STANDARD TEMPLATE OF FACULTY PROFILE FOR UPLOADING OF UNIVERSITY WEBSITE

Title	Dr	First Name	Pravin	Last Name	Chandra

Designation	Professor
School /Dept. Name	University School of Information, Communication & Technology
Address:	Room No 401, Block- E, University School of Information, Communication & Technology, Sector 16 C, Dwarka.

Phone No.	Office	011- 25302702
	Residence	(optional)
	Mobile	(optional)

Email	• 1. pchandra@ipu.ac.in	• 2. chandra.pravin@gmail.com

Web Page (if any)	Google Scholar : https://scholar.google.com/citations?hl=en&user=ORDnr5sAAAAJ
Subjects Taught	• Algorithm Analysis and Design, Neural Network
Areas of Interest/ Specialization	• Neural Networks and its Applications

Experience (in years)	Total	24
	Industry	7
	Teaching	17
	Research	5

Educational Qualifications	UG	B.Sc
	PG	M.Sc(Physics), DU; M.Tech(Computer Application)[ISM Dhanbad]
	Doctorate	Phd(IT) GGSIP University Thesis Title : Sigmoidal feed forward Artificial Neural Network
	Any other – Diploma in IPR	

Research Publications in Journals/Conference/Book Chapter (last 5 years)	

```
@article{aggarwal2005bayesian,
  title={Bayesian regularization in a neural network model to estimate
lines of code using function points},
  author={Aggarwal, KK and Singh, Yogesh and Ch, Pravin and Puri,
Manimala},
  year={2005}
}

@article{chandra2004feedforward,
```

| [BibTex Format] | ```
  title={Feedforward sigmoidal networks-equicontinuity and fault-
tolerance properties},
  author={Chandra, Pravin and Singh, Yogesh},
  journal={IEEE Transactions on Neural Networks},
  volume={15},
  number={6},
  pages={1350--1366},
  year={2004},
  publisher={IEEE}
}

@inproceedings{chandra2003fault,
  title={Fault tolerance of feedforward artificial neural networks-a
framework of study},
  author={Chandra, Pravin and Singh, Yogesh},
  booktitle={Proceedings of the International Joint Conference on
Neural Networks, 2003.},
  volume={1},
  pages={489--494},
  year={2003},
  organization={IEEE}
}

@article{chandra2004activation,
  title={An activation function adapting training algorithm for
sigmoidal feedforward networks},
  author={Chandra, Pravin and Singh, Yogesh},
  journal={Neurocomputing},
  volume={61},
  pages={429--437},
  year={2004},
  publisher={Elsevier}
}

@article{aggarwal2005sensitivity,
  title={Sensitivity analysis of fuzzy and neural network models},
  author={Aggarwal, KK and Singh, Yogesh and Chandra, Pravin and Puri,
Manimala},
  journal={ACM SIGSOFT Software Engineering Notes},
  volume={30},
  number={4},
  pages={1--4},
  year={2005},
  publisher={ACM}
}

@article{aggarwal2005measurement,
  title={Measurement of software maintainability using a fuzzy model},
  author={Aggarwal, KK and Singh, Yogesh and Chandra, Pravin and Puri,
Manimala},
  journal={Journal of Computer Sciences},
  volume={1},
  number={4},
  pages={538--542},
  year={2005},
  publisher={Science Publications}
}

@article{singh2003class+,
  title={A class+ 1 sigmoidal activation functions for FFANNs},
  author={Singh, Yogesh and Chandra, Pravin},
  journal={Journal of Economic Dynamics and Control},
  volume={28},
  number={1},
  pages={183--187},
``` |

```
  year={2003},
  publisher={North-Holland}
}

@article{aggarwal2005evaluation,
  title={Evaluation of various training algorithms in a neural network
model for software engineering applications},
  author={Aggarwal, KK and Singh, Yogesh and Chandra, Pravin and Puri,
Manimala},
  journal={ACM SIGSOFT Software Engineering Notes},
  volume={30},
  number={4},
  pages={1--4},
  year={2005},
  publisher={ACM}
}

@article{chandra2004case,
  title={A case for the self-adaptation of activation functions in
FFANNs},
  author={Chandra, Pravin and Singh, Yogesh},
  journal={Neurocomputing},
  volume={56},
  pages={447--454},
  year={2004},
  publisher={Elsevier}
}

@article{aggarwal2005expert,
  title={An expert committee model to estimate lines of code},
  author={Aggarwal, KK and Singh, Yogesh and Chandra, Pravin and Puri,
Manimala},
  journal={ACM SIGSOFT Software Engineering Notes},
  volume={30},
  number={5},
  pages={1--4},
  year={2005},
  publisher={ACM}
}

@inproceedings{singh2009fault,
  title={Fault models for neural hardware},
  author={Singh, Amit Prakash and Chandra, Pravin and Rai, Chandra
Sekhar},
  booktitle={2009 First International Conference on Advances in System
Testing and Validation Lifecycle},
  pages={7--12},
  year={2009},
  organization={IEEE}
}

@article{singh2006evaluation,
  title={An evaluation of Boolean expression testing techniques},
  author={Singh, RK and Chandra, Pravin and Singh, Yogesh},
  journal={ACM SIGSOFT Software Engineering Notes},
  volume={31},
  number={5},
  pages={1--6},
  year={2006},
  publisher={ACM New York, NY, USA}
}

@inproceedings{sharma2010adaptive,
  title={An adaptive slope sigmoidal function cascading neural
networks algorithm},
```

```
  author={Sharma, Sudhir Kumar and Chandra, Pravin},
  booktitle={2010 3rd International Conference on Emerging Trends in
Engineering and Technology},
  pages={531--536},
  year={2010},
  organization={IEEE}
}

@article{chandra2003sigmoidal,
  title={Sigmoidal function classes for feedforward artificial neural
networks},
  author={Chandra, Pravin},
  journal={Neural Processing Letters},
  volume={18},
  number={3},
  pages={205--215},
  year={2003},
  publisher={Kluwer Academic Publishers}
}

@inproceedings{chandra2003regularization,
  title={Regularization and Feedforward artificial neural network
training with noise},
  author={Chandra, Pravin and Singh, Y},
  booktitle={Proceedings of the International Joint Conference on
Neural Networks, 2003.},
  volume={3},
  pages={2366--2371},
  year={2003},
  organization={IEEE}
}

@article{goyal2006xml,
  title={XML based Safe and Scalable Multi-Agent Development
Framework},
  author={Goyal, Rinkaj},
  journal={Computer Sciences and Telecommunications},
  number={1},
  pages={42--50},
  year={2006},
  publisher={Научно-образовательная организация" Интернет Академия"}
}

@inproceedings{sharma2010adaptive,
  title={An adaptive slope basic dynamic node creation algorithm for
single hidden layer neural networks},
  author={Sharma, Sudhir Kumar and Chandra, Pravin},
  booktitle={2010 International Conference on Computational
Intelligence and Communication Networks},
  pages={139--144},
  year={2010},
  organization={IEEE}
}

@article{sharma2010constructive,
  title={Constructive neural networks: A review},
  author={Sharma, Sudhir Kumar and Chandra, Pravin},
  journal={International journal of engineering science and
technology},
  volume={2},
  number={12},
  pages={7847--7855},
  year={2010}
}
```

```
@article{singh2010empirical,
  title={Empirical study of FFANNs tolerance to weight stuck at zero
fault},
  author={Singh, Amit Prakash and Chandra, P and Rai, CS},
  journal={International Journal of Engineering \& Technology},
  volume={2},
  number={2},
  pages={65--70},
  year={2010}
}

@article{gupta2011empirical,
  title={An empirical evaluation of like operator in oracle},
  author={Gupta, Manoj Kumar and Chandra, Pravin},
  journal={Bharati Vidyapeeth's Institute of Computer Applications and
Management},
  pages={351},
  year={2011}
}

@article{singh2010empirical,
  title={Empirical study of FFANN tolerance to weight stuck-at max/min
fault},
  author={Singh, Amit Prakash and Rai, Chandra Shekhar and Chandra,
Pravin},
  journal={Internation Journal of Artificial Intelligence \&
Applications (IJAIA)},
  volume={1},
  number={2},
  pages={13--21},
  year={2010}
}

@inproceedings{kumar2012fingerprint,
  title={Fingerprint matching based on orientation feature},
  author={Kumar, Ravinder and Chandra, Pravin and Hanmandlu, M},
  booktitle={Advanced materials research},
  volume={403},
  pages={888--894},
  year={2012},
  organization={Trans Tech Publications Ltd}
}

@inproceedings{singh2010fault,
  title={Fault Measuring Technique for Neural Hardware},
  author={Singh, Amit Prakash and Chandra, Pravin and Rai, Chandra
Sekhar},
  booktitle={Proceedings of the 2009 International Conference on
Signals, Systems and Automation (ICSSA 2009)},
  year={2010},
  organization={Universal-Publishers}
}

@inproceedings{singh2010sensitivity,
  title={Sensitivity Measurement of Neural Hardware: A Simulation
Based Study},
  author={Singh, Amit Prakash and Chandra, Pravin and Rai, Chandra
Shekhar},
  booktitle={International Conference on Contemporary Computing},
  pages={131--141},
  year={2010},
  organization={Springer, Berlin, Heidelberg}
}

@article{singh2008detection,
```

```
  title={Detection of associative shift fault in boolean expression},
  author={Singh, RK and Chandra, Pravin and Singh, Yogesh},
  journal={International Journal Of Computer Science And
Applications},
  volume={1},
  number={1},
  year={2008}
}

@article{singh2010empirical,
  title={Empirical Study of Least Sensitive FFANN for Weight-Stuck-at
Zero Fault},
  author={Singh, Amit Prakash and Chandra, Pravin and Rai, Chandra
Shekhar},
  journal={International Journal of Computer Applications},
  volume={975},
  pages={8887},
  year={2010},
  publisher={International Journal of Computer Applications, 244 5 th
Avenue,\# 1526, New~…}
}

@article{singh2005sigmoidal,
  title={Sigmoidal FFANN's and the best approximation property},
  author={Singh, Yogesh and Chandra, Pravin},
  journal={Journal of Interdisciplinary Mathematics},
  volume={8},
  number={3},
  pages={287--299},
  year={2005},
  publisher={Taylor \& Francis Group}
}

@inproceedings{sharma2011adaptive,
  title={An adaptive sigmoidal activation function cascading neural
networks},
  author={Sharma, Sudhir Kumar and Chandra, Pravin},
  booktitle={Soft Computing Models in Industrial and Environmental
Applications, 6th International Conference SOCO 2011},
  pages={105--116},
  year={2011},
  organization={Springer, Berlin, Heidelberg}
}

@inproceedings{sharma2012constructive,
  title={A constructive algorithm with adaptive sigmoidal function for
designing single hidden layer feedforward neural network},
  author={Sharma, Sudhir Kumar and Chandra, Pravin},
  booktitle={Advanced Materials Research},
  volume={403},
  pages={3867--3874},
  year={2012},
  organization={Trans Tech Publications Ltd}
}

@inproceedings{kumar2012fingerprint,
  title={Fingerprint singular point detection using orientation field
reliability},
  author={Kumar, Ravinder and Chandra, Pravin and Hanmandlu, M},
  booktitle={Advanced Materials Research},
  volume={403},
  pages={4499--4506},
  year={2012},
  organization={Trans Tech Publications Ltd}
}
```

```
@inproceedings{naaz25survey,
  title={A Survey of Gateway Discovery Mechanism in Ad Hoc Network},
  author={Naaz, Saba and Chandra, Pravin},
  booktitle={4th National Conference Computing For Nation Development,
February 25 -- 26, 2010},
  organization={Bharati Vidyapeeth's Institute of Computer
Applications and Management, New~…}
}

@inproceedings{singh2010metrics,
  title={Metrics for measurement of additive noise to weight in
sigmoidal FFANNs},
  author={Singh, Amit Prakash and Rai, Chandra Shekhar and Chandra,
Pravin},
  booktitle={2010 11th International Conference on Control Automation
Robotics \& Vision},
  pages={2197--2201},
  year={2010},
  organization={IEEE}
}

@inproceedings{sharma2012cascading,
  title={Cascading Neural Networks using Adaptive Sigmoidal Function},
  author={Sharma, Sudhir Kumar and Chandra, Pravin},
  booktitle={Advanced Materials Research},
  volume={403},
  pages={858--865},
  year={2012},
  organization={Trans Tech Publications Ltd}
}

@article{singh2010new,
  title={New Metric for sensitivity analysis of FFANN},
  author={Singh, Amit Prakash and Chandra, Pravin and Rai, Chandra
Shekhar},
  journal={International journal of Engineering Science and
Technology},
  volume={2},
  number={4},
  pages={322--329},
  year={2010}
}

@article{chandra2009mutant,
  title={Mutant Counting for Operator Faults in Boolean Expression},
  author={Chandra, R Pravin and Singh, RK and Singh, Yogesh},
  journal={Software Quality Professional},
  volume={12},
  number={1},
  pages={30},
  year={2009},
  publisher={American Society for Quality}
}

@inproceedings{masood2012training,
  title={Training neural network with zero weight initialization},
  author={Masood, Sarfaraz and Chandra, Pravin},
  booktitle={Proceedings of the CUBE International Information
Technology Conference},
  pages={235--239},
  year={2012}
}

@article{sharma2012empirical,
```

```
  title={Empirical Evaluation of Adaptive Sigmoidal Activation
Function on a Constructive Algorithm},
  author={Sharma, Sudhir Kumar and Chandra, Pravin},
  journal={CSI Journal of Computing},
  volume={1},
  number={3},
  year={2012}
}

@article{kumar2012statistical,
  title={Statistical descriptors for fingerprint matching},
  author={Kumar, Ravinder and Chandra, Pravin and Hanmandlu, M},
  journal={International Journal of Computer Applications},
  volume={59},
  number={16},
  year={2012},
  publisher={Foundation of Computer Science}
}

@inproceedings{kumar2012fingerprint,
  title={Fingerprint matching based on texture feature},
  author={Kumar, Ravinder and Chandra, Pravin and Hanmandlu, M},
  booktitle={International Conference on Advances in Information
Technology and Mobile Communication},
  pages={86--91},
  year={2012},
  organization={Springer, Berlin, Heidelberg}
}

@article{chundru2015query,
  title={Query Optimization in Oracle},
  author={Chundru, Pruvin and Jain, Anurug and Kr, Munoj},
  year={2015}
}

@inproceedings{singh2004model,
  title={A model for corrective maintenance time prediction using
neural network.},
  author={Singh, Yogesh and Goel, Bindu and Chandra, Pravin},
  booktitle={IASTED Conf. on Software Engineering and Applications},
  pages={216--221},
  year={2004}
}

@article{gupta1998integrated,
  title={Integrated supply chain management in the government
environment},
  author={Gupta, RK and Chandra, Pravin},
  journal={OPSCON-98, Gurgaon},
  year={1998}
}

@article{chandra2008generation,
  title={Generation of mutants for boolean expression},
  author={Chandra, Pravin and Singh, RK and Singh, Yogesh},
  journal={Journal of Discrete Mathematical Sciences and
Cryptography},
  volume={11},
  number={5},
  pages={589--607},
  year={2008},
  publisher={Taylor \& Francis Group}
}

@article{sharma2013empirical,
```

```
    title={An empirical comparison of cascade and flat variants of
incremental node creation algorithm},
  author={Sharma, Sudhir Kumar and Chandra, Pravin},
  journal={CSI transactions on ICT},
  volume={1},
  number={3},
  pages={281--290},
  year={2013},
  publisher={Springer India}
}

@article{goyal2013identifying,
  title={Identifying influential metrics in the combined metrics
approach of fault prediction},
  author={Goyal, Rinkaj and Chandra, Pravin and Singh, Yogesh},
  journal={SpringerPlus},
  volume={2},
  number={1},
  pages={1--8},
  year={2013},
  publisher={SpringerOpen}
}

@inproceedings{kumar2013local,
  title={Local directional pattern (LDP) based fingerprint matching
using SLFNN},
  author={Kumar, Ravinder and Chandra, Pravin and Hanmandlu, Madasu},
  booktitle={2013 IEEE Second International Conference on Image
Information Processing (ICIIP-2013)},
  pages={493--498},
  year={2013},
  organization={IEEE}
}

@article{goyal2013impact,
  title={Impact of interaction in the combined metrics approach for
fault prediction},
  author={Goyal, Rinkaj and Chandra, Pravn and Singh, Yogesh},
  journal={Software Quality Professional},
  volume={15},
  number={3},
  pages={15},
  year={2013},
  publisher={American Society for Quality}
}

@inproceedings{sodhi2014partially,
  title={A partially deterministic weight initialization method for
SFFANNs},
  author={Sodhi, Sartaj Singh and Chandra, Pravin},
  booktitle={2014 IEEE International Advance Computing Conference
(IACC)},
  pages={1275--1280},
  year={2014},
  organization={IEEE}
}

@inproceedings{singh2013metrics,
  title={Metrics for weight stuck-at-zero fault in sigmoidal FFANNs},
  author={Singh, Amit Prakash and Sodhi, Sartaj Singh and Chandra,
Pravin and Rai, Chandra Shekhar},
  booktitle={2013 European Modelling Symposium},
  pages={61--66},
  year={2013},
  organization={IEEE}
```

```
}

@inproceedings{kumar2013fingerprint,
  title={Fingerprint matching using rotational invariant image based
descriptor and machine learning techniques},
  author={Kumar, Ravinder and Chandra, Pravin and Hanmandlu, Madasu},
  booktitle={2013 6th International Conference on Emerging Trends in
Engineering and Technology},
  pages={13--18},
  year={2013},
  organization={IEEE}
}

@article{singh2013metrics,
  title={Metrics for Measurement of Node Fault in Sigmoidal FFANNs},
  author={Singh, Amit P and Rai, CS and Chandra, Pravin},
  journal={International Journal of Modeling and Optimization},
  volume={3},
  number={1},
  pages={87},
  year={2013},
  publisher={IACSIT Press}
}

@article{sodhi2014interval,
  title={Interval based weight initialization method for sigmoidal
feedforward artificial neural networks},
  author={Sodhi, Sartaj Singh and Chandra, Pravin},
  journal={Aasri Procedia},
  volume={6},
  pages={19--25},
  year={2014},
  publisher={No longer published by Elsevier}
}

@article{goyal2014suitability,
  title={Suitability of KNN regression in the development of
interaction based software fault prediction models},
  author={Goyal, Rinkaj and Chandra, Pravin and Singh, Yogesh},
  journal={Ieri Procedia},
  volume={6},
  pages={15--21},
  year={2014},
  publisher={No longer published by Elsevier}
}

@article{sodhi2014bi,
  title={Bi-modal derivative activation function for sigmoidal
feedforward networks},
  author={Sodhi, Sartaj Singh and Chandra, Pravin},
  journal={Neurocomputing},
  volume={143},
  pages={182--196},
  year={2014},
  publisher={Elsevier}
}

@inproceedings{singh2006object,
  title={Object oriented testing techniques: A survey},
  author={Singh, Y and Chandra, P and Saha, A},
  booktitle={Proceedings of the 10 th IASTED International Conference
on Software Engineering and Applications},
  year={2006}
}
```

```
@inproceedings{bhatia2013impact,
  title={Impact of Gaussian learning rate on training of sigmoidal
FFANN using zero and random weight initializations},
  author={Bhatia, MPS and Chandra, Pravin and others},
  booktitle={Fifth International Conference on Advances in Recent
Technologies in Communication and Computing (ARTCom 2013)},
  pages={376--381},
  year={2013},
  organization={IET}
}

@article{goyal2014interaction,
  title={Why interaction between metrics should be considered in the
development of software quality models: a preliminary study},
  author={Goyal, Rinkaj and Chandra, Pravin and Singh, Yogesh},
  journal={ACM SIGSOFT Software Engineering Notes},
  volume={39},
  number={4},
  pages={1--4},
  year={2014},
  publisher={ACM New York, NY, USA}
}

@article{bhatia2014feasibility,
  title={Feasibility of training and investigation into training of
sigmoidal FFANN with gaussian learning rate and zero weight
initializations},
  author={Bhatia, MPS and Chandra, Pravin and others},
  journal={International Journal on Recent Trends in Engineering \&
Technology},
  volume={11},
  number={2},
  pages={10},
  year={2014},
  publisher={Association of Computer Electronics and Electrical
Engineers (ACEEE)}
}

@inproceedings{sodhi2014new,
  title={A new weight initialization method for sigmoidal feedforward
artificial neural networks},
  author={Sodhi, Sartaj Singh and Chandra, Pravin and Tanwar, Sharad},
  booktitle={2014 International Joint Conference on Neural Networks
(IJCNN)},
  pages={291--298},
  year={2014},
  organization={IEEE}
}

@inproceedings{chandra2014skewed,
  title={A skewed derivative activation function for SFFANNs},
  author={Chandra, Pravin and Sodhi, Sartaj Singh},
  booktitle={International Conference on Recent Advances and
Innovations in Engineering (ICRAIE-2014)},
  pages={1--6},
  year={2014},
  organization={IEEE}
}

@article{kumar2014empirical,
  title={An empirical evaluation of rotation invariance of LDP feature
for fingerprint matching using neural networks},
  author={Kumar, Ravinder and Hanmandlu, Madasu and Chandra, Pravin},
  journal={International Journal of Computational Vision and
Robotics},
```

```
  volume={4},
  number={4},
  pages={330--348},
  year={2014},
  publisher={Inderscience Publishers Ltd}
}

@incollection{goyal2015comparison,
  title={Comparison of M5'Model Tree with MLR in the development of
fault prediction models involving interaction between metrics},
  author={Goyal, Rinkaj and Chandra, Pravin and Singh, Yogesh},
  booktitle={New Trends in Networking, Computing, E-learning, Systems
Sciences, and Engineering},
  pages={149--155},
  year={2015},
  publisher={Springer, Cham}
}

@article{kumar2012information,
  title={Information Theoretic Approach for Fingerprint Matching},
  author={Kumar, Ravinder and Chandra, Pravin and Hanmandlu, M},
  year={2012}
}

@article{kumar2014rotational,
  title={Rotational invariant fingerprint matching using local
directional descriptors},
  author={Kumar, Ravinder and Chandra, Pravin and Hanmandlu, Madasu},
  journal={International Journal of Computational Intelligence
Studies},
  volume={3},
  number={4},
  pages={292--319},
  year={2014},
  publisher={Inderscience Publishers}
}

@inproceedings{parvat2014performance,
  title={Performance improvement of deep packet inspection for
Intrusion Detection},
  author={Parvat, Thaksen J and Chandra, Pravin},
  booktitle={2014 IEEE Global Conference on Wireless Computing \&
Networking (GCWCN)},
  pages={224--228},
  year={2014},
  organization={IEEE}
}

@article{parvat2015novel,
  title={A novel approach to deep packet inspection for intrusion
detection},
  author={Parvat, Thaksen J and Chandra, Pravin},
  journal={Procedia Computer Science},
  volume={45},
  pages={506--513},
  year={2015},
  publisher={Elsevier}
}

@inproceedings{bhatia2015comparison,
  title={Comparison of sigmoidal FFANN training algorithms for
function approximation problems},
  author={Bhatia, MPS and Chandra, Pravin and others},
  booktitle={2015 2nd International Conference on Computing for
Sustainable Global Development (INDIACom)},
```

```
  pages={717--721},
  year={2015},
  organization={IEEE}
}

@article{kumar2016robust,
  title={A robust fingerprint matching system using orientation
features},
  author={Kumar, Ravinder and Chandra, Pravin and Hanmandlu, Madasu},
  journal={Journal of information processing systems},
  volume={12},
  number={1},
  pages={83--99},
  year={2016},
  publisher={Korea Information Processing Society}
}

@article{chandra2015review,
  title={Review and extension of fault class hierarchy for testing
Boolean specification},
  author={Chandra, Pravin and Singh, RK and Singh, Yogesh},
  journal={International Journal of Computer Applications in
Technology},
  volume={52},
  number={1},
  pages={29--38},
  year={2015},
  publisher={Inderscience Publishers (IEL)}
}

@inproceedings{mittal2015statistically,
  title={A statistically resilient method of weight initialization for
SFANN},
  author={Mittal, Apeksha and Chandra, Pravin and Singh, Amit
Prakash},
  booktitle={2015 International Conference on Advances in Computing,
Communications and Informatics (ICACCI)},
  pages={1371--1376},
  year={2015},
  organization={IEEE}
}

@inproceedings{chandra2015non,
  title={A non-sigmoidal activation function for feedforward
artificial neural networks},
  author={Chandra, Pravin and Ghose, Udayan and Sood, Apoorvi},
  booktitle={2015 International Joint Conference on Neural Networks
(IJCNN)},
  pages={1--8},
  year={2015},
  organization={IEEE}
}

@inproceedings{ghose2015feasibility,
  title={On the feasibility of solving regression learning tasks with
FFANN using non-sigmoidal activation functions},
  author={Ghose, Udayan and Chandra, Pravin and Sood, Apoorvi},
  booktitle={2015 International Conference on Applied and Theoretical
Computing and Communication Technology (iCATccT)},
  pages={495--500},
  year={2015},
  organization={IEEE}
}

@article{goyal2015review,
```

```
  title={A review of metrics and modeling techniques in software fault
prediction model development},
  author={Goyal, Rinkaj and Chandra, Pravin and Singh, Yogesh},
  journal={Covenant Journal of Informatics and Communication
Technology},
  year={2015}
}

@inproceedings{masood2015analysis,
  title={Analysis of weight initialization techniques for gradient
descent algorithm},
  author={Masood, Sarfaraz and Doja, MN and Chandra, Pravin},
  booktitle={2015 Annual IEEE India Conference (INDICON)},
  pages={1--5},
  year={2015},
  organization={IEEE}
}

@inproceedings{masood2015analysis,
  title={Analysis of weight initialization methods for gradient
descent with momentum},
  author={Masood, Sarfaraz and Doja, MN and Chandra, Pravin},
  booktitle={2015 International Conference on Soft Computing
Techniques and Implementations (ICSCTI)},
  pages={131--136},
  year={2015},
  organization={IEEE}
}

@inproceedings{masood2016analysis,
  title={Analysis of weight initialization routines for scaled
conjugate gradient training algorithm},
  author={Masood, Sarfaraz and Doja, MN and Chandra, Pravin},
  booktitle={2016 Second International Conference on Computational
Intelligence \& Communication Technology (CICT)},
  pages={533--538},
  year={2016},
  organization={IEEE}
}

@inproceedings{chandra2016effect,
  title={Effect of activation function symmetry on training of SFFANNs
with the backpropagation algorithm},
  author={Chandra, Pravin and Singh, Amit Prakash and Sehrawat,
Ruchi},
  booktitle={2016 10th International Conference on Intelligent Systems
and Control (ISCO)},
  pages={1--6},
  year={2016},
  organization={IEEE}
}

@inproceedings{chandra2016effect,
  title={Effect of Activation Function Symmetry on Training of SFFANNs
with RPROP Algorithm},
  author={Chandra, Pravin and Ghose, Udayan and Sehrawat, Ruchi},
  booktitle={Proceedings of the International Conference on Advances
in Information Communication Technology \& Computing},
  pages={1--4},
  year={2016}
}

@inproceedings{masood2016analysis,
  title={Analysis of weight initialization routines for conjugate
gradient training algorithm with Fletcher-Reeves updates},
```

```
  author={Masood, Sarfaraz and Doja, MN and Chandra, Pravin},
  booktitle={2016 International Conference on Computing, Communication
and Automation (ICCCA)},
  pages={304--308},
  year={2016},
  organization={IEEE}
}

@article{sharma2016sentiment,
  title={Sentiment predictions using deep belief networks model for
odd-even policy in Delhi},
  author={Sharma, Sudhir Kumar and Hoque, Ximi and Chandra, Pravin},
  journal={International Journal of Synthetic Emotions (IJSE)},
  volume={7},
  number={2},
  pages={1--22},
  year={2016},
  publisher={IGI Global}
}

@inproceedings{sharma2017soft,
  title={Soft Computing Based Software Testing--A Concise Travelogue},
  author={Sharma, Deepak and Chandra, Pravin},
  booktitle={Proceedings of Sixth International Conference on Soft
Computing for Problem Solving},
  pages={220--228},
  year={2017},
  organization={Springer, Singapore}
}

@inproceedings{bhatia2016empirical,
  title={Empirical study of various weight initialization techniques
for FFANN},
  author={Bhatia, MPS and Chandra, Pravin and others},
  booktitle={2016 1st India International Conference on Information
Processing (IICIP)},
  pages={1--5},
  year={2016},
  organization={IEEE}
}

@inproceedings{sharma2016applicability,
  title={Applicability of soft computing and optimization algorithms
in software testing and metrics--a brief review},
  author={Sharma, Deepak and Chandra, Pravin},
  booktitle={International Conference on Soft Computing and Pattern
Recognition},
  pages={535--546},
  year={2016},
  organization={Springer, Cham}
}

@article{mishra2017bi,
  title={Bi-modal derivative adaptive activation function sigmoidal
feedforward artificial neural networks},
  author={Mishra, Akash and Chandra, Pravin and Ghose, Udayan and
Sodhi, Sartaj Singh},
  journal={Applied Soft Computing},
  volume={61},
  pages={983--994},
  year={2017},
  publisher={Elsevier}
}

@incollection{sharma2018software,
```

```
  title={Software fault prediction using machine-learning techniques},
  author={Sharma, Deepak and Chandra, Pravin},
  booktitle={Smart computing and informatics},
  pages={541--549},
  year={2018},
  publisher={Springer, Singapore}
}

@article{chandra2018comprehensive,
  title={Comprehensive survey on data warehousing research},
  author={Chandra, Pravin and Gupta, Manoj K},
  journal={International Journal of Information Technology},
  volume={10},
  number={2},
  pages={217--224},
  year={2018},
  publisher={Springer Singapore}
}

@article{mittal2017new,
  title={A new weight initialization using statistically resilient
method and Moore--Penrose inverse method for SFANN},
  author={Mittal, Apeksha and Singh, Amit Prakash and Chandra,
Pravin},
  journal={Int. J. Recent Res. Aspects},
  volume={4},
  pages={98--105},
  year={2017}
}

@article{goyal2017fuzzy,
  title={Fuzzy inferencing to identify degree of interaction in the
development of fault prediction models},
  author={Goyal, Rinkaj and Chandra, Pravin and Singh, Yogesh},
  journal={Journal of King Saud University-Computer and Information
Sciences},
  volume={29},
  number={1},
  pages={93--102},
  year={2017},
  publisher={Elsevier}
}

@article{chandra2009learning,
  title={Learning in Sigmoidal Feedforward Artificial Neural
Networks},
  author={Chandra, Pravin},
  year={2009},
  publisher={Delhi}
}

@inproceedings{singh2001blind,
  title={Blind source separation: A Review},
  author={Singh, Yogesh and Rai, CS and Kaur, Arvinder and Chandra,
Pravin},
  booktitle={Proceedings of the National Conference on Computer and
Devices for Communication, CODEC-2001},
  pages={16--26},
  year={2001}
}

@article{kataria2004commercial,
  title={Commercial Embedded Database Systems: Analysis and
Selection},
  author={Kataria, Vivek and Amit, Shri and Singh, P and Ch, SP},
```

```
  year={2004}
}

@inproceedings{sarfaraz2012training,
  title={Training neural network with zero weight initialization},
  author={Sarfaraz, Masood and Pravin, Chandra},
  booktitle={Proceedings of the CUBE International Information
Technology Conference},
  year={2012}
}

@article{bhatia2018new,
  title={A new weight initialization method for sigmoidal FFANN},
  author={Bhatia, MPS and Chandra, Pravin and others},
  journal={Journal of Intelligent \& Fuzzy Systems},
  volume={35},
  number={5},
  pages={5193--5201},
  year={2018},
  publisher={IOS Press}
}

@article{sharma2018factors,
  title={Factors Analysis and Multiple Linear Regression for fault
prediction in software's},
  author={Sharma, D and Chandra, P},
  journal={Journal of Advanced Research in Dynamical and Control
systems"},
  volume={6},
  pages={801--807},
  year={2018}
}

@article{sharma2019comparative,
  title={A comparative analysis of soft computing techniques in
software fault prediction model development},
  author={Sharma, Deepak and Chandra, Pravin},
  journal={International Journal of Information Technology},
  volume={11},
  number={1},
  pages={37--46},
  year={2019},
  publisher={Springer Singapore}
}

@article{roy2018note,
  title={A note on optimum cluster estimation in leach protocol},
  author={Roy, Nihar Ranjan and Chandra, Pravin},
  journal={IEEE Access},
  volume={6},
  pages={65690--65696},
  year={2018},
  publisher={IEEE}
}

@inproceedings{sharma2018efficient,
  title={Efficient fault prediction using exploratory and causal
techniques},
  author={Sharma, Deepak and Chandra, Pravin},
  booktitle={2018 Second World Conference on Smart Trends in Systems,
Security and Sustainability (WorldS4)},
  pages={193--197},
  year={2018},
  organization={IEEE}
}
```

```
@article{goyal2007xml,
  title={XML based Safe and Scalable Multi-Agent Development
Framework},
  author={Goyal, Rinkaj and Chandra, Pravin and Singh, Yogesh},
  journal={International Journal of Information and Communication
Engineering},
  volume={1},
  number={11},
  pages={3657--3662},
  year={2007}
}

@incollection{mittal2020modification,
  title={A modification to the Nguyen--Widrow weight initialization
method},
  author={Mittal, Apeksha and Singh, Amit Prakash and Chandra,
Pravin},
  booktitle={Intelligent Systems, Technologies and Applications},
  pages={141--153},
  year={2020},
  publisher={Springer, Singapore}
}

@inproceedings{gupta2012empirical,
  title={An Empirical Evaluation of Join Operation in Different
Versions of ORACLE},
  author={Gupta, Manoj and Chandra, Pravin and Badal, Dharmendra},
  booktitle={National Conference on Business Intelligence and Data
Warehousing organized by USMS, GGSIPU jointly with IETE, CSI and
IEEE},
  pages={167--176},
  year={2012}
}

@inproceedings{roy2019eedac,
  title={EEDAC-WSN: energy efficient data aggregation in clustered
WSN},
  author={Roy, Nihar Ranjan and Chandra, Pravin},
  booktitle={2019 International Conference on Automation,
Computational and Technology Management (ICACTM)},
  pages={586--592},
  year={2019},
  organization={IEEE}
}

@article{gupta2019hybcim,
  title={HYBCIM: hypercube based cluster initialization method for k-
means},
  author={Gupta, Manoj Kumar and Chandra, Pravin},
  journal={Int. J. Innov. Technol. Explor. Eng},
  volume={8},
  number={10},
  pages={3584--3587},
  year={2019}
}

@inproceedings{roy2019energy,
  title={Energy Efficient Positioning of Base Station in Clustered
WSN},
  author={Roy, Nihar and Chandra, Pravin},
  booktitle={Proceedings of International Conference on Advancements
in Computing \& Management (ICACM)},
  year={2019}
}
```

```
@incollection{gupta2020empirical,
  title={An empirical evaluation of K-means clustering algorithm using
different distance/similarity metrics},
  author={Gupta, Manoj Kumar and Chandra, Pravin},
  booktitle={Proceedings of ICETIT 2019},
  pages={884--892},
  year={2020},
  publisher={Springer, Cham}
}

@incollection{bhatia2020effect,
  title={Effect of weight initialization on training of sigmoidal
FFANN for back propagation algorithms},
  author={Bhatia, MPS and Chandra, Pravin and others},
  booktitle={Proceedings of ICETIT 2019},
  pages={462--471},
  year={2020},
  publisher={Springer, Cham}
}

@inproceedings{gupta2019pk,
  title={Pk-means: k-means using partition based cluster
initialization method},
  author={Gupta, Manoj Kumar and Chandra, Pravin},
  booktitle={Proceedings of International Conference on Advancements
in Computing \& Management (ICACM)},
  year={2019}
}

@article{masood2020architectural,
  title={Architectural Parameter-Independent Network Initialization
Scheme for Sigmoidal Feedforward ANNs},
  author={Masood, Sarfaraz and Doja, MN and Chandra, Pravin},
  journal={Arabian Journal for Science and Engineering},
  volume={45},
  number={4},
  pages={2901--2913},
  year={2020},
  publisher={Springer Berlin Heidelberg}
}

@article{sharma2019identification,
  title={Identification of latent variables using, factor analysis and
multiple linear regression for software fault prediction},
  author={Sharma, Deepak and Chandra, Pravin},
  journal={International Journal of System Assurance Engineering and
Management},
  volume={10},
  number={6},
  pages={1453--1473},
  year={2019},
  publisher={Springer India}
}

@article{roy2020energy,
  title={Energy dissipation model for wireless sensor networks: a
survey},
  author={Roy, Nihar Ranjan and Chandra, Pravin},
  journal={International Journal of Information Technology},
  volume={12},
  number={4},
  pages={1343--1353},
  year={2020},
  publisher={Springer Singapore}
```

```
}

@inproceedings{roy2020estimation,
  title={Estimation of optimum number of clusters in WSN},
  author={Roy, Nihar Ranjan and Chandra, Pravin},
  booktitle={International Conference on Innovative Computing and
Communications},
  pages={559--570},
  year={2020},
  organization={Springer, Singapore}
}

@inproceedings{roy2020analysis,
  title={Analysis of data aggregation techniques in WSN},
  author={Roy, Nihar Ranjan and Chandra, Pravin},
  booktitle={International conference on innovative computing and
communications},
  pages={571--581},
  year={2020},
  organization={Springer, Singapore}
}

@article{gupta2019mp,
  title={MP-K-means: modified partition based cluster initialization
method for k-means algorithm},
  author={Gupta, Manoj Kumar and Chandra, Pravin},
  journal={Int. J. Recent Technol. Eng},
  volume={8},
  number={4},
  pages={1140--1148},
  year={2019}
}

@article{roy2020threshold,
  title={Threshold sensitive clustering in SEP},
  author={Roy, Nihar Ranjan and Chandra, Pravin},
  journal={Sustainable Computing: Informatics and Systems},
  volume={25},
  pages={100367},
  year={2020},
  publisher={Elsevier}
}

@article{parvat2015modeling,
  title={Modeling Intrusion Detection Systems with Machine Learning
And Selected Attributes},
  author={Parvat, Thaksen J and Chandra, Pravin},
  journal={Journal of Multidisciplinary Engineering Science and
Technology (JMEST)},
  volume={2},
  number={6},
  pages={1553--1557},
  year={2015}
}

@article{gupta2020comprehensive,
  title={A comprehensive survey of data mining},
  author={Gupta, Manoj Kumar and Chandra, Pravin},
  journal={International Journal of Information Technology},
  volume={12},
  number={4},
  pages={1243--1257},
  year={2020},
  publisher={Springer Singapore}
}
```

```
@inproceedings{gupta2019comparative,
  title={A comparative study of clustering algorithms},
  author={Gupta, Manoj Kr and Chandra, Pravin},
  booktitle={2019 6th International Conference on Computing for
Sustainable Global Development (INDIACom)},
  pages={801--805},
  year={2019},
  organization={IEEE}
}

@article{masoood2020chaos,
  title={Chaos based network initialization approach for feed forward
artificial neural networks},
  author={Masoood, Sarfaraz and Doja, MN and Chandra, Pravin},
  journal={Journal of Computational and Theoretical Nanoscience},
  volume={17},
  number={1},
  pages={418--424},
  year={2020},
  publisher={American Scientific Publishers}
}

@article{sharma2020linear,
  title={Linear regression with factor analysis in fault prediction of
software},
  author={Sharma, Deepak and Chandra, Pravin},
  journal={Journal of Interdisciplinary Mathematics},
  volume={23},
  number={1},
  pages={11--19},
  year={2020},
  publisher={Taylor \& Francis}
}

@inproceedings{gupta2019efficient,
  title={An Efficient Approach for Selection of Initial Cluster
Centroids for k-means},
  author={Gupta, Manoj Kr and Chandra, Pravin},
  booktitle={International Conference on Recent Developments in
Science, Engineering and Technology},
  pages={3--13},
  year={2019},
  organization={Springer, Singapore}
}

@inproceedings{mittal2019comparison,
  title={Comparison of Random Weight Initialization to New Weight
Initialization CONEXP},
  author={Mittal, Apeksha and Singh, Amit Prakash and Chandra,
Pravin},
  booktitle={International Conference on Recent Developments in
Science, Engineering and Technology},
  pages={279--289},
  year={2019},
  organization={Springer, Singapore}
}

@article{sharma2020towards,
  title={Towards recent developments in the methods, metrics and
datasets of software fault prediction},
  author={Sharma, Deepak and Chandra, Pravin},
  journal={International Journal of Computational Systems
Engineering},
  volume={6},
```

```
  number={1},
  pages={14--45},
  year={2020},
  publisher={Inderscience Publishers (IEL)}
}

@inproceedings{malik2020ffann,
  title={FFANN Weight Initialization: A New Method},
  author={Malik, Rijul Singh and Payal, Ashish and Chandra, Pravin},
  booktitle={2020 8th International Conference on Reliability, Infocom
Technologies and Optimization (Trends and Future Directions)(ICRITO)},
  pages={468--473},
  year={2020},
  organization={IEEE}
}

@article{mittal2021weight,
  title={Weight and bias initialization routines for Sigmoidal
Feedforward Network},
  author={Mittal, Apeksha and Singh, Amit Prakash and Chandra,
Pravin},
  journal={Applied Intelligence},
  volume={51},
  number={4},
  pages={2651--2671},
  year={2021},
  publisher={Springer US}
}

@inproceedings{sood2021empirical,
  title={An Empirical Study of Activation Functions for Function
Approximation Tasks},
  author={Sood, Apoorvi and Chandra, Pravin and Ghose, Udayan},
  booktitle={Proceedings of 3rd International Conference on Computing
Informatics and Networks},
  pages={275--285},
  year={2021},
  organization={Springer, Singapore}
}

@inproceedings{mishra2021new,
  title={A new Activation function validated on function approximation
tasks},
  author={Mishra, Akash and Chandra, Pravin and Ghose, Udayan},
  booktitle={Proceedings of 3rd International Conference on Computing
Informatics and Networks},
  pages={311--321},
  year={2021},
  organization={Springer, Singapore}
}

@incollection{mishra2021non,
  title={A Non-monotonic Activation Function for Neural Networks
Validated on Benchmark Tasks},
  author={Mishra, Akash and Chandra, Pravin and Ghose, Udayan},
  booktitle={Modern Approaches in Machine Learning and Cognitive
Science: A Walkthrough},
  pages={319--327},
  year={2021},
  publisher={Springer, Cham}
}

@article{mittal2021improving,
  title={Improving learning in neural networks through weight
initializations},
```

```
  author={Mittal, Apeksha and Singh, Amit Prakash and Chandra,
Pravin},
  journal={Journal of Information and Optimization Sciences},
  volume={42},
  number={5},
  pages={951--971},
  year={2021},
  publisher={Taylor \& Francis}
}

@article{bhatia2018impact,
  title={Impact of Weight Initialization on Training of Sigmoidal
FFANN},
  author={Bhatia, MPS and Chandra, Pravin and others},
  journal={ICTACT Journal on Soft Computing},
  volume={8},
  number={3},
  pages={1692--1695},
  year={2018}
}

@article{gupta2021effects,
  title={Effects of similarity/distance metrics on k-means algorithm
with respect to its applications in IoT and multimedia: a review},
  author={Gupta, Manoj Kumar and Chandra, Pravin},
  journal={Multimedia Tools and Applications},
  pages={1--26},
  year={2021},
  publisher={Springer US}
}

@article{sharma2021empirical,
  title={An Empirical Analysis of Software Fault Proneness Using
Factor Analysis with Regression},
  author={Sharma, Deepak and Chandra, Pravin},
  year={2021}
}
```

Papers Published in Conference Proceedings(last 5 years)					

Books Authored/ BookVolume Chapters					

No. of Conferences	National	Attended		Organized	
	International				

Research Guidance	Awarded	PG	M. Phil	Doctorate	
		15			
	Undergoing	1		2	

Research Projects	Completed	
	Undergoing	
Awards & Distinctions		
Administrativ eAssignments Handled	Dean USICT	
Association with Professional Bodies	IEEE	
Any other Achievements		