



**Department of Mechanical Engineering Seminar
to be held on**

Thursday, June 8, 2023, 11:00

*in the Seminar Room (117) of the Mechanical Engineering Building (55)
at the Campus of the Ben-Gurion University of the Negev*

**Electrodynamics and Geometric Continuum
Mechanics**

Prof. Reuven Segev

Department of Mechanical Engineering, Ben-Gurion University of the Negev

Abstract:

We show that Maxwell's equations of metric free electrodynamics, and generalizations thereof, which are termed p-form electrodynamics, may be represented as special cases of a generalization of the equilibrium equation of geometric continuum mechanics. The relation is suggested by general formulation of continuum mechanics on differentiable manifolds that uses differential forms – completely antisymmetric tensor fields – as basic kinematic fields. These differential forms extend the notion of a vector potential in electromagnetism.

Bio:

R. Segev is an emeritus professor at the Mechanical Engineering Department at Ben-Gurion University of the Negev, where he held a position since 1981.

Speaker contact information:

Email: rsegev@post.bgu.ac.il