

Kostas Politopoulos, Phd

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Present Position:

- Lecturer - School of Electrical and Computers Engineering, National Technical University of Athens
- Associate Director of Biomedical Optics and Applied Biophysics Laboratory

Education:

- 1983 School of Electrical and Computers Engineering, National Technical University of Athens
- 2003 Phd School of Electrical and Computers Engineering, National Technical University of Athens

Research Interests

- Research and development of electronic and optoelectronic biomedical systems
- Research design and development of analog digital and optical systems.
- Development of computer programs for data processing of biomedical data and signals.
- Development of laser optical systems for biomedical purposes.

Selected Publications

1. Gorpas D., Yova D. and Politopoulos K., "A priori fluorophore distribution estimation in fluorescence imaging through application of a segmentation process and a data fitting technique", *Comput Med Imaging Graph* 34 (6): 435-445 (2010).
2. Gorpas D., Yova D. and Politopoulos K. "A three-dimensional finite elements approach for coupled radiative transfer equation and diffusion approximation modeling in fluorescence imaging", *J. Quant. Spectrosc. Radiat. Transfer*, 111, 553-568, (2010).

3. Gorpas D., Politopoulos K. and Yova D., "A Binocular Machine Vision System for Three-Dimensional Surface Measurement of Small Objects", *Comput. Med. Imag. Grap.*, 31:625-637 (2007).
4. Georgakopoulos G.F. and Politopoulos K., "MAX-DENSITY Revisited: a Generalization and a More Efficient Algorithm", *Comput. J.*, 50:348-356 (2007).
5. Theodossiou, T., Rapti, G.S., Hovhannisyan, V., Georgiou, E., Politopoulos, K., Yova, D., "Thermally induced irreversible conformational changes in collagen probed by optical second harmonic generation and Laser-induced fluorescence", *Laser Med. Sci.*, 17:34-41 (2002).
6. K. Politopoulos, George F. Georgakopoulos, P. Tsanakas "Precedence Constrained Scheduling: A Case in P". *The Computer Journal*, Vol 44, No 3, (2001).
7. Theodossiou T., Georgiou E., Hovhannisyan V., Politopoulos K. and Yova D., "Energy transfer between collagen-dye molecules as a probe of higher-lying electronic states following multiquantum excitation", *J. Opt. A-Pure Appl. Op.*, 3:1-3 (2001.)
8. Georgiou, E., Theodossiou, T., Hovhannisyan, V., Politopoulos, K., Rapti, G.S., Yova, D."Second and third optical harmonic generation in type I collagen, by nanosecond laser irradiation, over a broad spectral region", *Opt. Commun.*, 176:253-260 (2000).
9. Yova D., Politopoulos C., Gonis H. and Papaodysseus C., "A Generalized Diagnostic Algorithm Based on Fluorescence Data for the Atherosclerosis", *Medical and Biological Engineering and Computing*. Vol 34:297-298 (1996).
10. Serafetinides, A.A., Gonis, H., Makropoulou, M., Agapitos, E., Kavantzias, N., Politopoulos, C., Yova, D., "TEA-CO₂ Laser Ablation of Coronary Artery", *Il Nuovo Cimento D, Biophysics*, 17:213-219 (1995).
11. Yova, D., Gonis, H., Politopoulos, C., Agapitos, E., Kavantzias, N., Loukas, S., "Interpretation of Diagnostic Implications of Fluorescence Parameters for Atherosclerosis in Fibrous, Calcified and Normal Arteries", *Techn. and Health Care*, 3 (2) 101-109 (1995).
12. Yova D., Gonis H., Agapitos E., N.Kavantzias, C.Politopoulos, S.Loukas., "Application of Fluorescence Spectroscopy in the Diagnosis of Atherosclerosis of the Coronary Artery", *Medicine*, 66:391-396 (1994).
13. Mourtzopoulos Ioannis, Politopoulos Constantinos, Salamouris Soterios, Tsakiris Vasilios Digital system for the equalization of frequency and time response of audio systems and device and of listening spaces *Ευρωπαϊκή ευρεσιτεχνία* (1997) EP 0 805 613 A1