

# LECTURE SERIES

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## FUNDAMENTALS OF NONLINEAR ACOUSTICS MODEL EQUATIONS AND THEIR INTERPRETATION

By

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Visiting Professor at the University of Crete  
under „St. Pichorides“ grant

*Friday 15 June, 12-2 p.m. Z301*

1. A historical perspective of *nonlinear acoustics*, 1755 – 1960. Theoretical basis. Fundamental equations.

*Monday 18 June, 5-7 p.m. Z301*

2. Model equations: The Compound equation, Burgers' equation, Korteweg-deVries equation, Khokhlov-Zabolotskaya-Kuznetsov's equation, Westervelts equation. Interpretations. Second and higher-order acoustical non-linearity of fluids.

*Monday 25 June, 5-7 p.m. Z301*

3. Nonlinear acoustic effects in finite-amplitude sound propagation, cavitation, and acoustical streaming.

*Tuesday 26 June, 5-7 p.m. Z301*

4. Nonlinear acoustic effects in focused ultrasonic fields and in parametric acoustic arrays.