

PhD Research Topics at Amrita

(Note that this is not a comprehensive list)

Engineering

Coimbatore	Bengaluru
Water Electrolyzers for Hydrogen and Oxygen Production	Deep learning approaches in renewable energy based electrical power system
Unconventional Computing Architectures, Smart Systems	Electrical vehicle
Hyperspectral Image processing for remote sensing applications	Cloud Security
Electrocoagulation Reactors for Continuous Removal of Emerging Contaminants in Water	Data and Text Analytics on Material Data - Machine Learning and Material Science
Optical Wireless Communication	Secure Computations
VLSI Testing, Hardware security and Trust	Big Data based Cyber Security Analytics
Artificial Intelligence for Biomedical Signal Processing	Tribo-Material
Development of Adaptive and Intelligent Methods for Power Quality Monitoring	Structural Material
Algal Biodiesel - Synthesis and Characterization	Software Defined Networks Security, Machine Learning
Wireless Communication	Electric Vehicles - Power electronics and Drives
Speech Processing	Electric Vehicles -Regenerative Energy Recovery
Algorithms and Architectures for communication systems	Electric Vehicles - ON board Chargers
Treatment of emerging contaminants in water	Electric Vehicle V2V converters
Construction Materials	Electric Vehicle - Battery Management System
AI for Complex Systems	DC Micro grid controlling techniques
AI for Finance	Quantum Communication, 5G+ and 6G, Integrated terrestrial and non-terrestrial communication
Natural Language Processing	Construction Materials,Fiber reinforced concrete,Foam concrete,Cement

	Superplasticizer Compatibility, Rheology of Cement Paste, Self-compacting concrete etc
Multi-modal Approach for Parkinson Disease Detection	
AI for Power System Dynamics	
Investigation of the variability of age, accent, and disability for speech classification and recognition tasks	
Artificial Intelligence, Smart Grid, Power Quality Monitoring	
Artificial Intelligence, Bio-medical data analytics	
Dependency Parser and Its application in Natural Language Processing Applications	
Stochastic microgrid modelling with AI	

Amritapuri	Chennai
Fluid Dynamics, Machine Learning	Computer Networks
Digital Logic VLSI, FPGA, VLSI Testing, Hardware security	Machine Translation
Low Power VLSI, Full-custom Digital IC Design, Power Supply Noise	IoT Security
Fuel Cell	Machine Learning, Wireless Communication
Computational imaging	P2P Computing
Hardware Security	
Neuroengineering (Amrita Mind Brain Center)	

Pure Sciences & Life Sciences

Coimbatore	Amritapuri
Supramolecular chemistry	Biopolymer based voltammetric sensors for synthetic food colourants
Cobaloxime for the removal of Carbon monoxide	Polymer nanocomposites for advanced applications

Paper Analytical Devices (PAD)	Synthesis of Organic Molecules for Medicinal and Material Applications
Wearable Biosensors	

Kochi	Amritapuri - Biotechnology
Computer Vision	Antimicrobial Resistance

Health Sciences

Kochi	Amritapuri
Temperomandibular Disorders	Neuroengineering (Amrita Mind Brain Center)
Salivary Proteomics, Oral Cancer, Early diagnosis of Oral cancer	
Genetics of familial hypercholestroemia	
Liver transplantation, Cholestatic drugs	
Neuropsychology, Radiation Oncology	
Prenatal care, Preventive Dentistry, Anticipatory Guidance	
Autoimmune neurology	

School of Business

Coimbatore
Creativity in Marketing communication and consumer behaviour
Research focus on event studies in economics, finance, marketing and law
Business Model Innovation and Digital Transformation
Social Entrepreneurship enabled by Digital Business Models
Socio-technical approaches on Industry 5.0 performances
Application of Artificial Intelligence (AI) and Machine Learning (LM) in Operations Management
Design Thinking for the designing Socio-technical approaches
AI & Finance
Social Innovations driven by Social Alliances
Strategic Agility & Innovation in SMEs
Social Innovation and its Impact on Human health
Intergenerational transmission of entrepreneurship and gender