Zernike Colloquium

June 1st, 2023
16:00h
5111.0080

Neuromorphic Computing with Optoelectronics

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With the advent of artificial intelligence, computing power requirements are doubling, not every 18 months, as Moore's Law predicts, but rather every 3.5 months. That obviously does not mean that we are breaking Moore's Law, which of course had its own limitations, having essentially stagnated since 2010. So what hardware is powering our current rush into AI and Machine learning? In this presentation, I will talk about a future where new types of computing machinery will be needed, and my group's work over the last decade in this field, particularly in photonic computing, and more recently at the intersection of photonics and electronics - so called optoelectronics. Just like silicon enabled the previous "silicon" age, we need a range of new materials to enable the new age. This talk will be about the use of new functional materials to enable this new area of computing, and particularly about a class of materials known as phase change materials and their use in devices for computing in the future.

Coffee from 15:30h
Drinks & Snacks after

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