Some Interesting Seminar Topics

- Low-power analog and biomedical circuits including:
  - Low-power trans-impedance amplifiers and photoreceptors
  - Low-power transconductance amplifiers and scaling laws for power in analog circuits
  - Low-power filters and resonators
  - Low-power current-mode circuits
  - Ultra-low-power and neuron-inspired analog-to-digital conversion for biomedical systems
  - …
- Low-power RF and energy-harvesting circuits for biomedical systems including:
  - Wireless inductive power links for medical implants
  - Energy-harvesting RF antenna power links
  - Low-power RF telemetry in biomedical implants
  - …
- Biomedical electronic systems including:
  - Ultra-low-power implantable medical electronics
  - Ultra-low-power noninvasive medical electronics
  - …
- Bio-inspired systems including:
  - Neuromorphic electronics
  - Cytomorphic electronics: cell-inspired electronics for systems and synthetic biology
  - …
- Energy sources including:
  - Batteries and electrochemistry
  - Energy harvesting and the future of energy
  - …

Reference Book

* Sarpeshkar, Rahul, “Ultra low power bioelectronics: fundamentals, biomedical applications, and bio-inspired systems,” Cambridge University Press 2010