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## Biophysics: an introduction to its science and applications

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The 21st century has been called the “century of biology” since the biggest innovations are predicted at the intersection between biology and technology. Physics plays a key role in establishing this intersection. In fact, during the past couple of decades, biophysics has contributed to substantial advances in solving important and fundamental questions in biology and it is indispensable for confronting mankind’s health challenges. Biophysics underpins large sections of the global bio-economy. A strong and diverse biophysics research and commercial sector is therefore vital for the success of the African economy. Biophysics bridges the complexity of life with the elegant physical laws of nature. It wedes the complex beauty of biology with the rigour of physics.

This presentation will serve as a broad introduction to biophysics with a particular emphasis on molecular biophysics. I will include a few examples of quantum biology that illustrate how we may draw inspiration from the biological world for our own quantum technologies. This will be followed by an introduction to selected methods for manipulating and controlling the properties of individual biomolecules. I will conclude with examples from my own laboratory, showing how the photon emission signatures of individual light-harvesting complexes can reveal new biological functions.

### Apply to be considered for a student ; award (Yes / No)?

No

### Level for award;(Hons, MSc, PhD, N/A)?

N/A

### Consent on use of personal information: Abstract Submission

Yes, I ACCEPT

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