



University of Cyprus  
Department of Biological  
Sciences

# *Postgraduate Seminars*

*Seminar Series 2020 - 2021*

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**“Synthetic Biology: An engineering approach to  
foundational biological research and a course for the  
industrialisation of biotechnology”**

**Wednesday, 7 October 2020, at 17:00**

**This seminar will be hosted via Zoom.**

Click [here](#) to find the seminar registration link and join our seminar

***This seminar is open to the public***

Natural biological systems provide a vast repertoire of chemicals, molecular machineries and processes that can be utilised for the production of goods, energy as well as for drug discovery and healthcare. Biomolecular components exhibit exceptionally favourable characteristics for use as basic building blocks for developing processes with high catalytic efficiencies, that are environmentally friendly, and which can be directly interfaced with the human body for medical disease interventions. In order to harness this incredible potential of biology for useful purposes, Synthetic Biology is an interdisciplinary research and technology field that brings together molecular biology, chemistry, computer science and engineering to understand the design principles underlining biological matter. To introduce synthetic biology, the presentation will include an overview of the SYN BIO research field origins and history, its foundational tools and notable achievements in various application areas. The presentation will also include an overview of the presenter's work on the development of: genetically encoded cell-to-cell communication devices derived from the re-purposing of quorum sensing systems from various bacterial species, a computational methodology for the *in silico* prediction of recombinant protein expression and *E. coli*'s growth rate from sequence information, and a project overview of his current work on the systems biology of *V. natriegens* – the fastest growing organism known.