



Centre for Biosystems Science and Engineering

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at 4:00 PM on 16 July 2018

BSSE meeting room (3rd floor,
Biological Sciences Building)

Biomaterials for Cardiothoracic Surgery.
Dr. T. R. Rajesh
Clinician at Sparsh Hospital

Cardiovascular diseases have become a leading cause of death in our country, even in rural areas. They are linked to the lifestyle changes associated with the overall improvement in economy. The treatments of these diseases include both medical and surgical therapies. A multitude of surgical options are available for repairing, reconstructing and replacing damaged tissues. A variety of Biomaterials are used, which are an integral part of these procedures. These Biomaterials can be classified into Natural, Synthetic and Composite types. This presentation will discuss the Biomaterials used in Cardiovascular and Thoracic surgery broadly classified (for the purpose of presentation) as Heart Valves; Vascular conduits, grafts and patches; Mechanical cardio-respiratory assist devices like Cardiopulmonary bypass, Extra corporeal Membrane Oxygenators, Ventricular Assist Devices and Artificial Hearts. These biomaterials have ideal properties, many of which are still desirable as of now. These biomaterials and the scope for further advancement in them will be discussed.

About the speaker:

Dr. Rajesh T R. is a Consultant in Cardiovascular and Thoracic surgery at Sparsh Superspeciality Hospital, Bangalore. He is a Recipient of the Excellence in Surgery award by Sri Rosaiah, CM of Andhra Pradesh, in 2010. He is a Gold Medalist in MS (General Surgery) from Rajiv Gandhi University of Health Sciences and the First to Implant 3rd Generation Ventricular Assist Device in Asia. Formerly, he was part of Team that did the first successful heart transplant in Karnataka, in 2008 at Narayana Hrudayalaya. He has experience of more than 6000 Cardiac Surgeries. His special interests are in Complex CABG, Minimally Invasive Cardiac Surgery and Surgery for Heart Failure.