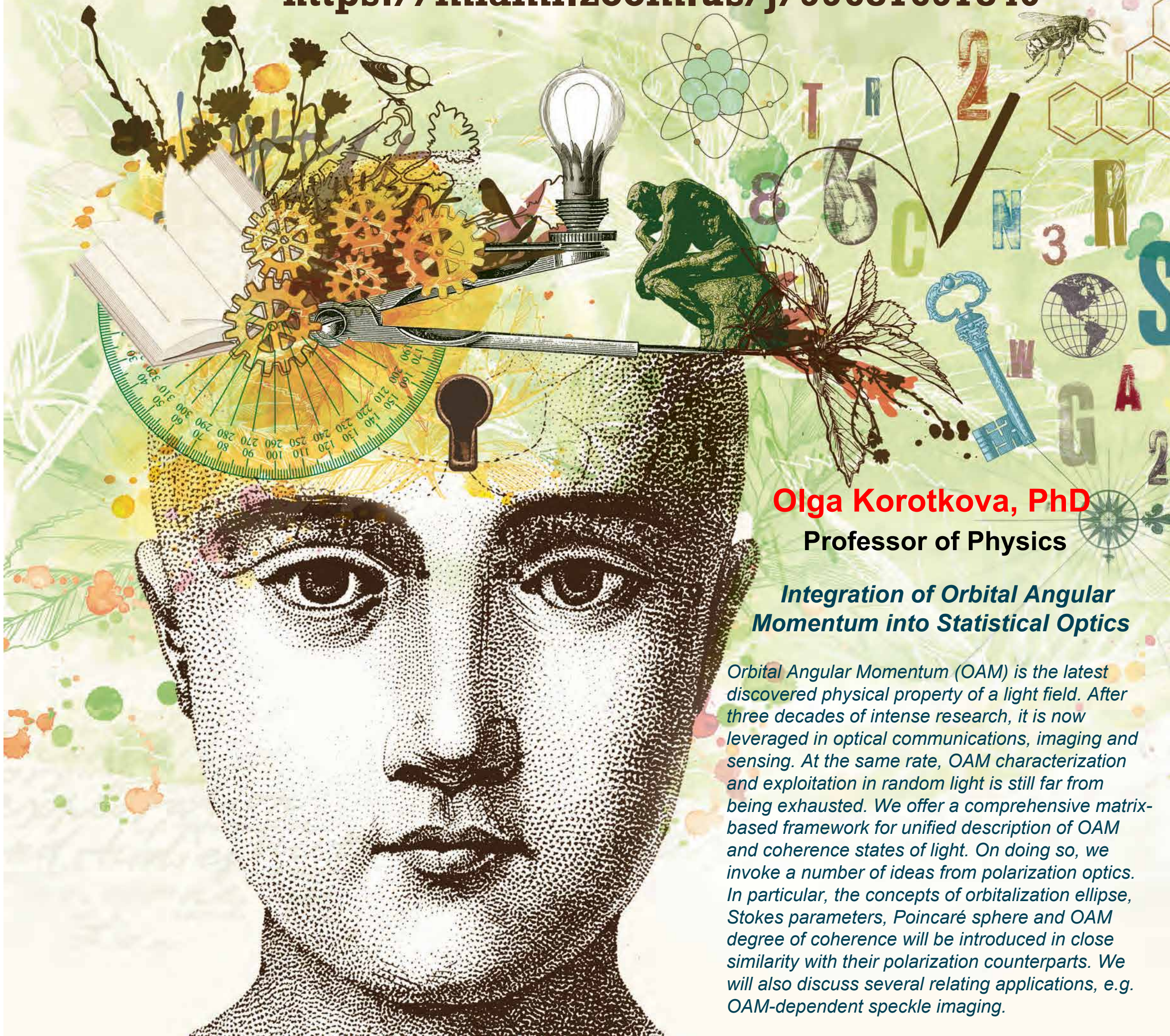


# Cooper Fellow

## LECTURE SERIES

**Thursday, November 14, 2024 3:30 P.M. via Zoom**

**<https://miami.zoom.us/j/99681697840>**



**Olga Korotkova, PhD**  
Professor of Physics

### ***Integration of Orbital Angular Momentum into Statistical Optics***

*Orbital Angular Momentum (OAM) is the latest discovered physical property of a light field. After three decades of intense research, it is now leveraged in optical communications, imaging and sensing. At the same rate, OAM characterization and exploitation in random light is still far from being exhausted. We offer a comprehensive matrix-based framework for unified description of OAM and coherence states of light. On doing so, we invoke a number of ideas from polarization optics. In particular, the concepts of orbitalization ellipse, Stokes parameters, Poincaré sphere and OAM degree of coherence will be introduced in close similarity with their polarization counterparts. We will also discuss several relating applications, e.g. OAM-dependent speckle imaging.*



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Cooper Fellows Lectures are free and open to the public.

For more information, contact Rose Glemaud at  
305-284-4021; [rglemaud@miami.edu](mailto:rglemaud@miami.edu).

[WWW.AS.MIAMI.EDU/LECTURES](http://WWW.AS.MIAMI.EDU/LECTURES)

Fall 2024