

Doctoral Vacancy Announcement form

Research Topic Title:	Automated Task Planning	
No. of Openings:	1	
Description:	<p>Automated task planning is a core technology in Artificial Intelligence. In robotics and autonomous systems, automated task planning is used for the creation and synthesis of the sequence of simple tasks that are necessary to achieve a requested complex operation. For the announced opening the candidate will be involved in the evolution of the algorithms of the SPECTER automated task planning platform, that was developed in the Robotics Control and Decision Systems laboratory (www.rcdslab.org) of the MEM Department of CUT.</p>	
Funding:	<p>The successful candidate will have the option for a scholarship/funding according to the University policy (https://www.cut.ac.cy/studies/phd). Future funding from participation to external research projects is possible, based on the performance of the candidate and the future availability of funds.</p>	
Required Qualifications:	<p>Undergraduate degree in Mathematics / Physics / Computer Science or Engineering.</p> <p>Graduate degree in the field of Robotics / Autonomous Systems / AI or a related field.</p> <p>Proficient in C/C++</p> <p>Strong mathematical background</p> <p>Knowledge of parallel or distributed processing will be considered as an advantage.</p> <p>Eligibility to work in EU.</p>	
Research Advisor:		
Name/Surname:	Savvas G. Loizou	
Position:	Associate Professor	
Email:	savvas.loizou@cut.ac.cy	

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Research Topic Title:	Synthesis and Characterization of Functional (Nano)materials	
No. of Openings:	1	
Description:	<p>The position is for a full-time student, offering partial funding based on the availability of relevant funds, along with a full tuition waiver through a scholarship.</p> <p>Applicants should hold an undergraduate and/or Master's degree (or equivalent) in Chemical or Mechanical Engineering, Chemistry, Physics, or Materials Science or any other related field.</p> <p>A strong academic record is essential. Moreover, previous experience in a synthetic laboratory will be considered an asset.</p> <p>The research will focus on the synthesis and characterization of (nano)materials, utilizing a range of chemical and physical synthesis methods, as well as techniques for structural, spectroscopic, and magnetic characterization.</p>	
Funding:	<p>(a) Full tuition waiver provided through a scholarship, as per the decisions of the 221st Senate Session.</p> <p>(b) Partial funding, subject to availability, for a period of three years (including start-up funding).</p>	
Required Qualifications:	Bachelor's or Master's degree (or an equivalent recognized qualification) in Chemical Engineering, Mechanical Engineering, Chemistry, Physics, or Materials Science.	
Research Advisor:		
Name/Surname:	Melita Menelaou	
Position:	Assistant Professor	
Email:	melita.menelaou@cut.ac.cy	

Doctoral Vacancy Announcement form

Research Topic Title:	Innovative Technology Development for Sustainable Photon Energy Management with Advanced Materials	
No. of Openings:	1	
Description:	<p>One PhD position is available in the Device Technology and Chemical Physics Laboratory (http://www.devtechcp.eu/) at the Department of Mechanical Engineering and Materials Science and Engineering (MEMSE).</p> <p>The position focuses on i) the study and spectroscopic characterization of advanced light-harvesting materials and ii) the development of novel architecture devices, aiming to improve the performance level of solar energy exploitation technologies, including photovoltaics, solar fuels and photocatalysts.</p> <p>Expressions of interest must be submitted together with a detailed curriculum vitae, a certificate of English language proficiency, a Cover Letter, 2-3 Letters of Recommendation, and a brief research statement highlighting the reasons that make desirable the selection of this research topic.</p>	
Funding:	<p>The successful applicant may have access to scholarship/funding opportunities in accordance to the CUT policy (https://www.cut.ac.cy/studies/phd). Subject to availability, further funding may be provided on a competitive basis via the participation in the Advanced Spectroscopy Unit for Sustainable Light Management of the MEMSE Department at CUT (project 'ASPERIUM', <i>SMALL SCALE INFRASTRUCTURES/1222/0067</i>). The 'ASPERIUM' project is implemented under the programme of social cohesion "THALIA 2021-2027" co-funded by the European Union, through Research and Innovation Foundation.</p>	
Required Qualifications:	<p>The candidate must hold an undergraduate degree in Materials Science or Chemistry or Physics or in a related field from an internationally recognized University. The candidate is expected to have very good academic performance and well-developed soft-skills, with analytical capacity, aptitude for experimental work and diligence in data processing with Origin Lab or similar specialized software packages. Previous certified work experience in research projects with the use of spectroscopic techniques, a Master Degree in Molecular Spectroscopy/Materials for Nanotechnology/Energy or a related field, knowledge of programming with MatLab/LabView will be considered as an advantage. The certified fluency in English (excellent written and verbal communication skills) is a requirement. In absence of a Master's degree, the attendance of postgraduate courses with a total of 60 ECTS is an integral part of the doctoral studies program (https://www.cut.ac.cy/studies/phd/quality-ass/), with priority</p>	

	<p>given to the postgraduate course of the MEMSE Department 'Advanced Concepts in Smart Materials'.</p> <p>The Device Technology and Chemical Physics Laboratory encourages the participation of female PhD candidates and it aligns in full with the Equality Plan 2022-2024 of the Cyprus University of Technology (CUT): https://www.cut.ac.cy/university/administration/administrative-services/hr/work-life-at-cut/%CE%99%CF%83%CF%8C%CF%84%CE%B7%CF%84%CE%B1/</p>
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Research Advisor:	
Name/Surname:	Panagiotis E. Keivanidis
Position:	Associate Professor
Email:	p.keivanidis@cut.ac.cy

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Research Topic Title:	Design of an Improved flat plate solar collector	
No. of Openings:	2	
Description:	<p>The position is open for full time students only. The successful candidate will receive a partial grant with subsequent funding subject to availability of funds. The candidate should hold an undergraduate and a Masters degree (or equivalent accredited degrees) in the field of Mechanical or Energy Engineering. The candidate should have an exceptional academic record with a very strong mathematical background. Additionally, computer literacy and programming skills are essential. Knowledge of the TRNSYS program for modeling of solar systems will be considered as an advantage. The study will consider ecological concerns and will help the green transition and sustainability.</p>	
Funding:	Partial, subject to availability of funds for 3 years.	
Required Qualifications:	BSc in Mechanical Engineering and Master in Energy	
Research Advisor:		
Name/Surname:	Soteris Kalogirou	
Position:	Professor	
Email:	Soteris.kalogirou@cut.ac.cy	

Doctoral Vacancy Announcement form

Research Topic Title:	PhD in Complex Fluids Rheology and Microfluidic flows	
No. of Openings:	2	
Description:	<p>Project Description. Biofluids, liquid biomass, foods, pharmaceutical products, polymer solutions, suspensions, surfactants, gels, and other industrial fluids show complex rheological properties, which become of particular importance in determining the characteristics of the flow at the microscale. In this program, advanced rheological and structural characterization of various complex fluids will be performed, in order to elucidate the influence of their properties in microscale flows. State of the art rheometry and in-house fabricated microfluidics will be utilised, in combination with flow and structural characterization techniques to investigate various aspects of the complex fluid flow problem.</p>	
Funding:	The PhD is partially funded under the program Research Infrastructures / Small Scale Infrastructures, of the Cyprus Research and Innovation Foundation, Project CRaFTC.	
Required Qualifications:	<p>Applicants must have an Undergraduate Degree in Mechanical Engineering, or in a related field, a Master's degree in Mechanical Engineering or in a related field, and preferably having completed an experimental Masters project in a relevant to the present study field. Experience in experimental biofluid physics/mechanics, rheology/biorheology, microfluidics, and data processing is essential. Candidates without a Master qualification, but with a strong undergraduate degree and relevant experience in fluid (biofluid) mechanics / rheology / microfluidics projects, will be considered; in this case, Master modules of 60 ECTS should be taken and completed successfully as part of the PhD Program. Experience in projects involving blood or biofluid handling and treatment is a significant advantage. The candidate should be able to work in an interdisciplinary team, collaborate with industrial partners, and have good oral and written communication skills in English. The candidates should provide a Cover Letter, an English-written one-page preliminary research proposal, which will be relevant to the theme of the project, and two reference letters.</p>	
Research Advisor:		
Name/Surname:	Efstathios Kaliviotis	
Position:	Associate Professor	
Email:	e.kaliviotis@cut.ac.cy	