Profile Page

Name	:	Dr A L Sangal
Designation	:	Professor Hag
Department	:	Computer Science & Engg.
Qualification	:	PhD Computer Science and Engineering (DR B R AMBEDKAR, NIT JALANDHAR) M.Tech Computer Science (TIET Patiala) B.E Electronics & Communication Engg (PEC Chandigarh)
Address	:	CSE Department Dr B R Ambedkar NIT Jalandhar Punjab Jalandhar, Punjab - 144027
Email	:	sangalal@nitj.ac.in

Research Interests :

Numerical Computing, Info. Security, Computer Networks, Software Engineering, Machine Learning,

Other Profile Links :

Personal Web Link :

Profile link Click Here

Journal Publications :

Year	Journal	Publication
2022	Artificial Intelligence Review	Kirti Bhandari, Kuldeep Kumar, Amrit Lal Sangal. “Data quality issues in software fault prediction: a systematic literature review’’
2022	Computer Science Review	Neha Thakur, Avtar Singh, AL Sangal. “Cloud services selection: A systematic review and future research directions”
2022	e-Informatica Software Engineering Journal	Pooja Sharma, Amrit Lal Sangal. “Examining the Predictive Capability of Advanced Software Fault Prediction Models–An Experimental Investigation Using Combination Metrics”
2022	Discrete Mathematics, Algorithms and Applications	HS Pattanayak, HK Verma, AL Sangal, Gravitational community detection by predicting diameter
2021	Archives of Computational Methods in Engineering 28 (4), 3087-3111	S Kaur, LK Awasthi, AL Sangal, A brief review on multi-objective software refactoring and a new method for its recommendation
2021	Recent Advances in Electrical & Electronic Engineering	S Kaur, LK Awasthi, AL Sangal, A review on software refactoring opportunity identification and sequencing in object-oriented software

2021	International Journal of Machine Learning and Cybernetics 12 (5), 1369-1411	A Mahindru, AL Sangal, SemiDroid: a behavioral malware detector based on unsupervised machine learning techniques using feature selection approaches
2021	Neural Computing and Applications 33 (10), 5183-5240	A Mahindru, AL Sangal, MLDroid—framework for Android malware detection using machine learning techniques
2021	Multimedia Tools and Applications 80 (9), 13271-13323	A Mahindru, AL Sangal, FSDroid:-A feature selection technique to detect malware from Android using Machine Learning Techniques
2021	The Journal of Supercomputing, 1-43	A Mahindru, AL Sangal, HybriDroid: an empirical analysis on effective malware detection model developed using ensemble methods
2021	Intelligent Computing and Applications, 203-220	HS Pattanayak, HK Verma, AL Sangal, Relationship Between Community Structure and Clustering coefficient
2021	Journal of Ambient Intelligence and Humanized Computing 12 (1), 1387-1406	A Bhandari, K Kumar, AL Sangal, S Behal, An anomaly based distributed detection system for DDoS attacks in Tier-2 ISP networks
2020	Arabian Journal for Science and Engineering, 45(12), 10327-10351.	Sharma, P., & Sangal, A. L. Building and testing a fuzzy linguistic assessment framework for defect prediction in asd environment using process-based software metrics.
2020	Evolutionary Intelligence, 1-31	A Mahindru, AL Sangal, SOMDROID: android malware detection by artificial neural network trained using unsupervised learning
2017	Journal of Multiagent and Grid systems	Ramanpreet Kaur, Amrit Lal Sangal, and Krishan Kumar, "Churn Handling Strategies for Structured Overlay Networks: Existing Protocols and Open Research Issues"
2017	Engineering Science and Technology, an International Journal, 20(1) 310-320	Ramanpreet Kaur, Amrit Lal Sangal, and Krishan Kumar, "Modeling and simulation of adaptive Neuro-fuzzy based intelligent system for predictive stabilization in structured overlay networks"
2017	Journal of High Speed Networks, 23(1) 67-91	Ramanpreet Kaur, Amrit Lal Sangal, and Krishan Kumar, "Overlay based defensive architecture to survive DDoS: A comparative study."
2016	Procedia Computer Science, 94 435-440	Sandeep Mehmi, Harsh K Verma, A L Sangal, "Comparative analysis of cloudlet completion time in time and space shared allocation policies during attack on smart grid cloud"
2016	Journal of Computer Networks and Communications, 2016(4) 1-15	Ramanpreet Kaur, Amrit Lal Sangal, and Krishan Kumar, "A Persistent Structured Hierarchical Overlay Network to Counter Intentional Churn Attack"
2016	International Journal of Grid and Distributed Computing, 9 61-72	Sandeep Mehmi, Amrit Lal Sangal, Harsh Kumar Verma, Kulwinder Parmar, "Economic viability of smart grid cloud in India"
2016	Security and Communication Networks, 9(13) 2222-2239	A.Bhandari, A.L Sangal and Krishan Kumar, "Characterizing flash events and distributed denial of service attacks: an empirical investigation"

Conference Publications :

Year	Conference	Publication
2021	2nd International Conference on Secure Cyber Computing and Communications (ICSCCC). IEEE	harma, P., & Sangal, A. L., Extensive Software Fault Prediction: An Ensemble based comparison, pp. 432-436.
2021	2nd International Conference on Image Processing and Capsule Networks (ICIPCN 2021)	Nidhi, A.L.Sangal, “Plant Disease Detection Using Deep Learning (Convolutional Neural Networks)”, pp. 635-649
2021	2nd International Conference on Image Processing and Capsule Networks (ICIPCN 2021)	Palak, Sangal, A. L “Deep Learning Approach to Classify Road Traffic Sign Images”
2021	International Conference on Recent Innovations in Computing (ICRIC-2021)	Neha Thakur, Avtar Singh and A L Sangal , Comparison of Multi-Criteria Decision Making Techniques for Cloud Services Selection

2021	2nd International Conference on Secure Cyber Computing and Communications (ICSCCC)	Kirti Bhandari, Kuldeep Kumar and A L Sangal , “A Study on Modeling Techniques in Software Fault Prediction”, pp 6-11
2016	Proceedings of the International Conference on Big Data and Advanced Wireless Technologies. ACM	Ramanpreet kaur, Amrit Lal Sangal, and Krishan Kumar, "Performance Analysis of Predictive Stabilization for Churn Handling in Structured Overlay Networks"
2014	The 2014 International Conference on Wireless Networks (ICWN'14), VOL 1 69-73	Harminder Singh Bindra, Dr A L Sangal, "Investigating Performance of Extended Epidemic Routing Protocol of DTN under Routing Attack"
2014	International Conference on Recent Advances and Innovations in Engineering (IEEE)	S. Mehmi; H. K. Verma; A. L. Sangal, "Smart grid cloud for Indian power sector"
2014	2014 IEEE, Recent Advances in Engineering and Computational Sciences (RAECS)	Ramanpreet kaur, Amrit Lal Sangal, and Krishan Kumar, "Analysis of different churn models in chord based overlay networks"
2014	Integrated Networks (SPIN), 2014 International Conference, 220-225	Ramanpreet kaur, Amrit Lal Sangal, and Krishan Kumar, "Modeling and simulation of DDoS attack using Omnet+ Signal Processing and +"

Book/Chapter Publications :

Type	Title	Publisher	Authors	ISBN/ISSN No.	Year
	“Artificial intelligence technologies for computational biology”	CRC Press (1st Edition Nov 2022)	Rout Ranjeet Kumar,Umer Saiyed,Sheikh Sabhaa, Amrit Lal Sangal	978-10007 7868-7, 978-10321 6000-9	2022

Events Organized :

Category	Type	Title	Venue	From	To	Designation
Conference	International	1st International Conference on Secure Cyber Computing and Communications (ICSCCC). IEEE	Dr B R Ambedkar National Institute of Technology, Jalandhar			
Conference	International	2nd International Conference on Secure Cyber Computing and Communications (ICSCCC). IEEE	Dr B R Ambedkar National Institute of Technology, Jalandhar			

Professional Affiliations :

Designation	Organization
Member	Indian Society for technical Education (ISTE)
Member	Fellow, Institution of Engineers
Member	Computer Society of India (CSI)
Member	Project Management Institute
Member	ACM Membership - Association for Computing Machinery
Member	IEEE Membership

PhD Supervised :

Scholar Name	Research Topic	Status	Year	Co-Supervisor
Mr Himanshu Pattanayak	An algorithm for detection of shared communities in social network	Defended	2022	Dr A L Sangal
Ms Pooja Sharma	Approaches to Evaluate and Measure Software Process Improvement in Software SME's	Defended	2022	
Ms Ankita Sharma	Broad Area : Machine Learning	Ongoing	2022	
Ms Satnam Kaur	Refactoring Opportunity Identification and Sequencing using Dyamic Analysis	Defended	2021	Dr A L Sangal
Mr Arvind Mahendru	Dynamic Analysis based Android Malware detection using Machine leaning techniques	Defended	2021	
Mr Chetan Lohani	Broad Area : Machine Learning	Ongoing	2021	
Mr Ramesh Kumar	Broad Area : NLP	Ongoing	2021	Dr A L Sangal
Ms Akanksha Puri		Ongoing	2021	Dr H K Verma
Mr Mahesh Kumar	Broad Area: Applications of IoT	Ongoing	2021	Dr K P Sharma
Ms Minakshi	Broad Area- Information Security	Ongoing	2020	
Ms Ramanpreet Kaur	Distributed Security Architecture for distributed denial of Service Defense	Defended	2018	Prof Krishan Kumar Saluja (Panjab University, Chandigarh)
Ms Neha Thakur	Modelling and Analysis of QoS aspects in Cloud Computing Environment	Ongoing	2018	Dr A L Sangal
Ms Kirti Bhandari	Impact Analysis of Data Quality Issues on Software Fault Prediction	Ongoing	2018	Dr Kuldeep Kumar
Mr Abhinav Bhandari	A Mitigation Framework against Flooding Based Distributed Denial of Service Attacks	Defended	2017	Prof Krishan Kumar Saluja (Panjab University, Chandigarh)
Mr Sunil Gupta	Efficient Access Control Protocol Against Malicious Attack in Wireless Sensor Networks	Defended	2017	
Mr Harminder Singh Bindra	Design Implementation Performance and Evaluation and Extension of Delay Tolerant Network's Routing Protocol in Adhoc Networks Environment	Defended	2015	

PG Dissertation Guided :

Student Name	Dissertation Title	Status	Year	Co-Supervisor
Skund Verma	SWu connection establishment between user Equipment and evolved packet data gateway.	Completed	2022	
Utsav Rajput	MLOps- Integration of Jenkins CI/CD with containerised python notebook environment for ML/Data Science Projects.	Completed	2022	
Ananya Sharma	IGT:Tools for testing and maintaining GPU Drivers.	Completed	2022	
Aman	Drowsy Alarm System Based on Face Landmarks Detection Using MediaPipe FaceMesh.	Completed	2021	
Nidhi	Comparative Analysis of Various Machine Learning Techniques for Plant Disease Detection.	Completed	2021	

Palak	Classification of Road Traffic Sign Images Using Conv.	Completed	2021	

Patents :

Name	Reg./Ref. No.	Date of Award/Filling	Organization	Status
A system of smartphone security using machine learning	202111040145		Patent Office India	Filed
Implementation of facial emotion recognition system using deep neural network approaches and its application thereof	202111012711	09-04-2011	Patent Office India	Published

Admin. Responsiblities :

Position Held	Organization	From	To
Head, Computer Science & Engineering	Dr B R Ambedkar National Institute of Technology, Jalandhar	September 1992	September 2006
Registrar	Dr B R Ambedkar National Institute of Technology, Jalandhar	September 2006	January 2012
Dean Students Welfare	Dr B R Ambedkar National Institute of Technology, Jalandhar	December 2017	January 2020
Member BOG	Dr B R Ambedkar National Institute of Technology, Jalandhar	July 2003	August 2011
Head, Computer Science & Engineering	Dr B R Ambedkar National Institute of Technology, Jalandhar	Feb 2020	May 2022
Head, Computer Centre	Dr B R Ambedkar National Institute of Technology, Jalandhar	June 2022	Till Date