

ICFO congratulates a new PhD graduate

Dr. Singh obtained his Doctoral degree with a project supervised by Prof. Petrov

July 31, 2006

Dr. Gajendra Pratap received a Bachelor in Technology in Mechanical Engineering from the G.B. Pant University of Agriculture & Technology (India) and an MSc degree in Biotechnology from the University of Calicut (India). Since then he has been working in his PhD thesis in the field of optical tweezers in Prof. Petrov?s group at ICFO. He received his Doctoral Degree jointly with the Department of Electronical Engineering, at the Universitat Politecnica de Catalunya (UPC).

Gajendra Pratap?s research project was focused on the combination of Raman spectroscopy with optical tweezers techniques, in order to obtain time a space resolved information of biomedical and biophysical reactions occurring inside single living cells.

In his PhD thesis dissertation, Dr. Singh studied the effect of environmental stress on an optically trapped single living cell to demonstrate the capability of OTRS. By finding the right conditions and keeping a single cell alive in an optical trap for many hours, he has shown that OTRS can be applied to study some phases of the cell-cycle. Minor mathematical treatment of data is sufficient for better visualization an interpretation of the acquired Raman spectra. Thus, his research has contributed to the view that OTRS indeed is a promising technique for studying single cells and numerous other biological applications.



ICFO Director congratulates the new Doctor