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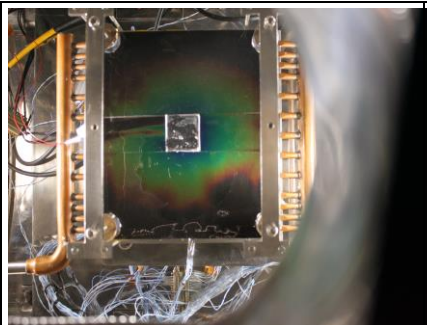
Research Interests

- Inverse Problems in Fluid-Thermal Sciences
- Thermal Contact Conductance
- Experimental and Numerical Heat Transfer
- Thermal Management of Electronics and Batteries
- Heat and Mass Transfer Measurements using Interferometry

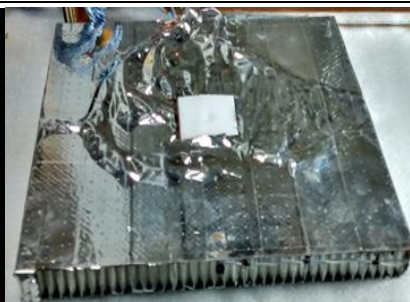
Brief Summary of Research

Following are the research problems of current interest which we are looking into:

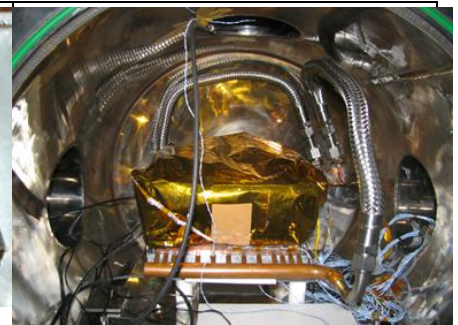
Estimation of thermal contact conductance in practical spacecraft/satellite joints; Design and development of porous media and phase change material based heat sinks for thermal management of electronics and electric vehicle batteries; Thermal transport characterization in novel composites; Characterization of evaporative heat transfer through porous membranes using interferometry; Design, development and characterization of enhanced thermal insulation materials using coir; Analysis of residual stresses caused due to thermal effects in additively manufactured components;



Temperature field in an anisotropic composite measured in simulated space environment using LCT



Measurement of direction dependent thermal conductivities of honeycomb composite



Heat transfer experiments performed on satellite components in simulated space environment

Recent Publications (Full list of publications: <https://iitpkd.ac.in/people/samarjeet>)

- Samarjeet, C., and Raghvendra Pratap Singh. (2019) "Prediction of gas production potential and hydrological properties of a methane hydrate reservoir using ANN-GA based framework." Thermal Science and Engineering Progress 11: 30-391.
- Samarjeet, C., C.Balaji and S.P.Venkateshan (2018). "Non-intrusive measurement of thermal contact conductance at polymer - metal two dimensional annular interface", Heat and Mass Transfer,55(2),pp.327-340.
- Samarjeet, C., C. Balaji, S. P. Venkateshan and GovindaRao, Y.(2017). "Estimation of principal thermal conductivities of layered honeycomb composites using ANN-GA based inverse technique", International Journal of Thermal Sciences, 111, pp.423-436.