

RESEARCH, INNOVATION AND EXTENSION

Research



Metric	
# PhD Research Guide	5
# PhD Completed	7
# PhD Pursuing	10
# MPhil Completed	2

Publications	
# Patents	4
# Journals	22
# International Conferences Proceedings	25
Annotated Databases	9

Fellowships	
Sir Visvesvaraya PhD scheme for electronics and IT of Gol	3 full-time and 2 part-time
University (Non NET/SET)	4

Research Projects

UoM Minor Research
 Developing a framework for learning North-Eastern Languages
<https://www.youtube.com/watch?v=QThMWawWyOQ>
 (2480 views in a year)
 DST Purse for Studio Classroom Development
 Total Grants Received :- Rs. 25,25,000

10/26

Unique to UDCS: Research in Diverse Domain

Dr. Ambuja Salgaonkar; Dr. Seema Purohit; Dr. Sushil Kulkarni

Robots & Networks

- Game theory for resource provisioning in next generation networks
- Spatial database for identifying and storing fixed and moving obstacles
- Robotic motion planning in dynamic environment
- Parameterized mazes for robotic motion planning
- RFID based traffic optimization
- Autonomic Adaptation in Pervasive Computing with Machine Learning

[Harshali Patil, Shruti Mantri, Mohanan, Sangeeta Menon, Jasbir Kaur, Pratik Desai]

Big Data	<ul style="list-style-type: none"> ➤ Complexity Reduction in dependency learning and prediction in convolution graph NN ➤ Classification model for discriminant analysis ➤ Credit evaluation of loan proposals ➤ Data mining for the analysis of massive data ➤ Spatial analysis and visualizations of topographic and multidimensional data ➤ Heterogeneous density based spatio-textual clustering in geo-spatial networks <p>[Ashish Gawande, Pooja Manghirmalani, Anjali Kulkarni, Nilam Naik, Rajesh Maurya, Jayashree Ravi]</p>
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Dr. Sushil Kulkarni, Dr. Siby Abraham, Dr. Dushyant Kothari, Dr. Ambuja Salgaonkar	
Security	<ul style="list-style-type: none"> ➤ Resilient issue redressal for android malware detection ➤ Secure ATM transaction protocol using Wi-fi <p>[Swapna Nikale, Rashmi Pote]</p>
Creative Mining	<ul style="list-style-type: none"> ➤ Protein sequence analysis ➤ Automatic composition of rhythmic music ➤ Automatic question generating system ➤ AI for generating meaningful algorithms: Food recipes <p>[Jyotshna Dongardive, Subodh Deolekar, Manisha Divate, Indrani Sen]</p>

Heritage of India	<ul style="list-style-type: none"> ➤ Named entity recognition for Hindi ➤ Konkani-Hindi machine translation OCR for calligraphic manuscripts ➤ Technology for enhancing accessibility of palm leaf manuscripts ➤ Inferring syntax of the Indus script ➤ Chakra designs for information encoding and secure communication <p>[Shilpi Srivastava, Annie Rajan, Reza Shikoori, Lalit Saxena, Nisha Yadav, Sindhu]</p>
Health	<ul style="list-style-type: none"> ➤ Ayurveda based expert system for HIV/AIDS ➤ Machine learning for dental implant radiology ➤ Machine learning for early diagnosis of neurodegenerative disorders ➤ Automatic classification of Clinical Data ➤ Medical image classifier <p>[Krantee Jamdade, Shweta Shirsat, Maria Acharya, Kavita Jain, Mahendra Kanojia]</p>

Dr. Leisa Armstrong, Dr. Jyotshna Dongardive, Dr. Seema Purohit, Dr. Ambuja Salgaonkar	
Agro-informatics	<ul style="list-style-type: none"> ➤ Information system framework for sustainable agriculture ➤ Spatio-temporal data mining for the predictive modeling of drought ➤ Expert system for enhancement of crop yield ➤ Fertilizer recommender system for Indian agriculture ➤ Intelligent agri-infrastructure for precision agriculture in India ➤ Employing technology in learning Agriculture <p>[Niketa Gandhi, Shubhangi Wankhede, Pallavi Chatufale, Sharayu Karandikar, Ashwini Kulkarni, Kavita Dev]</p>

Assistive Technology

- ANN for enhancing math-learning by the children with dyscalculia
- Modeling learning patterns of visually impaired for the evaluation of their learning environment
- MathX : Mathematics Text reader for Visually Challenged persons
- Significance of talkative graphics (Emoticons) in communication
- Predictive data analytics for learning management system

[Sampada Margaj, Meghana Jalgaonkar, Prashant Londhe, Aarti Pardeshi, Mousmi Pawar]