Implantable Strain Gauge Array System

- Using Micro Electromechanical Systems (MEMS) technology to create microscale strain gauges
- Design a two-dimensional array of strain gauges embedded in a biocompatible membrane

![Diagram of implantable strain gauge array system](image-url)
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- A wireless chronic implantable strain gauge array for measuring strain distribution at multiple sites over the surface of a bone

Strain gauge configuration at each recording site

2-D implantable strain gauge array

External handheld unit for power transmission & data logging

Signal processing and telemetry electronics