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Integrating CHIC technologies into a clinical research application framework ("CRAF") for cancer modeling

The CHIC project will deliver an integrated environment that will allow the creation of multi-scale cancer hyper-models from a plethora of elementary models shared by the global cancer modeling community. Due to the high complexity of the modeling work and especially its computational demands, this multi-scale modeling environment takes advantage of state of the art "cloud" technologies, which are provisioned outside the clinical setting. In order to make this a truly functional framework for accelerating the clinical translation of multi-scale cancer models a Clinical Research Application Framework ("CRAF") has been developed to support a unified and simple user experience and provide a "CHIC-in-a-box" abstraction for the clinicians to use in clinical research performed in their premises. To this end, its user interface is designed to be simple and smooth by hiding the complexity of the CHIC platform while, at the same time, demonstrating its full potential for clinical research and empowering the clinician to use the underlying technologies for the benefit of the cancer patient. At the same time, CRAF coordinates the functionality of other CHIC components that are also highly important for the clinicians to gain access to the CHIC services, such as the Data Upload tool for uploading patient data to the CHIC cloud, and the Visualization and image processing tools (e.g. Dr-Eye). In this presentation, the CRAF will be presented with emphasis in the integration with all the necessary software components addressing the hyper-modeling composition and execution needs.

Biography

Kostas Marias is Principal Researcher at the Computational Biomedicine Laboratory at the Institute of Computer Science of the Foundation for Research and Technology Hellas and Head of the Computational Biomedicine Laboratory. He completed his PhD at the University College London Medical School and has previously worked at the University of Oxford and the University of Crete. He works primarily in medical image processing and modeling for personalized medicine. He is the author or co-author of more than 30 published journal papers and has presented at 80 conferences and serves on the technical program committees of a number of international conferences.

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