

Event: MSE Seminar
Location: 2110 CHE
Date: Wednesday, March 8, 2023
Time: 3:30 PM

Title: New materials for monolithic optical resonators

Abstract: Monolithic optical resonators have the capability to trap laser light by total internal reflection for a duration higher than a microsecond. In these ultra-high Q optical cavities, the small volume of confinement, high photon density and long photon lifetime ensures a strong light-matter interaction, which can trigger various nonlinear effects such as Kerr, Raman, or Brillouin scattering. In this talk, we discuss some of the main challenges related to the understanding of nonlinear phenomena in these optical microresonators, and present as well as some of the main applications in aerospace and communication engineering.

Description: **Bio:** Yanne K. Chembo received a Ph.D. degree in nonlinear dynamics from the University of Yaoundé I, Cameroon, in 2005, a Ph.D. degree in photonics from the University of the Balearic Islands, Spain, in 2006, and an Habilitation degree in photonics engineering from the University of Franche-Comte, France, in 2011. He was a Research Director for the French CNRS (Centre National de la Recherche Scientifique) before joining the University of Maryland in 2019, where is currently Professor in the Department of Electrical and Computer Engineering, and Director of the Institute for Research in Electronics and Applied Physics (IREAP). His research is related to complex photonic systems for communication and aerospace engineering. He has been a Fellow of the NASA Postdoctoral Program in 2009, and of the European Research Council in 2011. He is a Fellow of SPIE, of OPTICA, and an Elected Member of the IEEE Photonics Society Board of Governors.

UMD webpage: <https://ece.umd.edu/clark/faculty/1031/Yanne-Chembo>

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