or Computer science. The ideal candidate would have followed courses in the Social Sciences and have experience with programming languages such as Python and noSQL databases such as Mongo. Good knowledge of English will be considered as an advantage. The application of each candidate should include a detailed CV along with a brief description of research interests (maximum 2 pages).

Financial Support: Depending on their field of expertise and qualifications, candidates may be offered teaching assistant positions in the department for lab-based courses. External funding sources will also be sought for the duration of the project.

Research Advisor: Vasiliki Triga, Assistant Professor, vasiliki.triga@cut.ac.cy

- **One (1) post on the following topic: "Mobile Health (mHealth) Technologies"**

Description: Chronic diseases, such as cardiovascular and respiratory diseases, are a major threat to today's healthcare systems. They account for nearly 40% of mortality cases and 75% of health care costs worldwide, while researchers predict a 42 percent increase in chronic disease cases by 2023. Much of this can be prevented through an emphasis on healthy lifestyles. Obesity alone, for example, accounts for an estimated 12 percent of the health spending growth in the United States. In this new landscape of healthcare, mobile and wearable technologies, such as physical activity trackers, have recently gained substantial interest both in research and practice as they can provide many benefits, ranging from increased awareness of one's behaviors, to empowerment and responsibility taking with one's own health, as well as opportunistic engagement in desired behaviors. The candidate will join an international team which strives to understand the long-term impact mobile health technologies have on individuals' behaviors and to design and prototype new forms of such technologies. Candidates with strong methodological background in the social sciences will conduct longitudinal studies on users' engagement with the technology as well as in behavior change, while candidates with a computer science background will work on designing and building new mobile and wearable technologies for behavior change, utilizing sensors available in smartphones and smartwatches and building new ways to visualize information and inspire action towards healthy lifestyles.

Qualifications: Candidates must hold either an undergraduate and a postgraduate degree in Computer Science, Computer Engineering or a relevant field with interests in Human-Computer Interaction and experience in mobile development (Android/Android Wear/iOS), or hold an undergraduate and a postgraduate degree in the Social Sciences with strong methodological background. The application of each candidate should include a detailed CV along with a brief description of research interests (maximum 2 pages).

Financial Support: Funding may be available from a startup grant and external research funding of the Persuasive Technologies Lab (http://persuasive.cut.ac.cy). Moreover, depending on their field of expertise and qualifications, candidates may be offered teaching assistant positions in the department for lab-based courses.

Research Advisor: Evangelos Karapanos, Assistant Professor, evangelos.karapanos@cut.ac.cy

- **One (1) post on the following topic: "Enhancing communication networks for the Internet of Things"**

Description: The aim of this dissertation is to analyse the various applications of ubiquitous computing in the Internet of Things and their requirements from the network communications infrastructure within both urban and rural areas. The analysis will help to identify and resolve the

open issues and enhance networked communications. The work for the above subject entails carrying out high level research that produces original results that advance knowledge in the corresponding scientific field.

Qualifications: Candidates must hold an undergraduate degree in Computer Science, Computer Engineering, Electrical Engineering or a relevant field. The application of each candidate should include a detailed CV along with a brief description of their research interests (maximum 2 pages) written in English.

Financial Support: Depending on their field of expertise and qualifications, candidates may be offered teaching assistant positions in the department for lab-based courses. Moreover, funding is currently available through on-going research projects

Research Advisor: Lambros Lambrinos, Assistant Professor, lambros.lambrinos@cut.ac.cy

- **One (1) post on the following topic: "Context awareness in the Internet of Things"**

Description: This dissertation will study the existing and potential applications of the Internet of Things and how they interact between them, with their users and the surrounding environment (e.g. within a smart city). The study will examine both the software and hardware (e.g. mobile devices, sensors) supporting the applications in order to identify the role of context awareness and resolve the issues identified. The work for the above subject entails carrying out high level research that produces original results that advance knowledge in the corresponding scientific field.

Qualifications: Candidates must hold an undergraduate degree in Computer Science, Computer Engineering, Electrical Engineering or a relevant field. The application of each candidate should include a detailed CV along with a brief description of their research interests (maximum 2 pages) written in English.

Financial Support: Depending on their field of expertise and qualifications, candidates may be offered teaching assistant positions in the department for lab-based courses. Moreover, funding is currently available through on-going research projects.

Research Advisor: Lambros Lambrinos, Assistant Professor, lambros.lambrinos@cut.ac.cy

- **One (1) post on the following topic: "Integrating the Internet of Things in smart city environments"**

Description: The aim of this dissertation is to examine how the Internet of Things can be applied within smart city environments. The analysis will help to enhance the use of smart city infrastructures in order to provide an improved level of services to the citizens. The work entails carrying out high level research that produces original results that advance knowledge in the corresponding scientific field. The work for the above subject entails carrying out high level research that produces original results that advance knowledge in the corresponding scientific field.

Qualifications: Candidates must hold an undergraduate degree in Computer Science, Computer Engineering, Electrical Engineering or a relevant field. The application of each candidate should

include a detailed CV along with a brief description of their research interests (maximum 2 pages) written in English.

Financial Support: Depending on their field of expertise and qualifications, candidates may be offered teaching assistant positions in the department for lab-based courses. Moreover, funding is currently available through on-going research projects.

Research Advisor: Lambros Lambrinos, Assistant Professor, lambros.lambrinos@cut.ac.cy

** In exceptional cases candidates without a postgraduate degree can be admitted in the doctoral program, with a unanimous positive decision of the Departmental Council. However, this implies that a number of additional ECTS from postgraduate courses must be completed.*

Information:
From the Department Secretary
Tel.: 25002453, Fax: 25829091

DEPARTMENT OF MULTIMEDIA AND GRAPHIC ARTS

- **One (1) post on the following in the area of "User Centered Design" and specifically in the areas of:**
  - **Methodologies of User Centered Design**
  - **Creative Design - Design Sprints**
  - **Social Computing**
  - **Design for people with disabilities/older people/vulnerable communities of user**

Candidates for this post should possess:

- Postgraduate Degree of Master's level from accredited Universities in Computer Science or Design or related to this opening
- Very good knowledge of English language.
- Ability to organize and carry out research work independently.
- Prior experience in submitting research proposals or participating in research programs will be considered as an additional qualification.
- Beyond the requirements that the university requests to apply for the doctoral programme, your application must include (in English) a letter of interest or statement of purpose, that explains/describes why you wish to undertake the specific studies, your research objectives and other relevant information (2-3 pages).
- The successful candidates will be assigned to the "Cyprus Interaction Lab" (http://www.cyprusinteractionlab.com/) of Cyprus University of Technology. In parallel with their studies the successful candidates may be employed in currently active research programs and will be assigned teaching-related duties at the Department of Multimedia and Graphic Arts with appropriate reimbursement.

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Research Advisor: Panayiotis Zaphiris**,** Professor, panayiotis.zaphiris@cut.ac.cy

- **Two (2) posts in the topics:**
  - **Visual Computing/ Computer Graphics ή**
  - **Virtual Reality for Well being/Rehabilitation ή**
  - **Exploiting Virtual Reality as Placebo ή**
  - **Study Brain Conflicting Sensory Input Through Virtual Reality ή**
  - **Virtual Reality and Brain Computer Interface (EEG)**

Candidates for this post should possess:

- A Bachelor's Degree and a postgraduate Degree of Master's level* from accredited Universities in Computer Science, Computer Engineering, or other related field
- Deep knowledge of Computer Graphics and Virtual Reality concepts
- Excellent programming skills
- Excellent knowledge of a game engine (e.g. Unity)
- **For topic (1):** excellent knowledge of C/C++ programming language
- **For topics (2), (3), (4) and (5):** academic knowledge or personal interest in cognitive psychology or neuroscience
- Ability to work independently on research projects Excellent knowledge of English language (spoken and written)
- The following will be considered as additional qualifications:
- **For topic (1):** experience in programming using OpenGL and experience in GPU programming
- **For topics (2), (3), (4) and (5):** knowledge of a 3D modelling software and knowledge of statistical analysis
- **For all topics:** experience in submitting research proposals and/or participation in research projects

* In cases where the candidate demonstrates EXCEPTIONAL academic performance; holding a postgraduate degree may not be a restrict requirement to apply for this position. (Even though it is highly recommended)

For these positions:

- Applications are accepted only for full time studies
- Candidates should include with their application, a research statement relevant to the topic they apply.
- The research statement should be 1-2 pages in length and written in English
- To submit the relevant documents proving possession of the required qualifications as they are described above.

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The successful candidate(s) will be affiliated with the research lab of Department of Multimedia and Graphic Arts, Microsoft Computer Games and Emerging Technologies (GET Lab – http://getlab.org) and will take part in the research activities of the lab.

The successful candidate(s) may be assigned teaching-related duties, with appropriate reimbursement, at the Department of Multimedia and Graphic Arts, based on the needs of department per academic year or/and research responsibilities at GET Lab.

Successful candidate(s) with excellent academic qualifications and performance may be hired as researchers at research projects that GET Lab is involved.

Research Advisor: Despina Michael Grigoriou, Assistant Professor, despina.grigoriou@cut.ac.cy
Director, GET Lab - Microsoft Computer Games and Emerging Technologies Research Lab

DEPARTMENT OF NURSING

- **One (1) post in the field of «Bundle for the prevention and treatment of decubitus ulcers in critically ill population».**

  Qualifications: Candidates should hold a Bachelor's degree in Nursing and a Postgraduate degree at Master's level, both from accredited Universities. Candidates need to have good computer skills (Microsoft Office, Statistical Analysis Software), clinical experience in Intensive Care Nursing as well as to have excellent Greek and English language skills. Prior research experience will be considered as an advantage.

  Research Advisor: M. Mpouzika, Lecturer, meropi.mpouzika@cut.ac.cy

- **One (1) post in the field of 'Cardiology Nursing' in the topic: "Compassion rounds" and health professionals in cardiology**

  Qualifications: Candidates must be registered nurses with a Postgraduate degree at Master's level in advanced nurse practice (cardiology care). Candidates need to have good computer skills (Microsoft Office, Statistical Analysis Software), as well as to have excellent Greek and English language skills and relevant clinical experience. Prior research experience in heart failure and social support will be considered as an advantage.

  Research Advisor: Ekaterini Lambrinou, Associate Professor, ekaterini.lambrinou@cut.ac.cy

- **One (1) post in the topic area: "Rationing- Missed Nursing Care: An international and Multidimensional problem"**

  Qualifications: Candidates should hold an accredited Bachelor's Degree in Health Sciences (e.g. Nursing, Medicine, Psychology, Physiotherapy, Pharmacology and other related areas). Additional requirements include: very good command of English, familiarity with health research methodology

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and competence in statistical data analysis. Prior involvement in related research projects, scientific publications/ conference presentations as well as clinical experience will be considered an advantage.

The person who will be selected will join the group working on the subject which is funded by the European Programme COST (http://www.cost.eu/), with the Acronym RANCARE(http://www.cost.eu/COST_Actions/ca/CA15208).

Research Advisor: Evridiki Papastavrou, Associate Professor e.papastavrou@cut.ac.cy

- **One (1) post in the field of "Mental Health Nursing" in the following topics:**

  "The association between depressive symptoms, school bullying and self - stigmatization in children and adolescents in Cyprus"

  "The Prevalence and risk indicators of depressive symptoms and Suicidal Ideation in elderly nursing home patients in Cyprus"

  Qualifications: Candidates should hold an accredited Bachelor's degree in Nursing or in a related field of Humanities and an accredited Postgraduate Degree at Master's levels, preferably in Mental Health Nursing or in a field related to Mental Health, and particularly in the topics under investigation. Certified proficiency skills in English, certified training in Biostatistics-Research Methodology and use of the statistical package SPSS are required. Prior research experience and publications in peer-reviewed journals will be considered an advantage.

  Research Advisor: Sokratis Sokratous Assistant professor**,** sokratis.sokratous@cut.ac.cy

- **One (1) post in the field of "Oncology Nursing" on the topic "Developing a supportive educational programme for informal caregivers of people diagnosed with and living with cancer across the cancer care continuum"**

  Qualifications: Candidates should hold an accredited Bachelor's Degree in Health Sciences and a Postgraduate Degree at Master's level in Health Sciences. Very good command of the Greek and English languages as well as competence in the use of computers and the statistical package SPSS or SAS/STAT are required. Prior research experience in clinical studies will be taken into consideration.

  Research Advisor: Andreas Charalambous, Assistant Professor, andreas.charalambous@cut.ac.cy

- **One (1) post in the field of "Surgical Nursing and-or post-surgical rehabilitation"**

  Qualifications: Candidates should hold an accredited Bachelor's Degree in Health Sciences (e.g. Nursing, Medicine) and a Postgraduate Degree at Master's level. Additional requirements include: very good command of English, familiarity with health research methodology and competence in statistical data analysis. Prior involvement in related research projects, scientific publications/ conference presentations as well as clinical experience will be considered an advantage.

Research Advisor: Pavlos Sarafis, Assistant Professor, pavlos.sarafis@cut.ac.cy

- **One (1) post in the field of "Health Research Methodology" in the topic of "Methodological approaches in the understanding of educational needs and preferences of parents-to-be and the development and assessment of perinatal educational material"**

  Qualifications: Candidates should hold an accredited Degree in Health Sciences (Midwifery, Nursing, Medicine) or Humanities/Social Sciences (Psychology, Sociology) and a Postgraduate Degree, preferably in Health Research Methodology, Health Promotion, Public Health, Midwifery, Community/Public Health Nursing, Health Psychology, Health Services Management, Midwifery, Nursing, or Medical Education, or other field related to the topic. Very good command of the English language, familiarity with the principles of systematic review and search strategies, familiarity with the concepts and principles in Health Research Methodology are required. Prior educational experience in antenatal/perinatal education programmes, and/or publications or conference presentations, and/or experience in participatory research, action research, or formative research with quantitative and/or qualitative research methods will be considered an advantage. The successful candidate will have the opportunity to participate as a researcher in the research programme "Baby Buddy-Forward", funded by Erasmus+- KA2- Strategic Partnership-Adult Education.

  Research Advisor: Nicos Middleton, Associate Professor, nicos.middleton@cut.ac.cy

- **One (1) post in the field of "Epidemiology" in the topic of "Parents' Health Literacy on their children's health**

  Qualifications: Candidates should hold an accredited Bachelor's Degree in Nursing, or Health Sciences and a Postgraduate Degree at Master's level, preferably in Health Promotion, Community Nursing/ Health Care, Nursing/Medical Education, Epidemiology, Public Health or other related field. Very good command of the English language, familiarity with the principles of systematic review and search strategies, familiarity with the concepts and principles in Health Research Methodology, Epidemiology and Biostatistics, good computer skills and familiarity with statistical packages (e.g. SPSS, STATA, R) are required. Prior experience in population-based research and/or community health needs assessment will be considered an advantage.

  Research Advisor: Christiana Nicolaou, Assistant Professor, c.nicolaou@cut.ac.cy

- **One (1) position in the field of "Implementation Nursing Science" "Assessment of the frequency and the severity of cachexia in patients with cancer who undergo treatment in Cyprus and/or Greece"**

  Qualifications: The PhD candidate will focus on the assessment of the frequency and the severity of the nutritional status of patients with cancer who undergo treatment. It is anticipated that important research questions will be explored in this PhD dissertation such as: (a) Are there published studies regarding the frequency and the severity of cachexia in patients with cancer who undergo treatment in Cyprus and/or Greece? (b)) Are there appropriate published instruments for the assessment of cachexia in patients with cancer who undergo treatment? (c) Design and

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implementation of a research study that explores the frequency and the severity of cachexia of patients with cancer who undergo treatment in Cyprus and/or Greece.

Candidates must be registered nurses with a Postgraduate degree at Master's level. Candidates need to have excellent Greek and English language skills, be competent in the use of computer programs (Microsoft Office, Statistical Analysis Software), and have relevant clinical experience.

Research Advisor: Maria Kyranou, Assistant Professor, maria.kyranou@cut.ac.cy

- **One (1) position in the area of 'Health Informatics' in the following subject: "Training scenarios for nursing and health professionals in virtual reality environments "**

  Qualifications: Candidates must be holders of a recognized postgraduate degree at Master level in Informatics/Computer Science. Degree at any level in the field of nursing or other health related profession and experience in the clinical area will be considered as an advantage.

  Very good knowledge of English language and proficiency in the use of software applications (Microsoft Office, statistical software such as SPSS) and programming expertise in modern programming languages are essential. Experience in developing applications in virtual reality environments and/or use of such technologies will be considered an advantage. Previous research experience will also be considered an advantage.

  Research Advisors:
  Panicos Masouras, Assistant Professor, panicos.masouras@cut.ac.cy
  Sotiris Avgousti, sotiris.avgousti@cut.ac.cy

- **One (1) position in the area of 'Health Informatics' in the following subject: "Internet of Things in Healthcare Environments in Cyprus"**

  Qualifications: Candidates must be holders of a recognized postgraduate degree at Master level in Informatics/Computer Science or Electronics Engineering. Degree at any level in the field of nursing or other health related profession and experience in the clinical area will be considered as an advantage.

  Very good knowledge of English language and proficiency in the use of software applications (Microsoft Office, statistical software such as SPSS) and programming expertise in modern programming languages are essential. Experience in applications development in smart equipment/phone environments and interfacing of external devices with software applications is also required. Previous research experience will also be considered an advantage.

  Research Advisors:
  Panicos Masouras, Assistant Professor, panicos.masouras@cut.ac.cy
  Sotiris Avgousti , sotiris.avgousti@cut.ac.cy

Information:
From the Department Secretary
Tel.: 25002048, Fax: 2500286

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DEPARTMENT OF CIVIL ENGINEERING AND GEOMATICS

- **Two (2) posts in the field of «3D recording and documentation of maritime cultural heritage»**

  Qualifications: Candidates should hold an MSc in computer graphics, computer vision, 3Dmodelling, VR or AR, photogrammetry, information technology or equivalent. Strong motivation is necessary. Additional skills and qualifications include experience in diving, data bases and archaeological excavations, scientific publications, 3D scanning. Excellent knowledge of English is a prerequisite.

  Research Advisor: Dimitrios Skarlatos, Assistant Professor, dimitrios.skarlatos@cut.ac.cy

- **One (1) post in the field of "Assessment of the fragility of existing buildings with degrading post-peak behavior and time-dependent loss of material strength"**

  Description: Development of a novel methodology for the fragility assessment of existing RC buildings taking into consideration all credible failure modes under non-linear behavior both in frame elements and joints. The methodology will also examine the reduction in the fragility of these buildings prior to retrofitting with RC Infill walls

  Basic Requirements:
  - Dipl. Ing. or B.Sc.+M.Sc./M.Eng. in Civil engineering
  - Basic knowledge of numerical methods for analysis of frames
  - Basic knowledge of seismic design and assessment
  - Ability to perform non-linear frame analysis using software tools
  - Good use of English Language

  Desired Requirements:
  - Ability to perform non-linear analysis using finite element software
  - Programming in MATLAB or similar package.

  Research advisor: Nicholas Kyriakides, Lecturer, nicholas.kyriakides@cut.ac.cy

- **One (1) post in the field of "Biomimicry Practices in Structural Design"**

  Description: The Doctoral candidate will join the research group of Dr. Yiatros and will investigate the potential of biomimetic practices in Structural Engineering/Design. Biomimicry is a relatively recent design methodology based on the emulation of optimized natural systems and/or processes to provide sustainable solutions to man-made problems or needs. There have been some early successes in various areas such as robotics and other engineering disciplines; therefore the aim of this project is to identify, assess and offer practical biomimetic applications in structural design.

  Typical qualifications: The candidates must hold Masters (MSc/ MA) degree in Civil Engineering or Structural Engineering or Architectural Engineering or Architecture from recognised universities. 5-

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Year Diploma (Dipl. Eng. / Dipl. Ing / Dipl. Arch) graduates are also welcome to apply. MEng or other 4-year course graduates in the same fields may apply, but if successful, they will have to undertake some postgraduate modules at CUT. Finally all candidates must have a very good knowledge of English. Participation in professional conferences and/or competitions will be considered favourably.

Research Advisor: Stylianos Yiatros, Assistant Professor, stylianos.yiatros@cut.ac.cy

- **One (1) post in the field of "Investigation of the multifunctional behaviour of metal foam structural components "**

Description: The Doctoral candidate will join the research group of Dr. Yiatros and will investigate the design and behaviour of multifunctional structural elements comprising metal foams in structural or offshore applications. The investigation will be based on the vast literature of metal foams and their properties and will aim the optimal design, testing and analysis of specific structural components.
Typical qualifications: The candidates must hold Masters (MSc/ MA) degree in Civil Engineering or Structural Engineering or Marine Engineering, or Mechanical Engineering or Aeronautics or Architectural Engineering or Architecture from recognised universities. 5-Year Diploma (Dipl. Eng. / Dipl. Ing / Dipl. Arch) graduates are also welcome to apply. MEng or other 4-year course graduates in the same fields may apply, but if successful, they will have to undertake some postgraduate modules at CUT. Finally all candidates must have a very good knowledge of English. Participation in professional conferences and/or competitions will be considered favourably.

Research Advisor: Stylianos Yiatros, Assistant Professor, stylianos.yiatros@cut.ac.cy

- **One (1) post in the field of «Satellite Geodesy»**

Basic Requirements:

- Dipl. Ing. or B.Sc.+M.Sc./M.Eng. in Geomatic or Civil Engineering with specialization in Geodesy (a mark of at least 70% is required),
- Experience in the use of geodetic equipment (i.e. GNSS receivers, digital levels etc).
- Good Knowledge of satellite positioning methodologies, and geodetic infrastructure (coordinate reference systems and frames, CORS networks etc),
- Experience in programming Matlab.

Desired Requirements:

- Ability to program in C/C++ or Python,
- Unix/Linux shell scripting,
- Ability to use research or commercial GNSS-processing software (e.g. Bernese GNSS, GAMIT/GLOBK, GIPSY, TEQC, Novatel GrafNet, etc.)
- Experience in Atmospheric Monitoring using GPS/GNSS techniques.

Research advisor: Dr. Chris Danezis, Lecturer, chris.danezis@cut.ac.cy

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- **Two (2) posts in any of the following subjects:**

1. Development of in-house fluid-structure-interaction analysis methods and tools (based in FEM) for the design of floating or fixed bottom marine (coastal and offshore) structures (e.g. offshore oil and gas structures, offshore wind turbines, wave energy converters, jetties, pipelines, mooring lines, cables, port structures).

2. Development of in-house numerical tools (based in FEM and CFD) for the nonlinear analysis (involving transient dynamics and nonstationary system responses) of in-service conditions (installation, operation, maintenance and decommissioning) of flexible and rigid structures/systems for coastal and offshore engineering applications (e.g. offshore oil and gas structures, risers, pipelines, utility networks, offshore wind turbines, mooring lines, cables, port structures).

3. Development of in-house multi-zone numerical methods and tools (based in CFD or IGA) for the analysis of marine (coastal and offshore) structures and systems. Application to a relevant structure in oil and gas technology, offshore wind turbines, wave energy converters or coastal structures with emphasis in quantification of nonlinear wave conditions and hydrodynamic loadings, and complicated physical problems of interaction between structures and waves.

4. Development of in-house methods and tools for the study, early detection, prediction and prevention of coastal morphodynamic processes (e.g. coastal erosion, longshore drift). Application in different coasts in Cyprus.

5. Development of high fidelity numerical methods and tools for the natural hazard-structure-interaction response analysis of coastal and offshore structures (nonlinear excitation and nonlinear response) and marine environment. Emphasis on: (a) estimation of the dynamic response and (b) design for resilience of marine (coastal and offshore) structures and coastal environment under sea natural hazard excitations.

6. Stochastic dynamic analysis of marine (coastal and offshore) structure for use within rare events, extreme response prediction and probing/mitigation of extreme events.

Research Advisor: Constantine Michailides, Lecturer, c.michailides@cut.ac.cy

- **One (1) position in the field of "Spatial Analysis and Geoinformatics in Archaeology"**

Description: Harnessing cutting-edge geoinformatics technologies and geoanalytical methods for supporting inferences with spatial data in archaeology. Development of agent-based models and relevant simulation algorithms. Applications of spatial analysis in archaeology, including the delineation of plausible maritime routes between coastal areas in the Eastern Mediterranean based on information and hypotheses regarding ancient vessel characteristics. Analysis and modeling of spatial networks in antiquity.

Required Qualifications:

- Engineering diploma or bachelor's or postgraduate degree in one of the following fields: Geomatics Engineering, Geography, or Cultural Technology/ Informatics
- Experience in applications and methodologies of Geographic Information Systems
- Proficient use of English Language

Desired Qualifications:

- Experience in the implementation of research projects and applications in the field of geoinformatics and spatial analysis in Archaeology or Cultural Heritage
- Experience in applying neural networks and data mining techniques to uncover patterns in (spatial) data
- Ability to program in Matlab, C/C++, R or Python

Research Advisor: Phaedon Kyriakidis, Professor, phaedon.kyriakidis@cut.ac.cy

- **One (1) position in the field of "Geoinformatics and Spatial Analysis for Security, Civil Protection and Crisis Management"**

  Description: Harnessing cutting-edge geoinformatics technologies and geoanalytical methods for supporting inferences regarding physical phenomena and human activities related to security and civil protection. Development of scenario-based spatial approaches to crisis management.

  Required Qualifications:

  - Engineering diploma or bachelor's or postgraduate degree in one of the following fields: Geomatics Engineering, Geography, Geology, Environmental Science, or Informatics
  - Experience in applications and methodologies of Geographic Information Systems
  - Proficient use of English Language

  Desired Qualifications:

  - Experience in the implementation of research projects and applications in the field of geoinformatics and spatial analysis in security and civil protection.
  - Experience in applying neural networks and data mining techniques to uncover patterns in (spatial) data
  - Ability to program in Matlab, C/C++, R or Python

  Research Advisor: Phaedon Kyriakidis, Professor, phaedon.kyriakidis@cut.ac.cy

- **Three (3) positions in the following subjects:**

  1. Earth Surveillance and Space-Based monitoring of the Environment in the Eastern Mediterranean region (Excelsior Teaming Project, Widespread Horizon 2020)

  2. Space technologies and earth observation in natural hazards in the Eastern Mediterranean region

  3. Active remote sensing (radars) in natural and built environment

4. Satellite Remote Sensing (optical and radar), field spectroscopy/geospatial technologies for cultural heritage

5. Marine Spatial Planning in Cyprus and Greece

6. Irrigation water management / Water Resources Management using Sentinel imagery in the Eastern Mediterranean region

7. Exploring the need of using Copernicus data for the benefit of public, academic and industry sector in Cyprus

8. Designing the new generation 'satellite' for monitoring the environment in the Eastern Mediterranean region

9. Earth observation in climate changes /atmosphere in the Eastern Med region

10. Remote sensing in Solar Radiation in the Eastern Mediterranean region: Application for Solar Energy.

11. Ατμοσφαιρικές διορθώσεις σε δεδομένα SENTINEL

Research Advisor: Diofantos Hadjimitsis, Professor, d.hadjimitsis@cut.ac.cy

DEPARTMENT OF MECHANICAL ENGINEERING AND MATERIALS SCIENCE AND ENGINEERING

- **One (1) position in Mechanical Engineering in the topic: Autonomous Robotic Systems**

  The position is available to full-time students only. The successful candidate may receive funding during the first two years of his/her study with the possibility of extension subject to performance and availability of funds. The candidate should have undergraduate and graduate (MSc or equivalent) degrees in Mechanical Engineering from a recognized University, an excellent academic record and a strong mathematical aptitude. Previous work experience in a robotics research laboratory will be considered an advantage.

  For more information, the interested candidates should contact

  Research Advisor: Savvas G. Loizou, Assistant Professor savvas.loizou@cut.ac.cy

Information:
From the Department Secretary
Tel.: 25002606, Fax: 25002637

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DEPARTMENT OF ELECTRICAL ENGINEERING, COMPUTER ENGINEERING AND INFORMATICS

- **One (1) post in the following topic: Predictive Learning Algorithms for Distributed Acoustic Sensor (DAS) Networks**

  The goal of this thesis is to develop novel machine learning algorithms, suitable for performing data-driven predictive tasks in the context of Distributed Acoustic Sensor (DAS) networks. DAS environments generate data that entail great deals of epistemic uncertainty, due to several hard to model artifacts, such as skewness, heavy tails, non-stationarity, and measurement noise. These data properties call for the development of deep generative models with novel statistical assumptions, that are not yet reported in the related literature. In addition, the very nature of DAS networks necessitates the development of novel distributed inference algorithms, as well as sensor hardware that effectively facilitates the operation of such algorithms. This thesis will address these challenges in a comprehensive way. We will develop in-house sensor networks for our experimentations, and will leverage state-of-the-art machine learning software, such as TensorFlow. There is also the strong prospect of real-world deployment and validation of our novel solutions, in the context of our existing collaboration with a world leader in Fiber-optic sensing technology. This thesis requires some basic affinity with DAS and statistical modelling.

  Research Advisors:
  Sotiris Chatzis, Assistant Professor, sotirios.chatzis@cut.ac.cy
  Kyriacos Kalliç, Associate Professor, kyriacos.kalli@cut.ac.cy

- **One (1) post in the following topic: Transfer Learning for Democratizing Neural Machine Translation**

  Neural machine translation (NMT) is a novel breakthrough in the field of machine learning (ML). It consists in developing deep encoder-decoder models with neural attention modules that can learn to effect machine translation by being presented with relevant examples. An issue existing approaches suffer from is that effective model training requires very large corpora of manually generated translations. This is an extremely costly procedure; in fact, its costs may become rather prohibitive when dealing with languages spoken by limited populations, that may also entail difficult inflection rules and structure. However, lack of progress in this direction may become yet another factor undermining the very existence of many of the languages spoken today. This thesis aims at resolving these issues, by leveraging, for the first time, arguments from the literature of transfer learning. Transfer learning techniques, also known as one-shot learning, aim at distilling high-level learned knowledge/patterns from a machine learning model addressing some task, so as to facilitate effective training of another model on a different but related task, with limited requirements in training data availability. To effect our goals, we shall exploit the theoretically expected amenability of deep encoder-decoder models to transfer learning, and we will leverage Bayesian inference arguments.

  Research Advisor: Sotiris Chatzis, Assistant Professor, sotirios.chatzis@cut.ac.cy

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- **One (1) post in the following topic: Data-driven methodologies for agile design of ship cladding modules**

  The goal of this thesis is the development of novel, data-driven methodologies for agile design of ship cladding modules. Specifically, we envisage utilization of statistical inference methodologies that robustly account for uncertain conditions and inaccurate measurements. We consider development of effective ship dynamics simulation software environments, in case access to real-word test-beds is not available; we will make use of state-of-the-art statistical tools, e.g. written in R. This thesis requires prior strong knowledge of the addressed application; prior affinity with statistical modeling, especially statistical inference, is not mandatory.

  Research Advisor: Sotiris Chatzis, Assistant Professor, sotirios.chatzis@cut.ac.cy

- **One (1) position in the following field: Capacity Allocation Mechanisms for Applications Hosted on Multiple Alternative Cloud Platforms**

  The plethora of heterogeneous solutions offered in the Cloud market vouches for the strong impact of Cloud computing in the current technology landscape. However, this heterogeneity of the offered services and the associated pricing schemes makes it extremely challenging for one to select the configuration that minimizes the operating costs while guaranteeing the desired Quality of Service. Simple heuristic techniques employed by practitioners are incapable of accounting for the large variability in price models and the intrinsic dynamism and multi-tenancy of Cloud environments. On the other hand, recently proposed mathematical approaches to solving this problem, based on Queuing Theory arguments and Mixed Integer Linear Programing, yield computationally intractable algorithmic schemes, if deployed in full scale. In addition, they require a large number of direct queries to the Cloud platform, which can be prohibitively expensive. This thesis aims at the development of novel data-driven techniques, capable of leveraging past experience and observations so as to learn the best policy for each occasion. Deep learning techniques will play a central role to the utilized toolkit of methods used to address the considered challenges.

  Research Advisor: Sotiris Chatzis, Assistant Professor, sotirios.chatzis@cut.ac.cy

- **One (1) position in the following field: Distributed Data-Driven Multiprocessing**

  High-Performance Computing (HPC) is seen as the only way so solve mankind's pending big problems that require computational capability measured in terms of at least a million trillion of computations per second (ten to the power of 18), i.e., exascale. Such problems involve reverse engineering the human brain, creating medicine to eradicate diseases such as cancer, and simulating weather phenomena to predict climate change. This Doctoral Thesis concerns the research and development of a novel distributed multiprocessor architecture to address the power and concurrency challenges of future HPC/exascale systems. The system will be based on a Hybrid Data-Flow model, the Data-Driven Multithreading (DDM) model of execution. The multiprocessor architecture will be implemented and evaluated on a large capacity Field-Programmable Gate Array (FPGA) and will consist of low-power and low-complexity non-coherent processing elements and hardware support for the DDM model. Additionally, it will incorporate a lightweight, mainly cache-based memory hierarchy, augmented with automated deterministic prefetching into scratchpad

memories. Last, an Application Programming Interface (API) in C++ will be implemented to allow programmers to develop DDM applications for rapid architectural prototyping and evaluation. This Doctoral Thesis will build upon existing infrastructure in terms of both hardware and software, and extensive know-how that the Research Team has built over the years.

Qualifications: Candidates should possess a Bachelor's Degree and a Master's-level postgraduate degree from accredited universities in the field of Computer Science, or Electrical Engineering, or Computer Engineering with a preferred specialization in either computer architecture, distributed systems and networks, embedded systems, or related. The candidate should have 2+ years of experience in object-oriented programming and be fluent in C++ programming and/or Python, and also possess experience in parallel and distributed computing (i.e., PThreads, OpenMP and MPI). Next, the candidate should have 2+ years of working experience with hardware description languages such as VHDL or Verilog. Excellent command of the English language is a must. Any research experience with data-flow/data-driven models (e.g., TBB, OmpSs, etc.) and command in Xilinx HDL tools (ISE or Vivado Design Suites) will be considered as an advantage.

Research Advisor: Vassos Soteriou, Associate Professor, vassos.soteriou@cut.ac.cy

- **One (1) position in the following field: Resilient Wear-Aware Computer Architectures**

Moore's Law scaling continues to yield higher transistor density with each succeeding process generation, leading to today's many-core chip multiprocessors (CMPs) with hundreds of interconnected cores or tiles. Unfortunately, deep submicron CMOS process technology is marred by increasing susceptibility to wear. Prolonged operational stress gives rise to accelerated wearout and failure due to several physical failure mechanisms, including hot-carrier injection (HCI), electro-migration (EM), and negative-bias temperature instability (NBTI). Unfortunately such wear can prove catastrophic to the reliable operation of CMPs, as various chip components may introduce errors and/or timing violations during computation and data transportation across the chip, deeming it inoperable. To avoid such detrimental effects this Doctoral Thesis will deal with the development of wearout-decelerating techniques so as to slow-down wear in CMP components and improve their resilience, including processors, memory and on-chip interconnect. Such techniques will be incorporated seamlessly into the existing CMP architecture to work online during chip operation without any intervention from the programming stack or the user. Since wear in CMOS transistors is usage-based, and correlates heavily on how workloads utilize them over time, a key drive of this Thesis will be to understand the usage patterns of applications so as to adopt appropriate wear-aware policies to them for maximum positive lifetime extending effect. As such, wear-aware policies may be based on artificial neutral network techniques or algorithms which are very good in recognizing patterns and adapting to them. Other pattern recognition schemes will also be examined to further explore the design space of wear-reducing architectural-level policies. Wear-aware hardware augmentations to the base CMP architecture will be implemented using hardware description languages (e.g., VHDL) to prove their feasibility. This Doctoral Thesis will build upon existing and extensive know-how that the Research Team has developed over the years, and will utilize and substantially extent existing methods from the field of wear-aware multiprocessor architectures.

Qualifications: Candidates should possess a Bachelor's Degree and a Master's-level postgraduate degree from accredited universities in the field of Computer Science, or Computer Engineering, or

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Electrical Engineering with a preferred specialization in either computer architecture, distributed systems, interconnection/computer networks, embedded systems, artificial neural network architectures and algorithms, or related. The candidate should have 2+ years of experience in object-oriented programming and be fluent in C++ programming and/or Python, and also have a good command in calculus. Last, the candidate should have 2+ years of working experience with hardware description languages such as VHDL or Verilog. Excellent command of the English language is a must. Good knowledge in using Xilinx HDL tools (ISE or Vivado Design Suites) will be considered as an advantage.

Research Advisor: Vassos Soteriou, Associate Professor, vassos.soteriou@cut.ac.cy

- **One (1) post in the following topic: Night Cooling Systems: Modeling and monitoring systems**

  Qualifications: BSc and/or MSc in Electrical Engineering or Physics, or any other related subject. Strong mathematical background will be considered an advantage.

  Research Advisor: Paul Christodoulides, Assistant Professor, paul.christodoulides@cut.ac.cy

- **One (1) post in the following topic: Modeling of the cardiovascular cycle circulation**

  Research Advisor: Paul Christodoulides, Assistant Professor, paul.christodoulides@cut.ac.cy

- **One (1) post in the following topic: 3D numerical mapping of the brain and analysis of tumors**

  Research Advisor: Paul Christodoulides, Assistant Professor, paul.christodoulides@cut.ac.cy

- **One (1) post in the following topic: Heat transfer in microfluidics and their influence on microstructure optical fibers**

  Qualifications: BSc and/or MSc in Electrical Engineering or Physics, or any other related subject. Strong mathematical background will be considered an advantage.

  Research Advisors:
  Kyriacos Kalli, Associate Professor, kyriacos.kalli@cut.ac.cy
  Paul Christodoulides, Assistant Professor, paul.christodoulides@cut.ac.cy

- **One (1) post in the following topic: Development of Optical Fiber Plasmonic Sensors and Nanoantennas Using Femtosecond Laser Pulses**

  Required Qualifications: BSc and/or MSc in Electrical Engineering or Physics, or any other related subject. Strong mathematical background will be considered an advantage.

  The PhD will focus on the development of photonic (bio)chemical sensing platforms, using custom sensors developed in-house with a femtosecond laser system. The PhD will focus on tilted fibre Bragg gratings surrounded by nanoscale coatings of metal layers and nanoparticles that will be studied and optimized to exploit the plasmonic enhancement of the sensing transduction mechanisms.

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Research Advisor: Kyriacos Kalli, Associate Professor, kyriacos.kalli@cut.ac.cy

- **One (1) post in the following topic: Machine learning applied to laser processing of materials for photonic applications**

  Required Qualifications: BSc and/or MSc in Electrical Engineering or Physics, or any other related subject. Strong mathematical background will be considered an advantage.

  The PhD will focus on the application of machine learning to laser inscription and micro-machining of photonic components, with the purpose of the automated processing of various material types with sub-micron precision. The goal will be to identify the most accurate machine-learning technique for a given process, tested to build highly accurate models for each output processing variable.

  Research Advisors:
  Kyriacos Kalli, Associate Professor, kyriacos.kalli@cut.ac.cy
  Sotirios Chatzis, Assistant Professor, sotirios.chatzis@eecei.cut.ac.cy .

- **One (1) position in the following field: Event Detection, Localization and Tracking using Wireless Sensor Networks**

  Wireless Sensor Networks (WSNs) are a fairly new technology that can potentially provide an interface between the physical world and computers allowing the latter to vanish into the background. They have a wide variety of applications including military sensing, infrastructure security, environment and habitat monitoring, industrial sensing, building and structure monitoring, and traffic control. The proposed research is expected to be based on ideas and techniques from a variety of different fields including Wireless Communication Systems, Computer Networks, Collaborative Signal and Information Processing and Computational Intelligence. The offered positions will concentrate on the development of new algorithms and techniques for detecting, localizing and tracking an event. The developed algorithms should feature low computational complexity, distributed implementation and fault tolerance in order to address the limitations of WSNs in terms of energy and bandwidth and the harsh conditions of operation. The successful applicants are expected to perform real–time experiments in order to verify the performance of their algorithms using the WSN platform at the Cyprus University of Technology.

  Qualifications: BSc (required) and MSc (preferably) in Electrical Engineering and/or Computer Science. Prior research experience or specialization in related topics will be considered an advantage.

  Research Advisor: Michalis Michaelides, Assistant Professor, michalis.michaelides@cut.ac.cy

- **One (1) position in the following field: Contaminant Event Monitoring in Intelligent Buildings**

  An Intelligent Building is a system that incorporates computer technology to autonomously govern and adapt the building environment in order to enhance operational and energy efficiency, cost effectiveness, improve user's comfort, productivity and safety, and increase system robustness and

reliability. The dispersion of contaminants from sources (events) inside a building can compromise the indoor air quality and influence the occupants' comfort, health, productivity and safety. These events could be the result of an accident, faulty equipment or a planned attack. Under these safety-critical conditions, immediate event detection should be guaranteed and the proper actions should be taken to ensure the safety of the people. The proposed research will investigate and produce solutions for the problem of monitoring the indoor building environment against the presence of contaminant events. Distributed sensor networks have been widely used in buildings to monitor indoor environmental conditions such as air temperature, humidity and contaminant concentrations (e.g. CO, CO2). The goal of this research will be the development of methods for interpreting the real-time-collected data coming from the sensors in order to ensure the accurate and prompt identification of contaminant sources. The results can help determine appropriate control solutions such as: (i) indicating safe rescue pathways and/or refugee spaces, (ii) isolating contaminated spaces and (iii) cleaning contaminant spaces by removing sources, ventilating and filtering air.

Qualifications: BSc (required) and MSc (preferably) in Electrical Engineering and/or Computer Science. Prior research experience or specialization in related topics will be considered an advantage.

Research Advisor: Michalis Michaelides, Assistant Professor, michalis.michaelides@cut.ac.cy

- **One (1) position in the following field: Air Quality Monitoring in Smart Cities using Wireless Sensor Networks**

  Currently, there is a lack of sufficient infrastructure for environmental monitoring, both spatially (in multiple points) and temporally (in regular time intervals). The proposed wireless sensor network can constitute an economical and reliable solution to the problem of sufficient monitoring and control of the city air quality. The proposed research will focus on the development of innovative algorithms and techniques for detecting, identifying and tracking the release of pollutants in an urban environment using a wireless sensor network. More specifically, the successful candidate is expected to use signal processing and machine learning methods to analyze the collected data from the sensors in order to: (i) construct a fine-grained pollution map of the city, (ii) identify the main sources of pollution and estimate their locations, (iii) develop models for predicting the pollution levels in the near future. These results are expected to provide the necessary information for reducing the pollution levels through appropriate actions and policies, leading to a cleaner and safer city environment. The successful applicants are expected to work with real data in order to verify the performance of their algorithms using the established WSN platform at the Cyprus University of Technology.

  Qualifications: BSc (required) and MSc (preferably) in Electrical Engineering and/or Computer Science. Prior research experience or specialization in related topics will be considered an advantage.

  Research Advisor: Michalis Michaelides, Assistant Professor, michalis.michaelides@cut.ac.cy

- **One (1) position in the following field: Evaluation of An MR Compatible Brain Biopsy of a 6-D Robot**

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Evaluation of a robotic system develop at CUT in an in vitro brain model. Evaluation of the system inside MRI environment. Develop the method for frameless needle biopsy in the brain. Animal experiments for verification of the system. Software development for the MRI guidance of the biopsy procedure.

Qualifications: MSc in Electrical Engineering with B.Sc. only will be asked to take M.Sc courses.

Research Advisor: Christakis Damianou, Associate Professor, christakis.damianou@cut.ac.cy

- **One (1) post in the following topic: Software Reliability**

Methods, techniques, models and algorithms for studying software reliability. Software Reliability Growth Models (SRGM) based on mathematical and statistical approaches. Use of empirical data measured from real world software systems. Application of non-linear dynamics and time-series analysis for revealing the nature of software reliability in various application types (classic, web-based, mobile, etc.) Use of Computational Intelligence or/and of other sub-areas of Computer Science and Engineering for improving SRGM.

Qualifications: BSc and/or MSc in Computer Science or Computer Engineering or Informatics or any other related field. Prior experience or specialization (i.e. during BSc or MSc in Software Engineering) will be considered as advantage.

Funding: The candidates with the appropriate qualifications can be funded as participants in research projects or as teaching assistants.

Research Advisor: Andreas S. Andreou,Professor, andreas.andreou@cut.ac.cy, http://www.cut.ac.cy/eecei/staff/andreas.andreou/

- **One (1) post in the following topic: Automated Software Testing**

Methods, techniques, models and algorithms for performing software testing in an automated way, with little or no human intervention. Use of Computational Intelligence or/and of other sub-areas of Computer Science for performing black-box (specifications-based) and glass-box (source code-based) testing for classic software systems, web applications and mobile software.

Qualifications: BSc and/or MSc in Computer Science or Computer Engineering or Informatics or any other related field. Prior experience or specialization (i.e. during BSc or MSc in Software Engineering) will be considered as advantage.

Research Advisor: Andreas S. Andreou, Professor, andreas.andreou@cut.ac.cy, http://www.cut.ac.cy/eecei/staff/andreas.andreou/

- **One (1) post in the following topic: Software Engineering for the Cloud**

The research to be conducted will revolve around issues of software development for the Cloud environment. This new environment poses several restrictions to the way we usually follow to

develop classic software and necessitates the study of parameters to help raising the quality of software systems. In addition, the Cloud requires elasticity and automation of the development process to speed up release times and satisfy clients' requirements for fast change. Finally, this thesis will investigate DevOps as there is strong need to bridge the two teams involved, the one that develops the software (Dev) and the one that operates (manages) it after its delivery (Ops). In this context, new life cycle models tailored to the need of the Cloud will be proposed, along with software development methodologies and techniques that will address issues like automatic detection of Service Level Agreements (SLA) violations, automatic software testing, reduction of cycle time and release time, etc. The research will utilize Computational Intelligence notions which will be combined with core software engineering subjects like Agile Processes, software testing, project management, team organization etc. This research will be supported by collaboration activities with Politecnico di Milano and University of Tilburg under a Horizon 2020 Twinning project that was recently awarded to our group.

Qualifications: BSc and/or MSc in Computer Science or Computer Engineering or Informatics or any other related field. Prior experience or specialization (i.e. during BSc or MSc in Software Engineering) or any involvement with research in the past will be considered as advantage.

Research Advisor: Andreas S. Andreou, Professor, andreas.andreou@cut.ac.cy, http://www.cut.ac.cy/eecei/staff/andreas.andreou/

- **One (1) post in the following topic: Automatic Resource Management for the Cloud**

This research topic will concentrate on algorithms, methods and techniques for automating certain process in the Cloud environment dealing with how resources are managed. More specifically, Computational Intelligence – CI approaches will be utilized to tackle issues and solve problems related to optimizing the way resources are managed (e.g. physical servers, virtual machines, etc.) in such a way so that clients are serviced according to their Service Level Agreements – SLA, with high quality and performance, but at the same time energy and cost preservation is taken into consideration. Fog computing will also be investigated as the paradigm that pushes processing intelligence and data down to the local area network level of network architecture and a fog node to avoid latencies.

In this context different CI models will be investigated and apply in single- and multi-objective optimization of Cloud resources. This research will be supported by collaboration activities with Politecnico di Milano and University of Tilburg under a Horizon 2020 Twinning project that was recently awarded to our group.

Qualifications: BSc and/or MSc in Computer Science or Computer Engineering or Informatics or any other related field. Prior experience or specialization (i.e. during BSc or MSc in Software Engineering) or any involvement with research in the past will be considered as advantage.

Research Advisor: Andreas S. Andreou, Professor, andreas.andreou@cut.ac.cy, http://www.cut.ac.cy/eecei/staff/andreas.andreou/

Cyprus University of Technology

- **One (1) position in the following field: New techniques for data storage and archiving of massive and complex amounts of 2D/3D/4D Cultural assets**

  Cultural Heritage (CH) is an integral element of Europe and vital for the creation of a common European identity. The rapid growth of technology has led to mass digitization of cultural assets, requiring for their cost–effective preservation, documentation, protection and presentation in online digital libraries. The aim is to shed light, through technological innovation and digital media, on all aspects of cultural heritage, both tangible (books, newspapers, photographs, drawings, manuscripts, costumes, maps, objects, archaeological sites, monuments) and intangible (eg, music, performing arts, folklore, theater), as well as their semantic interrelations, and finally enhancing their added value by reusing them in the fields of education, tourism industry, advertising and art.

  The proposed research will focus on (a) the study and analysis of massive and complex amounts of multimedia 3D/4D data, (b) study and analysis of data storage and archiving in multimedia digital libraries, (c) the development of innovative methodologies for harvesting of such data sets in digital libraries, taking into account object's semantic signatures, and finally, (d) the development of innovative methodologies for reuse of such complex structures from digital libraries.

  Research Advisor: Marinos Ioannides, Senior Lecturer, marinos.ioannides@cut.ac.cy

- **One (1) position in the following field: Holistic Heritage Management**

  Heritage Management is a multiparametric field facing nowadays a variety of challenges. The progressive expansion of the term of Cultural Heritage (CH) has led to a type of management of it (CH), which goes beyond the conservation and restoration of cultural assets. A wide spectrum of values, a variety of involved stakeholders, multiple, even conflicting, objectives, are only some of the challenges CH is facing. Even nowadays involved authorities and stakeholders act within their own narrow spectrum without taking into consideration a number of other interrelated parameters; an attitude which not rarely results to fragmented and not so beneficial interventions. The proposed project aims to approach Heritage Management in a holistic way; As a "procedure" of management, starting from the phase of data acquisition, but also as a "result", leading to concrete actions; As an embracement not only of the lifecycle of the cultural asset, but also of the lifecycle of the human, starting at his early schooling age, since human is the provider but also the user of CH. For the achievement of this goal a continuous shift between different scientific domains, the skilful management of differentiated input and its transformation into new information and knowledge, exploitable by various sectors, becomes crucial. For this reason it is needed: a broad educational background on Arts and Culture, the tools and the methodological thinking of engineering as well as the pedagogical techniques, in order for CH to become an actual "public asset".

  Required Qualifications: BSc and MSc degree in Architecture, an MSc in the field of Cultural Heritage as well as pedagogical education. Prior research experience or specialization in Cultural Heritage and Education will be considered an advantage.

  Research Advisor: Marinos Ioannides, Senior Lecturer, marinos.ioannides@cut.ac.cy

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- **One (1) position in the following field: Applying Machine Learning methods in processing Cultural Heritage assets**

  Cultural Heritage is the legacy of a nation from previous generations, for which efforts are made maintain their present status but also to safeguard its future existence. Nowadays, the technological outbreak has led to the development of intelligent systems, which can actively contribute in areas like the documentation, preservation and promotion of Cultural Heritage. Machine Learning constitutes an integral part of intelligent systems as it is a category of artificial intelligence, which enables modern computer systems to "learn" to develop and adapt their function upon exposure to new data.

  The proposed research will be focused on the development of machine learning methods for their use in cultural applications. As part of the research activities will be the study of existing machine learning methods (supervised, non-supervised, reinforcement) which are currently used for the classification of cultural assets over time.

  Qualifications: Applicants should have a BSc and an MSc degree in Computer Science, Science of Electrical Engineering or other related field. Previous research experience in the study and the application of machine learning in Cultural Heritage sector will be considered an asset.

  Research Advisor: Marinos Ioannides, Senior Lecturer, marinos.ioannides@cut.ac.cy

Information:
Department Secretary
Tel: 25002533, Fax: 25002635

DEPARTMENT OF HOTEL AND TOURISM MANAGEMENT

- **One (1) position in the topic "Political Instability and Communication in Tourism"**

  Qualifications: Candidates should possess an undergraduate degree and an MSc / MA / MBA from accredited universities in at least one of the following subject areas: Tourism Management, Business Administration, Communication Studies, Sociology, Political Sciences or other studies relevant with the topic. In addition, candidates should exhibit high academic achievements, a strong background in qualitative and quantitative research methodologies, excellent command of the English language, and proficiency in computer applications and research related software. Candidates should be able to complete their doctorate dissertation in English. Previous relevant research output would be considered as an advantage.

  Research Advisor: Anastasios Zopiatis, Associate Professor, anastasios.zopiatis@cut.ac.cy

- **One (1) position in the topic "Tourism Entropy as a critical factor for destination sustainability" Assessment of carrying capacity through IoT and determination of tourism satisfaction."**

  Qualifications: Candidates should possess an undergraduate degree and an MSc / MA / MBA from accredited universities in at least one of the following subject areas: Business Administration,

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Hospitality and Tourism Management, Regional Development, Environmental Policy or other studies relevant with the topic. In addition, candidates should exhibit high academic achievements, a strong background in qualitative and quantitative research methodologies, excellent command of the English language, and proficiency in computer applications and research related software. Candidates should be able to complete their doctorate dissertation in English. Previous relevant research output would be considered as an advantage.

Research Advisor: Antonis Theocharous, Assistant Professor, antonis.theocharous@cut.ac.cy

- **One (1) position in the following research area: "Sustainable development in the Hospitality Industry"**

  Qualifications: Applicants for the aforementioned post are required to hold an accredited undergraduate degree in Hospitality and Tourism Management as well as an accredited postgraduate Masters degree in Responsible/Sustainable Tourism, or, in Sustainable Development (with concentration in Tourism). Furthermore, candidates should possess strong analytical skills in qualitative and quantitative research, excellent command of English Language, awareness of the Cypriot hospitality industry's road towards sustainable development, as well as very good knowledge of computer applications. Candidates should be able to deliver their doctoral dissertation in the English Language. The command of other European Languages as well as previous experience in hospitality operations would be considered an advantage.

  Research Advisor: Alexis Severiades, Assistant Professor, alexis.saveriades@cut.ac.cy

- **One (1) post in the following research area: "Spiritual Tourism and tourist satisfaction".**

  Applicants for the aforementioned post are required to hold an accredited undergraduate degree in the fields of Hospitality/Tourism Management, or Psychology, or Sociology. Furthermore, be holders of an accredited postgraduate Masters' degree in Tourism, or Psychology, or Sociology. Candidates should possess strong analytical skills in qualitative and quantitative research, excellent command of the English Language, very good knowledge of computer applications and be interested in the theme of the dissertation. Candidates should be able to deliver their doctoral dissertation in the English Language. Previous relevant research output would be considered as an advantage

  Research Advisor: Alexis Severiades, Assistant Professor, alexis.saveriades@cut.ac.cy

Information:
Department Secretary
Tel: 25002430, Fax: 25002633

DEPARTMENT OF COMMERCE, FINANCE AND SHIPPING

- **One (1) post in the topic "Operations Management with emphasis in Shipping"**

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Operations Management with emphasis in shipping studies the learning environment of fundamental knowledge and skills related to the development and application of analytical tools essential for the support of corporate decisions. This field represents one of the key elements for the efficiency of operations management, especially in the shipping industry. Candidates should possess a Bachelor's degree and a Master's level postgraduate degree in Business Management, or Economics or Shipping Economics or Operations Management or Mathematics or Statistics or Applied Mathematics or related field of study. The doctoral candidate usually receives financial support.

Research Advisors:
Panayiotis Andreou, Assistant Professor, panayiotis.andreou@cut.ac.cy,
Neophytos Lambertides, Associate Professor, n.lambertides@cut.ac.cy

- **One (1) post in the topic " Finance"**

  Candidates should possess a Bachelor's degree and a Master's level postgraduate degree in Finance or Economics or Applied Mathematics or related field of study. The doctoral candidate usually receives financial support.

  Research Advisor: Christodoulos Louca, Assistant Professor, christodoulos.louca@cut.ac.cy

- **One (1) post in the area "International Finance» or «International Financial Management"**

  Candidates should possess a Bachelor's degree and/or a Master's degree from an accredited University in at least one of the following fields: Economics, Finance,

  Econometrics, Business Administration, Applied Statistics. Prospective doctoral students will receive financial support from the department.

  Research Advisor: Andreas Savvides, Professor, andreas.savvides@cut.ac.cy

- **One (1) post in the topic "Shipping or Shipping Management or Shipping Economics or Transportation Logistics "**

  Candidates should possess a Bachelor's degree and a Master's level postgraduate degree from an accredited University in Operations Research, Econometrics or Quantitative Methods or Statistics or Finance or Business Administration or Shipping or Logistics/Supply Chain Management".

  Research Advisor: Photis Panayides, Professor, photis.panayides@cut.ac.cy

Information:
Department Secretary
Tel: 25002628, Fax: 25002766

Cyprus University of Technology

CYPRUS INTERNATIONAL INSTITUTE FOR ENVIRONMENTAL AND PUBLIC HEALTH

- **One (1) post on the following topic: "Metabolomics applications in population health studies"**

  This PhD position is available within the research team of the Water and Health Laboratory of the Cyprus International Institute for Environmental and Public Health at the Cyprus University of Technology.

  The successful candidate will be trained on state-of-the-art metabolomics tools and applications for improving our understanding of chronic disease processes using population health datasets. The candidate will be trained on agnostic biomarkers of exposure/effect and novel bioinformatics platforms that are becoming key thematic concepts of the exposome framework, i.e. the holistic representation of all those environmental, lifestyle and behavioral factors that relate to the development of chronic diseases with special emphasis on metabolic outcomes.

  The Water and Health Lab team's ultimate goal is to characterize and reduce health risks associated with chronic exposures to environmental chemicals with emphasis on the implementation of state-of-the-art human biomonitoring and metabolomics technologies that refine the exposure assessment in population health studies. The transition focus from disease to exposure through implementation of the exposome concept is warranted to reduce exposures that lead to disease pathogenesis. Our laboratory is equipped with advanced mass spectrometers to conduct biomarker measurements in human biospecimen and it is located in the old town of Limassol, just minutes away from the cosmopolitan Mediterranean seafront.

  The Cyprus University of Technology is ranked #1 along with the University of Crete among all Cypriot and Greek universities in the most recent Times Higher Education World University Rankings 2017-18.

  Qualifications: Highly motivated candidates should possess a Bachelor and/or Master in Health Sciences or Physical Sciences or in a related discipline.

  Funding: The successful candidate will be offered financial support, depending on skills.

  Research Advisor: Konstantinos C. Makris, konstantinos.makris@cut.ac.cy, https://www.facebook.com/waterandhealthlab.CII/

Information:
Department Secretary
Tel: 25002393/8 Fax: 25002644

Cyprus University of Technology

DEPARTMENT OF PUBLIC COMMUNICATION

- **One (1) post on the topic: National Image Integrated Communication**

  Description: National Image is a field of growing interest for politicians, academics, and strategic communications professionals. The topic will investigate the image and reputation of a country. Indicative concepts that can be examined within this research are nation branding, the role of a country's exports, tourism, governance, culture and heritage, people as well as investment and migration.

  Qualifications: Candidates must hold an undergraduate degree in social sciences/ Marketing / Business Administration and a Postgraduate Degree in Communication / Marketing / Business Administration or a relevant field. (It is noted that in exceptional cases the admission of students without a postgraduate degree may be permitted, with the unanimous decision of the Faculty's Council). Candidates should be able to deliver their doctoral thesis in Greek or English. The application of each candidate should include a description of research interests (maximum 2 pages) in English or Greek.

  Financial Support: Depending on their field of expertise and qualifications, candidates may be offered teaching assistant positions. Moreover, funding may be available through research projects.

  Research Advisor of the Post: George Panigyrakis, Professor of Marketing, Coordinator of the Department Social Communication, Faculty Communication and Media Studies. george.panigyrakis@cut.ac.cy