

**University of Wollongong  
Sydney, Australia**

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**Advanced Processing for Through-the-Wall Imaging  
Principal Investigator: Dr. Moeness Amin**

**Summary:**

To develop Through-the-Wall Radar (TWR) imaging techniques that can “see” objects through obstacles, such as walls, doors and other opaque materials. The aim is to improve TWR imaging by developing advanced visual processing techniques to enhance image formation, improve resolution, resolve ambiguities, detect and track moving objects behind walls, and segment and classify targets. Developing a reliable through-the-wall surveillance capability would be invaluable to many organizations, including law enforcement, security and counter terrorism agencies. It can be used to locate survivors within collapsed buildings in search and rescue missions, and to provide situational awareness in surveillance operations.