

# MARAGKAKI STELLA

Dr. Stella Maragkaki is a postdoctoral researcher at IESL-FORTH. She received a BSc and MSc in Physics from the University of Crete, Greece in 2010 and 2012 respectively. During the undergraduate programme, she joined the Institute of Electronics Structure and Laser (IESL) in FORTH, where she investigated the laser ablation mechanisms on biopolymers, under the supervision of Prof. C. Fotakis. In the graduate programme she continued her research in IESL with her thesis entitled “Development of an optical parametric amplifier and prospects for application in nanosurgery”. In 2018 she graduated with a PhD in Mechanical Engineering from the Chair of Applied Laser Technologies, in Ruhr-University of Bochum in Germany. During her PhD, she studied the formation of periodic surface micro/nanostructures upon ultrashort laser pulse irradiation and their underlying physical mechanisms. In 2018, she joined the Ultrafast Laser Micro and Nano Processing group of the IESL, FORTH. Her current research interests include ultrafast laser micro/nano processing and functionalization of material surfaces.

## Education

- 2018, Ph.D. Chair of Applied Laser Technologies - Department of Mechanical Engineering, Ruhr-University Bochum, Germany
- 2012, M.Sc., Photonics/ Nanoelectronics - Department of Physics, University of Crete, Heraklion, Greece
- 2010, B.Sc., Department of Physics, University of Crete, Heraklion, Greece

## Career and Work Experience

- 07/2018 - Today, Postdoctoral Researcher, Ultrafast Laser Micro and Nano Processing group, Institute of Electronic Structure & Laser, FORTH, Heraklion, Crete, Greece
- 10/2013 – 02/2018, Teaching assistant in the *Laser & Photonics* Master’s programme, Chair of Applied Laser Technologies (LAT), Department of Mechanical Engineering, Ruhr-University Bochum (RUB), Germany lectures: “Laser technology”, “Laser metrology”, “Ultrashort laser pulses and nonlinear optics”
- 10/2015 – 02/2018, Supervision of laboratory classes and scientific works - MSc thesis, for *Laser & Photonics* Master’s programme, LAT, RUB, Germany
- 10/2008 – 07/2012, Private tutoring in physics, mathematics and chemistry to junior and senior high school students (Greece)
- 03/2008 – 09/2008, Internship, IESL, FORTH, Heraklion, Crete, Greece

## Interests

- laser-material interactions
- ultrafast laser micro/nano processing
- functionalization of material surfaces

## **Awards/Prices/Distinctions**

- 2018, Gateway postdoctoral fellowship, Ruhr-University Research School, Bochum, funded by DFG, Germany
- 2017, LaserLab-Europe grant for research stay, European Union's Horizon 2020 research and innovation programme

## **Conference contributions (talks & posters)**

### **Talks**

- 8<sup>th</sup> international LIPSS Workshop, Bochum, Germany, September 27-28, 2018  
Title: "Optical properties of LIPSS"
- 7<sup>th</sup> international LIPSS Workshop, Cottbus, Germany, September 28-29, 2017  
Title: "Simultaneous nanopatterning and reduction of graphene oxide by fs laser pulses"
- SPIE Photonics West 2017, San Francisco CA, USA, February, 2017  
Title: "Parametric studies of laser-induced periodic surface structures on copper"
- 6<sup>th</sup> international LIPSS Workshop, Fundamentals and application, Heraklion, Crete, Greece, November 24-25, 2016  
Title: "Experimental studies of LIPSS period dependence on the laser wavelength"
- Material Science Engineering Congress, Darmstadt, Germany, September 23-25, 2014  
Title: "Laser micro-patterning of self-assembled monolayers with tunable femtosecond laser pulses"
- SPIE Photonics West 2014, San Francisco CA, USA, February, 2014  
Title: "Micro-patterning of self-assembled organic monolayers by using tunable ultrafast laser pulses"
- Summer School in trends and new developments in laser technology, Dresden, Germany, August, 2013  
Title: "Sub-wavelength patterning of thin films via non-collinear optical parametric amplifier"

### **Posters**

- 7<sup>th</sup> European Conference on application of femtosecond lasers in material science, FemtoMat, Mauterndorf castle (Salzburg), Austria, March 20-22, 2017  
Title: "Study of the LIPSS orientation"