Wearable Respiratory-Cardiac Disorders Detection
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Research Program Overview
• Aim: To develop sound based wearable techniques for long duration monitoring of respiratory and/or cardiac disorders
• Clinician Partner: National University Hospital, Singapore General Hospital
• Research Grant: More than S$1.5m (4 major grants from ASTAR and MOE)

Novelties & Achievements
• IEEE Distinguished Lecture
• Novel detection algorithms (wheeze, respiratory rate, heartbeat, sleep apnea)
• 4 multiple-sensor wearable systems tested with patient data
• Preliminary Results: 2 patents filed: Sensitivity: 90%, Specificity: 80%

Respiratory Rate Estimation
Wheeze Detection

Data Collection at NUH