

Contact

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Top Skills

Innovation Development
AI
Patentability Searches

Languages

Urdu (Native or Bilingual)
English (Full Professional)

Publications

Energy Tunneling: A Way to Achieve Highly Sensitive Material Detection With Sub-Wavelength Resolution

Passive Duplexers for 5G mm-Wave Applications

Analysis of Periodic Strong Chiral – Metamaterial Structures as Frequency Selective Surfaces and Polarization Rotators Using Transfer Matrix Method

Power tunneling and rejection from fractal chiral-chiral interface", Journal of Electromagnetic Waves and Applications

Transverse Electromagnetic Modes of Menger Sponge

Patents

Duplexer for 5G/6G and Beyond; mm-wave and THz Applications

Passive Class of Polar Modulator for mm-Wave Applications (5G/6G and Radar)

Muhammad Omar Mughal

CEO and Principal Scientist at TechnoSense21 | Patent Oriented Researcher | Inventor | Tech Entrepreneur
Islāmābād, Pakistan

Summary

With over 15 years of experience in electrical engineering, I lead TechnoSense21, a company I founded in 2021 to develop state-of-the-art solutions for various industries. As the CEO and Principal Scientist, I oversee the strategic direction, research and development, and product delivery of our company while also managing a team of talented engineers and researchers.

As an inventor, I hold over 60 patents in diverse areas, such as computational electromagnetics, IC design, power, UAVs, embedded systems, IoT, antenna design, polar modulation, and dielectric fractal interfaces. As an author, I have published over 80 research papers in prestigious journals and conferences, sharing my knowledge and insights with the global community of electrical engineering professionals. My goal is to use my expertise and creativity to solve complex challenges and deliver high-quality products that meet the needs and expectations of our clients and partners. I am passionate about advancing innovation and excellence in the field of electrical engineering and contributing to the societal and environmental impact of technology.

Experience

TechnoSense21

CEO | Principal Scientist

September 2021 - Present (3 years 4 months)

Islamabad, Islāmābād, Pakistan

H2Earth Dynamics

Senior Research And Development Engineer

January 2024 - Present (1 year)

Lodon, UK

As a senior Research and Development engineer at H2Earth Dynamics in London, UK, my primary focus is on leveraging AI and intelligent algorithms to

revolutionize the hydrogen production industry. I work with a team of experts in developing innovative solutions and securing patents to drive the company's growth and establish a strong foothold in the market.

Pi-Invent

Project Manager / Senior Research Engineer (RF)

June 2020 - September 2021 (1 year 4 months)

Islamabad, Islāmābād, Pakistan

National University of Computer and Emerging Sciences

Senior Design Engineer

July 2018 - June 2020 (2 years)

Islamabad, Islāmābād, Pakistan

United Arab Emirates University

Researcher

July 2015 - July 2018 (3 years 1 month)

Ghulam Ishaq Khan Institute of Engineering Sciences and Technology (GIKI)

Research and Development Engineer

January 2011 - December 2012 (2 years)

Topi, Kpk, Pakistan

Education

Ghulam Ishaq Khan Institute of Engineering Sciences and Technology

Ms, Electronics Engineering · (2011 - 2013)

Quaid-i-Azam University, Islamabad

Msc, Electronics · (2008 - 2010)

University of the Punjab, Lahore

Bachelors · (2006 - 2008)