

Academic wins prestigious Research Excellence Award

Four years of perseverance, dedication and sacrifice not only led to a Fiji National University (FNU) academic attaining a PhD degree, but it also made him a proud recipient of the Vice Chancellor's Award for Research Excellence 2019, in the category of Early Career Researcher.

Senior Instructor in the School of Electrical and Electronics Engineering at FNU's College of Engineering, Science and Technology (CEST), Dr Ronesh Sharma received the award in recognition of outstanding research achievements.

Dr Sharma has to date published seven Q1 journal papers, one Q2 journal paper, and one paper in a conference proceeding. He has a citation H-Index of 7 and i 10-Index of 5. His contribution to knowledge is in the discipline of Electrical and Electronics Engineering Bioinformatics and Artificial Intelligence.

His PhD was based on Protein Fold Recognition and Structure Class Prediction and MoRF Detection using Computational Intelligence Methodologies, which he accomplished from The University of the South Pacific (USP). He started in 2014 and graduated in September this year.

In his PhD research, Dr Sharma applied feature engineering to bioinformatics data to build several state-of-the-art computational models.

Dr Sharma explained that proteins are considered as an important biological macromolecule, which plays a vital role in the biological processes and drug design and it is crucial to understand how these proteins function.

"Thus, protein classification, protein fold recognition, protein structure prediction and protein-protein interaction is an important step towards protein function prediction. In terms of machine learning, protein function prediction is characterized by solving a classification problem which heavily depends on the feature extraction and classification techniques."

"In this thesis, I have presented several novel algorithms for identifying the molecular recognition features (MoRFs) in intrinsically disordered proteins (IDPs) and I have outlined the methodology of predicting the multi-label subcellular proteins. Several existing feature extraction techniques and classifiers are studied and their limitations and weakness are explored."

Dr Sharma said in his PhD research, he has presented the methodology to train and evaluate the state-of-the-art predictors for MoRF identification and subcellular protein prediction.

The 33-year-old said he is overjoyed with this recognition from FNU, which has boosted his motivation for further research.

"Successfully completing my PhD was a huge achievement in itself and this award is just icing on the cake," said Dr Sharma.

"I would like to acknowledge everyone who has guided me throughout my PhD journey. Especially, my PhD supervisor, Prof Alok Sharma, for his advice and continuous guidance."



Senior Instructor in the School of Electrical and Electronics Engineering at FNU's College of Engineering, Science and Technology (CEST), Dr Ronesh Sharma.

"His knowledge and encouragement has helped me in exploring new ideas and producing quality research."

According to Dr Sharma, his life and perception towards academia completely changed the moment he started with PhD studies.

"I started enjoying my new field of research, and I have never looked back from that time. Attending numerous research meetings and conferences, I learnt the art of looking at things as an optimist."

He had to face many challenges and obstacles during his studies, but these did not deter his dedication and enthusiasm for achieving a PhD qualification.

"During these four years, I was on full teaching load, therefore, had to take out time during the nights and weekends to conduct research and writing of papers, which contributed to a successful PhD thesis."

Pro-Vice-Chancellor Research Professor Mohini Singh said FNU is very proud of Dr Ronesh Sharma's achievements.

His achievements as an early career researcher, she said, is outstanding by world standards.

"We at FNU are very pleased to have researchers of his calibre, and are putting in place support systems to help Early Career Researchers progress to the next level," Professor Singh added.