

INSTITUTE COLLOQUIUM

INDIAN INSTITUTE OF SCIENCE, BANGALORE

**PROFESSOR G V ANAND**

*DEPARTMENT OF ELECTRICAL COMMUNICATION ENGINEERING*

Will deliver a lecture

on

**ACOUSTIC REMOTE SENSING  
OF THE OCEANS**

on Tuesday, the 17 March, 1998

at 4.00 PM in the Faculty Hall

**PROFESSOR G PADMANABAN**

*Director, will preside*

*All are cordially invited.*

Coffee : 1700 hrs.  
Reception Hall

Prof. S S Krishnamurthy  
Convener

**ABSTRACT**

*Acoustic probing and sensing techniques are widely used for exploration of marine resources, detection and tracking of underwater targets, large-scale monitoring of ocean dynamics for weather forecasting, and a variety of other underwater applications. In all these applications, the measured values of the acoustic pressure by an array of sensors are used to estimate source parameters or channel parameters of interest. These estimation problems are mathematically ill-posed inverse problems which are generally difficult to solve. Some of the difficulties associated with the solution of these problems can be mitigated by using Matched Field Processing (MFP) which is a class of versatile, conceptually simple, but computation-intensive estimation techniques. In this talk, a brief overview of the basic concepts and some recent developments in the area of MFP and its applications to remote sensing of the ocean is presented.*