# A brief description about me

I was awarded doctorate degree (Ph. D) in Physical Oceanography in 1992 under the Faculty of Marine Sciences, Cochin University of Science and Technology (CUSAT). The title of my doctoral thesis is "Studies on Wave Climate along the Southwest Coast of India". I continued my post-doctoral research at Faculty of Marine Sciences, CUSAT; Centre for Atmospheric Sciences, Indian Institute of Technology, Delhi and Centre for Marine Technology and Ocean Engineering (CENTEC), Universidade de Lisboa, Portugal. In 2011, I was awarded the post-doctorate degree; The Degree of Doctor of Science (D.Sc) for my post-doctoral thesis entitled "Contributions to Ocean Wave Climatology" under the Faculty of Marine Sciences, Cochin University of Science and Technology (CUSAT). My research interests are statistical methods in atmospheric and oceanic sciences, ocean wave climatology, probability based engineering, extreme event modelling, quantile functions for wave height and period modelling, regional frequency analysis based on L-moments for extreme event estimations, tsunami and storm surge inundation modelling, weather window analysis. I have published more than 60 articles in peer reviewed national/international journals and proceedings and as international book chapters to my credit. I´ve also guided/assisted 16 M.Sc dissertations and three Ph.D theses. I´ve also served as the chairman of the jury of the seminar for public presentation of proposal for Ph.D thesis held at Centre for Marine Technology and Ocean Engineering (CENTEC), Universidade de Lisboa, Portugal. I´m also listed in the 2013( 30th pearl anniversary edition) 2014 and 2015 editions WHO´S WHO IN THE WORLD AND 2016-2017 (12th edition) WHO´S WHO IN SCIENCE AND ENGINEERING, published by MARQUIS WHO´S WHO, as the biographical reference representing the world´s most accomplished individuals. Also included in the ´TOP 100 SCIENTISTS~ 2013~´ LIST BY INTERNATIONAL BIOGRAPHICAL CENTRE, Cambridge, England.. My significant research achievements are: provided a general statistical formula for the estimation of significant wave height ($H_s$) and period ($T_s$), derived a statistical formula (using general formula) from generalised *Pareto* distribution (*GP*3) for estimation of significant wave period $T_s$ (also significant wave height $H_s$), suggested alternative method for estimation of $H_s$ and $T_s$ as well as $H_{1/10}$ and $T_{1/10}$ from the functional forms of average conditional exceedance of wave heights and periods derived from the distributions of wave heights and periods, suggested a novel method of selection of the appropriate distribution function of an environmental parameter from the knowledge of the functional form of average conditional exceedance of the environmental parameter $m$ (.). Since $m$ (.) determines the distribution of the parameter uniquely, it is sufficient to find the functional form of $m$ (.) consistent with the data. Provided the procedure and programmed as FORTRAN routine the estimation of three-parameter *Weibull* distribution by the method of L-moments, various parametric relations are derived from *Weibull* distribution to estimate the wave statistics programmed as FORTRAN routines for the estimation of various wave statistics by the parametric relations derived from

probabilistic models, derived the characteristic and moment generating functions of generalised *Pareto* and *Weibull* distributions, suggested a theoretical spectrum from modified *Weibull* distribution for deep water significant wave height estimations, provided a predictive model based on work-energy theorem for the estimation of beach run-up heights and inundation by long gravity waves, initiated statistical modelling of wave heights with quantile functions, introduced regression quantile function concepts as a better tool for extreme wave height estimations, initiated weather window analysis using probabilistic models, initiated regional frequency analysis (*RFA*)-an approach based on L-moments for extreme wave height estimations.