

# **Moeness Amin, PhD**

**Professor of Electrical and Computer Engineering; Director of the Center for Advanced Communications | Villanova College of Engineering at Villanova University**

Villanova, PA, US

Moeness Amin, PhD, is an expert in the theory of signal and array processing with applications to radar, sonar, and communications

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## **Biography**

Dr. Amin is an internationally recognized expert who has made major contributions to the advances of the theory of signal and array processing with applications to radar, sonar, communications, satellite navigations, ultrasound, healthcare, and RFID. He is the world lead expert on through-the-wall radar imaging, which could have applications for search and rescue and law enforcement. Innovations generated by the Center have important functions in both industry and government. The holder of two U.S. patents, Dr. Amin has over 750 journal and conference publications in the areas of wireless communication, time-frequency analysis, smart antennas, interference cancellation in broadband communication platforms, anti-jam GPS, compressive sensing, target detection, classification, localization and tracking, multiple-input multiple-output radar and communications, and frequency spectrum sharing and co-existence. Dr. Amin is a fellow of four societies and recipient of three technical achievement awards.

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## **Industry Expertise**

Wireless, Education/Learning, Research

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## **Areas of Expertise**

Array Signal Processing, Machine Learning, Radar Imaging, Radar, Satellite Navigations, Smart Antennas, Sonar , Surveillance , Wireless Communications

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## **Affiliations**

Member of the Board of the Proceedings for the Institute of Electrical and Electronics Engineers

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## **Education**

University of Colorado Boulder  
PhD

University of Petroleum and Minerals  
MSEE

## Select Accomplishments

### 2022 IEEE Picard Gold Medal in Radar Technologies and Applications

The IEEE Dennis J. Picard Medal for Radar Technologies and Applications was established in 1999, in honor of Dennis J. Picard. Dr. Amin was recognized for his contributions to radar signal processing across a wide range of applications including through-the-wall imaging and health monitoring.

### 2017 Fulbright Distinguished Chair in Advanced Defense Science and Technology

The Fulbright Distinguished Chair Awards comprise approximately 40 distinguished lecturing, research and lecturing/research awards that range from three to 12 month tenures. Dr. Amin's Fulbright Distinguished Chair appointment is to the Defense Science and Technology Group (DSTG), Australia.

### 2016 Alexander von Humboldt Prize

The Alexander von Humboldt Prize is sponsored by the Alexander von Humboldt Foundation. This international honor recognizes the lifetime achievements of researchers whose fundamental discoveries and new theories and insights have had a significant impact on their discipline, and who are expected to continue producing cutting-edge achievements in the future. Dr. Amin will spend a period of total six months from 2016 to 2019 at the Technical University of Darmstadt.

### 2016 IET Achievement Medal

The Institution of Engineering and Technology (IET) Achievement Medals are awarded to individuals who have made major and distinguished contributions in the various sectors of science, engineering and technology, covering energy, transport, manufacturing, information and communications, and the built environment. Dr. Amin's award reflects his outstanding achievements and seminal contributions to signal analysis and processing over the past three decades.

### 2014 IEEE Signal Processing Society Technical Achievement Award

This award, given by the Institute of Electrical and Electronic Engineers, Signal Processing Society, honors a person who, over a period of years, has made outstanding technical contributions to theory and/or practice in technical areas within the scope of the Society. Dr. Amin's award citation is "for fundamental contributions to signal processing algorithms for communications, satellite navigations, and radar imaging."

### 2009 EURASP Individual Technical Achievement Award

The European Association of Signal Processing grants the Technical Achievement Award to a scientist who has made significant research contributions in Signal Processing Theory and Applications. Dr. Amin's citation is "for contributions to radar imaging and interference mitigation in communications and navigation systems."

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