CURRICULUM VITAE

Personal Information:

Name: ***Prasan Kumar Sahoo***

Nationality: ***Indian***

Email: pksahoo@mail.cgu.edu.tw

Current Research Interest:

- ✧ Applications of Artificial Intelligence
- ✧ Healthcare Big Data analysis
- ✧ Medical Images analysis
- ✧ Cloud, Fog and Edge Computing
- ✧ Internet of Things

Education:

✧ **PhD:** ***Computer Science and Information Engineering***
National Central University, Taiwan — June' 2009

✧ **PhD:** ***Mathematics***
Utkal University, India — April' 2002

✧ **M Tech.:** ***Computer Science and Data Processing***
Indian Institute of Technology (IIT), Kharagpur, India — Dec' 2000

✧ **M Sc.:** ***Mathematics***
Utkal University, India — July' 1994

Professional Experience:

❖ **Professor:** Dept. Of Computer Science and Information Engineering, Chang Gung University, Taiwan — Aug'2017- Present

❖ **Adjunct Professor:** Dept. Of Artificial Intelligence, Chang Gung University, Taiwan — Aug'2020- Present

❖ **Adjunct Professor:** Artificial Intelligence Center, Chang Gung University, Taiwan — Aug'2020- Present

❖ **Adjunct Research Fellow:** Department of Neurology, Chang Gung Memorial Hospital, Linkou, Taiwan. — Jan'2021- Present

❖ **Adjunct Research Fellow**, Division of Colon and Rectal Surgery, Chang Gung Memorial Hospital, Linkou, Taiwan — Jan'2018- Dec'2020

❖ **Adjunct Associate Research Fellow**, Department of Cardiology, Chang Gung Memorial Hospital, Linkou, Taiwan — Jan'2016- Dec'2018

❖ **Associate Professor**, Dept. Of Computer Science and Information Engineering, Chang Gung University, Taiwan	Aug'2012-July'2017
❖ **Director**, Center for International Academic Cooperation, Chang Gung University, Taiwan	Feb'2013- Jan'2017
❖ **Assistant Professor**, Dept. of Computer Science and Information Engineering, Chang Gung University, Taiwan	Aug'2011-July'2012
❖ **Adjunct Associate Professor**, Dept. of Industrial Management National Taiwan University of Sci. and Technology, Taiwan	Feb'2011-July'2011
❖ **Associate Professor**, Dept. of Information Management Vanung University, Taiwan	Jun'2007-July'2011
❖ **Assistant Professor**, Dept. of Information Management, Vanung University, Taiwan	Aug'2003-May'2007
❖ **Research Associate,** Software Research Center National Central University, Taiwan	Oct'2001-Aug'2002
❖ **Visiting Associate Professor**, Dept. of Computer Science, Université Claude Bernard Lyon 1, France	June' 2015
❖ **Visiting Scholar**, Dept. of Computer Science, Old Dominion University, Virginia, USA	Fall'2013
❖ **Visiting Scholar**, Dept. of Electrical Engineering and Comp. Sc., University of Cincinnati, Ohio, USA	Fall' 2012
❖ **Visiting Scholar**, Dept. of Computer Science, ENS, Lyon, France	Nov' 2012

Professional Activities:

❖ **Editor:**

2020 ~ Now	***Journal of Networks and Computer Applications (JNCA), Elsevier***
2021~ Now	***Electronics Journal, MDPI.***
2016 ~ Now	***International Journal of Vehicle Information and Communication Systems (EI), Inderscience.***

❖ **Lead Guest Editor:**

2020 **Special Issue:** *Applications and Methodologies of Artificial Intelligence in Big Data Analysis*, Electronics Journal, MDPI.

EAI/ Springer Book Series: IoT Applications for Healthcare Systems

❖ **Distinguished/Keynote Speaker:**

2021 AICTE sponsored Short Term Training Program on "***Artificial Intelligence and Its Societal***

Applications", NIT, Meghalaya, India

2019 International Taiwanese Congress of Neurology (ITCN) 2019, Taipei, Taiwan.

2018 International Sensors & Actuators Congress, Stockholm, Sweden

❖ **Review Panel:**

2017 IEEE Senior Member Application Review Panel

Publications: Journal Articles

*** indicates the corresponding author**

1. P. Gupta, Y.-L. Huang, **Prasan Kumar Sahoo***, J.-F. You, S.-F. Chiang, D. D. Onthoni, Y.-J. Chern, K.-Y. Chao, J.-M. Chiang, C.-Y. Yeh, W.-S. Tsai, "*Colon Tissues Classification and Localization in Whole Slide Images using Deep Learning*", ***Diagnostics***, July, 2021.

2. P. Gupta, **Prasan Kumar Sahoo*,** B. Veeravalli, "*Dynamic Fault Tolerant Scheduling with Response Time Minimization for Multiple Failures in Cloud"*, ***Journal of Parallel and Distributed Computing,*** July, 2021.

3. H. K. Thakkar, **Prasan Kumar Sahoo*,** B. Veeravalli, "*RENDA: Resource and Network-aware Data Placement Algorithm for Periodic Workloads in Cloud"*, ***IEEE Transactions on Parallel and Distributed Systems***, Vol.: 32, Issue: 12, Dec., 2021.

4. H. K. Thakkar, **Prasan Kumar Sahoo*,** P. Mohanty, "*DOFM: Domain-Specific Feature Miner for Robust Extractive Summarization"*, ***Information Processing & Management,*** Vol. 58, Issue: 3, May, 2021.

5. G. Neelakantam, D. D. Onthoni, **Prasan Kumar Sahoo*,** *"Fog Computing Enabled Locality Based Product Demand Prediction and Decision Making using Reinforcement Learning"***, *Electronics,*** 2021, 10, 227, pp. 1-16, Jan, 2021**.**

6. D. D. Onthoni, T.-W. Sheng, **Prasan Kumar Sahoo*,** L.-J. Wang, P. Gupta, *"Deep Learning Assisted Localization of Polycystic Kidney on Contrast-enhanced CT Images"*, ***Diagnostics,*** 2020, 10, 1113, pp. 1-15, Dec, 2020.

7. G. Neelakantam, D. D. Onthoni, **Prasan Kumar Sahoo*,** *"Reinforcement Learning Based Passengers Assistance System for Crowded Public Transportation in Fog Enabled Smart City"***, *Electronics,*** 2020, 9(9), 1501, pp. 1-19, Sept, 2020**.**

8. C. K. Dehury, **Prasan Kumar Sahoo**[*], "*Failure Aware Semi-Centralized Virtual Network Embedding in Cloud Computing Fat-Tree Data Center Networks*", ***IEEE Transactions on Cloud Computing***, Apr (Online), 2020.

9. H. K. Thakkar, C. K. Dehury, **Prasan Kumar Sahoo**[*], "*MUVINE: Multi-stage Virtual Network Embedding in Cloud Data Centers using Reinforcement Learning based Predictions*", ***IEEE Journal on Selected Areas in Communications***, Vol: 38 , Issue: 6, pp: 1058 – 1074, Jun, 2020.

10. H. K. Thakkar, **Prasan Kumar Sahoo**[*]**, "***Towards Automatic and Fast Annotation of Seismocardiogram Signals using Machine Learning***", *IEEE Sensors,*** Vol: 20, No: 5, pp: 2578-2589, Mar, 2020.

11. P. Gupta, S.-F. Chiang, **Prasan Kumar Sahoo*,** S. K. Mohapatra, J.-F. You, D. D. Onthoni, H.-Y. Hung, J.-M. Chiang, Y. Huang, W.-S. Tsai, *"Prediction of Colon Cancer Stages and Survival Period with Machine Learning Approach"*, ***Cancers,*** 11, 2007, Dec. 2019.

12. **Prasan Kumar Sahoo,** S. Pattanaik, S.-L. Wu, "*A Novel Synchronous MAC Protocol for Wireless Sensor Networks with Performance Analysis*", ***Sensors***, 19, 5394, Dec., 2019. **(Selected as cover page article).**

13. C. K. Dehury, **Prasan Kumar Sahoo***, "*DYVINE: Fitness based Dynamic Virtual Network Embedding in Cloud Computing*", ***IEEE Journal on Selected Areas in Communications***, Vol. 37, No. 5, May, 2019.

14. S. Mohapatra, **Prasan Kumar Sahoo***, J.-P. Sheu, "*Spectrum Allocation with Guaranteed Rendezvous in Asynchronous Cognitive Radio Networks for Internet of Things*", ***IEEE Internet of Things Journal,*** Vol. 6, No. 4, Aug., 2019.

15. **Prasan Kumar Sahoo*,** H. K. Thakkar, "*TLS: Traffic Load Based Scheduling Protocol for Wireless Sensor Networks*", ***International Journal of Ad Hoc Ubiquitous Communications,*** Vol. 30, No. 3, pp. 150-160, Mar, 2019.

16. **Prasan Kumar Sahoo,** S. Mohapatra, S.-L. Wu, "*SLA Based Healthcare Big Data Analysis and Computing in Cloud Network*", **Journal of Parallel and Distributed Computing,** Vol. 19, pp: 121-135, Sep., 2018.

17. **Prasan Kumar Sahoo**, S. Mohapatra, J.-P. Sheu, "*Dynamic Spectrum Allocation Algorithms for Industrial Cognitive Radio Networks*", ***IEEE Transactions on Industrial Informatics***, Vol: 14, Issue: 7, July, 2018.

18. **Prasan Kumar Sahoo,** C. K. Dehury, B. Veeravalli, "*LVRM: On the Design of Efficient Link based Virtual Resource Management Algorithm for Cloud Platforms*", ***IEEE Transactions on Parallel and Distributed Systems***, Vol. 29, Issue: 4**,** pp: 887-900, 2018.

19. **Prasan Kumar Sahoo,** C. K. Dehury, "*Efficient Data and CPU-intensive Job Scheduling Algorithms for Healthcare Cloud*", **Computers and Electrical Engineering,** Vol. 68, pp: 119-139**,** Apr, 2018.

20. **Prasan Kumar Sahoo,** H. K. Thakkar, M.-Y. Lee, "*On the Design of an Efficient Cardiac Health Monitoring System through Combined Analysis of ECG and SCG Signals*", ***Sensors***, 18, 379, Jan, 2018**.**

21. **Prasan Kumar Sahoo,** H. K. Thakkar, I.-S. Hwang, "*Pre-Scheduled and Self Organized Sleep-Scheduling Algorithms for Efficient K-Coverage in Wireless Sensor Networks*", ***Sensors***, 17, 2945, Dec., 2017**.**

22. **Prasan Kumar Sahoo,** S. Pattanaik, S.-L. Wu, "*Design and Analysis of a Low Latency Deterministic Network MAC for Wireless Sensor Networks*", ***Sensors***, 17 (10), 2185, Sep., 2017.

23. **Prasan Kumar Sahoo,** S. Pattanaik, S.-L. Wu, "*A Reliable Data Transmission Model for IEEE 802.15.4e Enabled Wireless Sensor Network Under WiFi Interference*", ***Sensors***, 17, 1320, June, 2017.

24. **Prasan Kumar Sahoo,** H. K. Thakkar, M.-Y. Lee, "*Cardiac Early Warning System With Multi Channel SCG and ECG Monitoring for Mobile Health*", ***Sensors,*** 17(4), 711, Mar., 2017**.**

25. **Prasan Kumar Sahoo,** S. Pattanaik, S.-L. Wu, *"A Novel IEEE 802.15.4e DSME MAC for Wireless Sensor Networks*", ***Sensors,*** 17(1), 168, Jan., 2017.

26. **Prasan Kumar Sahoo,** S. K. Mohapatra, S.-L. Wu, *"Analyzing Healthcare Big Data with Prediction for Future Health Condition",* ***IEEE Access***, Vol. 4, 9786-9799, Jan., 2017.

27. **Prasan Kumar Sahoo*,** J.-P. Sheu, "*Design and Analysis of Collision Free MAC for Wireless Sensor Networks With Or Without Data Retransmission*", ***Journal of Network and Computer Applications,*** Vol. 80, pp. 10–21, Feb., 2017.

28. **Prasan Kumar Sahoo*,** D. Sahoo, "*Sequence Based Channel Hoping Algorithms for Dynamic Spectrum Sharing in Cognitive Radio Networks*", ***IEEE Journal on Selected Areas in Communications***, Vol. 34, Issue-11, pp: 1-15, Nov., 2016.

29. C. K. Dehury, **Prasan Kumar Sahoo*,** "*Design and Implementation of a Novel Service Management Framework for IoT Devices in Cloud*", ***Journal of Systems and Software***, 119C, 149-161, July, 2016.

30. S. K. Mohapatra, **Prasan Kumar Sahoo,** S.-L. Wu, "*Big Data Analytic Architecture for Intruder Detection in Heterogeneous Wireless Sensor Networks*", ***Journal of Network and Computer Applications,*** 66, 236–249, Apr., 2016.

31. **Prasan Kumar Sahoo,** M.-J. Chiang, S.-L. Wu, *"An Efficient Distributed Coverage Hole Detection Protocol for Wireless Sensor Networks*", ***Sensors,*** Vol. 16, Issue 3, 386: 1-21, Mar., 2016.

32. **Prasan Kumar Sahoo,** W.-C. Liao, "*HORA: A Distributed Coverage Hole Repair Algorithm for Wireless Sensor Networks*", **IEEE Transactions on Mobile Computing**, Vol.14, no. 7, pp. 1397-1410, July, 2015.

33. **Prasan Kumar Sahoo,** M.-J. Chiang and S.-L. Wu, "*SVANET: A Smart Vehicular Ad Hoc Network for Efficient Data Transmission with Wireless Sensors*", ***Sensors***, Vol. 14, Issue 12, pp. 22230-22260, Nov., 2014.

34. **Prasan Kumar Sahoo*,** J.-P. Sheu, K.-Y. Hsieh, **"***Target tracking and boundary node selection algorithms of wireless sensor networks for internet services***",** ***Information Sciences,*** Vol. 230, pp. 21-38, May, 2013**.**

35. **Prasan Kumar Sahoo*,** "*TDMA Based Slotted Medium Access Control Protocol for Wireless Sensor Networks*", ***Sensors & Transducers Journal*** **(EI),** Vol. 142, Issue 7, pp. 33-43, July 2012**.**

36. **Prasan Kumar Sahoo*, "***Efficient Security Mechanisms for mHealth Applications using Wireless Body Sensor Networks*", ***Sensors,*** Vol. 12, pp. 12606-12633, Sept, 2012.

37. H.-C. Ma, **Prasan Kumar Sahoo***, Y.-W. Chen, "*Distributed Coverage Hole Detection Protocol for the Wireless Sensor Networks*", ***Journal of Network and Computer Applications,*** 34(5): pp. 1743-1756, Sept, 2011.

38. **Prasan Kumar Sahoo*,** I.-S. Hwang, "*Collaborative Localization Algorithms for Wireless Sensor Networks with Reduced Localization Error*", ***Sensors***, Vol. 11, pp. 9989-10009, Oct, 2011.

39. **Prasan Kumar Sahoo*,** J.-P. Sheu," *Limited Mobility Connectivity and Coverage Maintenance Algorithms for Wireless Sensor Networks*", ***Computer Networks***, 55(13): pp. 2856-2872, 2011.

40. J.-P. Sheu, **Prasan Kumar Sahoo*,** C.-H. Su, W.-K. Hu, *"Efficient Data Gathering Path Planning in Wireless Sensor Networks*", ***Computer Communications***, Vol. 33 (3), pp. 398-408, **Jan. 2010.**

41. **Prasan Kumar Sahoo*,** M-C Wueng and I-S. Hwang, "*Approximate K-Coverage Configuration in Wireless Sensor Networks*", ***International Journal of Information and Communication Technology (IJICT),*** Vol 2, Issue: 234, pp. 11-15, Dec 2010.

42. **Prasan Kumar Sahoo*,** J.-P. Sheu, Y.-C. Chang, "*Performance Evaluation of Wireless Sensor Network with Hybrid Channel Access Mechanism*", ***Journal of Network and Computer Applications,*** Vol. 32 (4), pp. 878–888, July, 2009.

43. **Prasan Kumar Sahoo**, R. K. Deka, "*Hall Effect on Hydromagnetic Flow Past an Accelerated Horizontal Porous Plate*", ***Advances and Applications in Fluid Mechanics,*** Vol. 4(1), pp. 77-90, 2008.

44. S-W. Chang, **Prasan Kumar Sahoo*,** C-Y. Chang, "*A Location Aware Mobility based Routing Protocol for the Bluetooth Scatternet*", ***Wireless Personal Communications,*** Vol. 47, pp. 541-566, Oct., 2008.

45. **Prasan Kumar Sahoo*,** C-Y. Chang, S-W. Chang, "*Novel Route Maintenance Protocols for the Bluetooth Ad Hoc Network with Mobility*", ***Journal of Network and Computer Applications,*** Vol. 31, Issue. 4, pp. 535–558, July, 2008.

46. **Prasan Kumar Sahoo*,** J.-P. Sheu, and K-Y Hsieh, "*Power Control Based Topology Construction for the Distributed Wireless Sensor Networks*", Special issue of ***Computer Communications,*** Vol. 30, 14-15, pp. 2774-2785, ***Sept, 2007.***

47. C-Y. Chang, **Prasan Kumar Sahoo***, and S-C. Lee, "*A Location-Aware Routing Protocol for the Bluetooth Scatternet*", ***Wireless Personal Communications,*** vol. 40, no. 1, pp. 117-135, ***Dec. 2006.***

48. S.Biswal, M. Pradhan, **Prasan Kumar Sahoo,** "*Transmission of Thermal Energy in Magneto-Hydrodynamic Unsteady Free Connective Flow of Mercury and Liquid Sodium past an Infinite Porous flat plate in presence of heat absorbing sinks with constant Suction*" in ***Acta Ciencia Indica,*** pp. 571-576, Vol. XXXI P, No. 4, 571, ***2005.***

49. **Prasan Kumar Sahoo*** and J.-P. Sheu, "*An efficient channel allocation technique for multiple videos-on-demand*", ***Multimedia Tools and Applications***, 20, pp. 67-81, ***May-2003***.

50. **Prasan Kumar Sahoo***, N.Datta, S.Biswal, "*Magnetohydrodynamic unsteady free convection flow past an infinite vertical plate with constant suction and heat sinks*", ***Indian Journal of Pure & Applied Mathematics***, New Delhi, India, 34(1) pp. 145-155, ***Jan 2003.***

Publications: Conference Articles

1. D. D. Onthoni, C.-P. Lin, **Prasan Kumar Sahoo,**, "*Machine Learning Assisted Performance Analysis of Customer Churn Prediction using Customer Relationship Management Big Data*", *International Conference on Smart Sustainable Intelligent Computing and Applications*, New Delhi, India, Feb, 2020.
(Best Paper Award)

2. **Prasan Kumar Sahoo**, "*Low Redundancy Node Scheduling Algorithms for Wireless Sensor Networks*", *Sensors & Actuators Congress*, Stockholm, Sweden, Sep, 2018.

3. S. Pattanaik, **Prasan Kumar Sahoo,** S.-L. Wu, "*Performance Analysis of Modified IEEE 802.15.4e MAC*

for Wireless Sensor Networks ", *ACM, PE-WASUN*, USA, Nov, 2017.

4. S. Mohapatra, **Prasan Kumar Sahoo**, "A Study of Channel Hopping Protocols in Cognitive Radio Networks", *International Conference on Information Technology and Computer Sciences*, Japan, Aug., 2017.

5. Prasan Kumar Sahoo*, Y. Yunhasnawa,"Ferrying Vehicular Data in Cloud Through Software Defined Networking", *IEEE WiMob*, New York, USA, Oct, **2016.**

6. S. Mohapatra, **Prasan Kumar Sahoo**, "ASCH: A Novel Asymmetric Synchronous Channel Hopping Algorithm for Cognitive Radio Networks", *IEEE International Conference on Communications (ICC)*, Kuala Lumpur, Malaysia, May, 2016.

7. Prasan Kumar Sahoo, " Hydromagnetic Free Convection Flow with Hall Effect and Mass Transfer", *International conference on Progress in Applied Mathematics in Science and Engineering (PIAMSE)*, Bali, Indonesia, Sept., 2015.

8. Prasan Kumar Sahoo, C.-C. Chien, M.-J. Chiang and S.-L. Wu, "A Novel Event Transmission Protocol for Vehicular Ad Hoc Network", *IEEE Asia Pacific conference on Wireless and Mobile*, Indonesia, Aug., 2014.

9. J.-P. Sheu, **Prasan Kumar Sahoo*,** P.-H. Liu, "Efficient Bandwidth Allocation Scheme for Wireless Networks Using Relay Stations", *IEEE M & N Conference*, Naples, Italy, 2013.

10. Prasan Kumar Sahoo*, I-S. Hwang, "An Adaptive Traffic Load Based Scheduling Protocol for Wireless Sensor Networks", *IEEE ICCCI*, India, Jan., 2012.

11. Prasan Kumar Sahoo*, M.-J. Chiang, S.-L. Wu, "Connectivity Modeling of Vehicular Ad Hoc Networks in Signalized City Roads", *IEEE ICPP*, Taiwan, 2011.

12. M.-C. Wueng, **Prasan Kumar Sahoo*,** I-S. Hwang, "Time-Synchronized versus Self-Organized K-Coverage Configuration in WSNs", *IEEE ICPP*, Taiwan, 2011.

13. Prasan Kumar Sahoo*, C.-Y. Chang, C.-C. Chen, "Reduced Idle Listening based Medium Access Control Protocol for Wireless Sensor Networks", *in Proc. of IEEE Conference on Communications and Mobile Computing*, pp. 329-333, China, 2010.

14. Prasan Kumar Sahoo*, H.-L. Ke, "Vector Method based Coverage Hole Recovery in Wireless Sensor Networks", *in Proc. of IEEE COMSNETS*, India, Jan., 2010.

15. S.-W. Chang, **Prasan Kumar Sahoo,** L.-L. Hung, C.-Y. Chang, "A location-and-mobility aware routing protocol for Bluetooth radio networks", *in Proc. of* I*EEE Joint Conferences on Pervasive Computing (JCPC)*, pp. 137-142, 2009.

16. Prasan Kumar Sahoo*, J.-P. Sheu, "Modeling IEEE 802.15.4 based Wireless Sensor Network with Packet Retry Limits", *in Proc. of ACM PE-WASUN*, Vancouver, Canada, Oct, 2008.

17. Prasan Kumar Sahoo*, I-S. Hwang, and S-Y. Lin, "A Distributed Localization Scheme for Wireless Sensor Networks", *in Proc. of ACM SAMnet*, Yi-Lan, Taiwan, Sep., 2008.

18. Prasan Kumar Sahoo*, C-Y. Chang, and S-W. Chang, "Location Aware Route Maintenance Protocols for the Mobile Bluetooth Radio Networks", *in Proc. of IEEE LCN*, page(s): 411-420, Dublin, Ireland, Oct, 2007.

19. Prasan Kumar Sahoo*, K-Y Hsieh, J.-P. Sheu, "Boundary Node Selection and Target Detection in Wireless Sensor Network", *in Proc. of IEEE WOCN*, Singapore, page(s): 1-5, July, 2007.

20. **Prasan Kumar Sahoo*,** J.-P. Sheu and W.-S. Lin,"Dynamic Coverage and Connectivity Maintenance Algorithms for Wireless Sensor Networks", *in Proc. of IEEE COMSWARE*, Bangalore, India, Jan, 2007.

21. J.-P. Sheu, **Prasan Kumar Sahoo*,** Y.-J. Chen, and Y.-C. Chang, "Energy Efficiency Modeling and Analysis in Wireless Sensor Networks" in *Proc. of IEEE AusWireless*, Sydney, Australia, *March, 2006*.

22. **Prasan Kumar Sahoo*,** J. J-R. Chen, P-T. Sun, "Efficient Security Mechanisms for the Distributed Wireless Sensor Networks", in *Proc. of IEEE, International Conference on Information Technology and Applications (ICITA'05)*, Sydney, Australia, July, 2005.

23. **Prasan Kumar Sahoo*,** J.-P. Sheu and C-H. Huang, "Power Control Based Topology Construction for the Distributed Wireless Sensor Networks", in *Proc. of IEEE IPCCC'2005*, Phoenix, USA, April, 2005.

24. C-Y. Chang, **Prasan Kumar Sahoo*,** and S-C. Lee, "LARP: A Location-Aware Routing Protocol for the Bluetooth Scatternet", *in Proc. of IEEE WOCN'2005*, Dubai, UAE, pp 541-546, March, 2005.

25. P-T. Sun, **Prasan Kumar Sahoo*,** and J. J-R. Chen, "*Security Protocols for the Mobile Sensor Networks", in Proc. of IEEE International Conference on Telecommunications (ICT05)*, South Africa, May, 2005.

26. **Prasan Kumar Sahoo*** and N. Datta, "Magnetohydrodynamic unsteady free convection flow past an exponentially accelerated porous vertical plate with heat sources", in *Proc. of International Golden Jubilee Conference of Indian Institute of Technology*, Kharagpur, India, March, 2001.

27. **Prasan Kumar Sahoo*,** N.Datta, and S.Biswal, "Hall effect on hydromagnetic free convection flow in a porous vertical channel with mass transfer", in *Proc. of International Conference on Contribution of Cognition to Modeling*, France, 1998.

Book:

1. Prasan Kumar Sahoo, "Magnetohydrodynamics: Modeling and Analysis" (ISBN 978-3-639-18974-2): Published by *Verlag (VDM), Germany, Nov, 2009.*

Book Chapters:

1. H. K. Thakkar, H. Shukla, **Prasan Kumar Sahoo**, "*Metaheuristics in classification, clustering, and frequent pattern mining*", **Book:** Cognitive Big Data Intelligence with a Meta-Heuristic Approach, Elsevier, 2021.

2. P. Gupta, **Prasan Kumar Sahoo**, "*Applications of Artificial Intelligence in Medical Images Analysis*", **Book:** Biomedical Signal and Image Processing with Artificial Intelligence, EAI/Springer, 2021.

3. M. Sarkar, **Prasan Kumar Sahoo**, "*Intelligent Image Segmentation Methods using Deep Convolutional Neural Networks*", **Book:** Biomedical Signal and Image Processing with Artificial Intelligence, EAI/Springer, 2021.

4. **Prasan Kumar Sahoo**, S. Mohapatra, H. K. Thakkar, "*Artificial Intelligence Assisted Cardiac Signal Analysis for Heart Disease Prediction*", **Book:** Biomedical Signal and Image Processing with Artificial Intelligence, EAI/Springer, 2021.

5. D. D. Onthoni, **Prasan Kumar Sahoo**, G. Neelakantam, "*Role of Internet of Things and Artificial Intelligence in COVID-19 Pandemic Monitoring*", **Book:** IoT Applications for Healthcare Monitoring, EAI/Springer, 2021.

6. S. Mohapatra, **Prasan Kumar Sahoo**, "*Internet of Medical Things (IoHT): Applications and Research Issues in Healthcare Monitoring*", **Book:** IoT Applications for Healthcare Monitoring, EAI/Springer, 2021.

7. **Prasan Kumar Sahoo*,** and J.-P. Sheu, "*Performance Evaluation of Contention based MAC in Wireless Sensor Networks*", **Book:** Handbook on Sensor Networks (ISBN: 978-981-283-730-1), World Scientific Publishing Co., Singapore, Aug, 2010.

Patents:

M.-Y. Lee, B.-F. Kuo, M.-Y. Wu, W.-W. Tsai, **Prasan Kumar Sahoo**, W.-Y. Lin, P.-C. Chang, "*A Risk Evaluation Method of the Coronary Artery Heart Disease*", Taiwan (ROC) Patent #: I557677, Nov, 2016.

Funded Projects

29. AI Stroke: Automatic prognosis detection models for ischemic stroke by analyzing brain images with Artificial Intelligence (MOST 110-2221-E-182 -008 -MY3). ***Aug, 2021~ July, 2024***	MOST, Taiwan
28. Intracranial Artery Stenosis Images Analysis to Design and Establish Automatic Brain Disease Prognosis Models using Deep Learning (MOST 110-2314-B-182-037): ***Aug, 2021~July, 2022***	MOST, Taiwan
27. Deep Learning based analysis of computed tomography image data for prediction of colorectal lesion in emergent cases (MOST 110-2314-B-182A-096): ***Aug, 2021~July, 2022***	MOST, Taiwan
26. Deep learning assisted image data analysis for automatic detection and prediction of cerebrovascular diseases: ***Aug, 2020~July, 2021***	MOST, Taiwan
25. Processing and analysis of clinical and imaging big data in brain diseases to design and establish automatic outcome prediction models using Artificial Intelligence: ***Aug, 2019~July, 2020***	MOST, Taiwan
24. Processing and analysis of images and bio-signature big data in stroke and rehabilitation patients using Artificial Intelligence: Design and implementation of precision models for outcome prediction: ***Sep, 2019~Aug, 2021***	CGMF, Taiwan
23. Innovative AI-based Nutrition Service to Assist Healthy Eating Behavior in Older Adults: ***Aug, 2019~July, 2022***	MOST, Taiwan
22. Analysis of Colorectal Cancer Big Data using Artificial Intelligence and Implementation of Clinical Expert System for Predicting Treatment Strategies: ***Nov, 2018~Oct, 2019***	CGMF, Taiwan
21. Analysis of Socio-Commercial-Daily Living Activities Big Data using Artificial Intelligence to Design Prediction Models for Smart Living: ***Aug,2018 ~July, 2019***	MOST, Taiwan

20. Prediction of renal function decline in patients with autosomal dominant polycystic kidney disease by determination of cyst and kidney volumes on images using Artificial Intelligence: ***Jan, 2018~Dec, 2019***	CGMF, Taiwan
19. Design and Performance Analysis of Channel Hopping Protocols for Cognitive Radio enabled IoT Devices: ***Aug, 2017~July, 2018***	MOST, Taiwan
18. Design and Implementation of Data Processing Algorithms for Analyzing Real Time Big Data in Cloud: ***Aug, 2016~July, 2017***	MOST, Taiwan
17. Task Scheduling and Cost Optimization Models for Hadoop Framework of IoT Big Data in Cloud: ***Aug, 2015~July, 2016***	MOST, Taiwan
16. Design and Analysis of Performance Models for the Smart Internet of Things (IoT) Architecture: ***Aug, 2014~July, 2015***	MOST, Taiwan
15. Clustering based Big Data Analytics for Health Care Management in Cloud: ***Aug, 2014~July, 2015***	Chang Gung University, Taiwan
14. Synchronization and Performance Modeling of Heterogeneous Devices in Internet of Things (IoT): ***Aug, 2013~July, 2014***	MOST, Taiwan
13. Design and Implementation of Internet of Things (IoT) Architecture for Coexistence among Heterogeneous Devices: ***Aug, 2013~July, 2014***	Chang Gung University, Taiwan
12. Design Communication Models of WASN and VANET for an Intelligent Transport System: ***Aug, 2012~July, 2013***	MOST, Taiwan
11. Design and Implementation of an Intelligent Traffic Navigation System (Integrated): ***Aug, 2012~July, 2013***	MOST, Taiwan
10. Design and Implementation of Wireless Embedded Sensor Networks Based Old Age Home Monitoring: ***Mar, 2012~Feb, 2015***	NSC, Taiwan and DST, India
9. Design and Implementation of Communication Architecture for mHealth Using Biomedical Wireless Sensor Networks: ***Jan, 2012~Dec, 2012***	Chang Gung University, Taiwan
8. Designing Communication Models for the Intelligent Transportation System: ***Aug, 2011~July, 2012***	MOST, Taiwan
7. Design and Implementation of an Intelligent Traffic Navigation System (Integrated-2nd Year): ***Aug, 2011~July, 2012***	MOST, Taiwan
6. Developing Mobile Applications for e-Learning platform: ***Oct, 2010~May, 2011***	Ministry of Education, Taiwan
5. Mathematical Modeling of Hole Detection and Hole Maintenance	MOST,

Problems in Wireless Sensor Networks: ***Aug, 2009~July, 2010***	Taiwan
4. Coverage, Connectivity Maintenance and Energy Efficient Node Scheduling Algorithms in Wireless Sensor Networks: ***Aug, 2007~July, 2008***	MOST, Taiwan
3. Modeling and Performance Evaluation of Wireless Sensor Networks: ***Aug, 2006~July, 2007***	MOST, Taiwan
2. Modeling of Wireless Sensor Networks for Localization and Mobile Targets Tracking: ***Aug, 2005~July, 2006***	MOST, Taiwan
1. Energy-efficient Routing and Topology Construction in Wireless Sensor Networks: ***Aug, 2004~July, 2005***	MOST, Taiwan

Industrial Project:

1. ***Implementation of Visa Format Preserving Encryption (FPE)***

   Funding source: VISA Corporation, USA and Uniform Industrial Corporation (UIC), Taiwan

Academic Awards/Honors

- ✧ Ministry of Science and Technology (MOST), Taiwan: *Special Research Talent Award (top 5%),* Aug, 2021.
- ✧ Ministry of Science and Technology (MOST), Taiwan: *Special Research Talent Award (top 5%),* Aug, 2020.
- ✧ Best Paper Award: *International Conference on Smart Sustainable Intelligent Computing and Applications*, New Delhi, India, Feb, 2020
- ✧ Model Odia Award in Science, Technology and Education Category: By Indo European Chamber of Small and Medium Enterprises and Youth for Odisha, India, 2017.
- ✧IEEE, Senior member: 2016
- ✧Best paper nomination: ACM SAMnet, 2008
- ✧ Excellent Master Project in Computer Science, Indian Institute of Technology, Kharagpur, India, 2000

Academic Activities

Program Chair:

2010 International Conference on Computer Technology (ICCT), India

Session Organizer:

2019 IEEE International Conference on Consumer Electronics -Taiwan, Yilan, Taiwan

Session Chair:

2016 IEEE International Conference on Communications (ICC), Malaysia.

2013 IEEE International Conference on Measurement & Networking, Italy.

2012 IEEE International conference on computer, communication and informatics (ICCCI), Coimbatore, India

2008 ACM Workshop on Sensor, Ad Hoc, and Mesh Networks (SAMnet), Taiwan.

2007 IEEE Wireless and Optical Communications Networks (WOCN), Singapore

2005 IEEE International Performance Computing and Communications Conference (IPCCC), Phoenix, USA

PC Member:

2021 IEEE International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob), Italy

Asia-Pacific Network Operations and Management Symposium, Taiwan

IEEE International Conference on Consumer Electronics, Taiwan

International Conference on Digital Image Processing and Vision, Australia

2020 IEEE International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob), Greece

Wireless and Optical Communications Conference (WOCC), USA

6th International Conference on Signal and Image Processing, London, UK

International Conference on Sensor Technologies and Applications, Valencia, Spain

International Conference on Block-chain and Internet of Things, London, UK

International Conference on IoT and its Applications, India

International Conference on Signal, Image Processing and Embedded Systems, Sydney, Australia

2019 International Conference on Advances in Signal Processing and Artificial Intelligence, Barcelona, Spain

International Conference on Heart and Cardiothoracic Surgery, India

International Conference on Signal and Image Processing, Denmark

International Conference on E-Society, E-Education and E-Technology, Taiwan

International Conference on Mobile Ubiquitous Computing, Systems, Services and Technologies (UBICOMM), Portugal

International conference on Parallel, Distributed Computing and Applications Conference, Dubai, UAE

International Conference on Advanced Computer Science and Information Technology, Zurich, Switzerland

2018 International Conference on Digital Telecommunications, Athens, Greece.

International Workshop on Advances on Big Data Management, Analytics and Security, Budapest, Hungary

Wireless and Optical Communications Conference (WOCC), Taiwan

International Conference on Sensor Technologies and Applications, Venice, Italy

IEEE International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob), Cyprus

International Conference on Big data, IoT, and Cloud Computing, Jeju, Korea

International Conference on Networking and Network Applications, Xi'an, China

International Conference on Parallel and Distributed Computing, Applications and Technologies, Jeju, Korea

2017 IEEE International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob), Rome, Italy

International Conference on Mobile Ubiquitous Computing, Systems, Services and Technologies, UBICOMM, Barcelona, Spain

ACM International Symposium on Performance Evaluation of Wireless Ad Hoc, Sensor, and Ubiquitous Networks, Florida, USA

International Conference on Energy Engineering and Smart Grids, Oxford, UK

2016 IEEE International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob), New York, USA

IEEE International Conference on Networking and Network Applications, Japan.

International Conference on Sensors and Electronic Instrumental Advances, Barcelona, Spain.

International Conference on Environmental Research and Public Health, Shenzhen, China.

International Conference on Sensors Engineering and Electronics Instrumental Advances, Dubai, UAE.

2015 International Conference on Ubiquitous Context-Awareness and Wireless Sensor Network, Korea.

International Conference on Ubiquitous Computing Application and Wireless Sensor Network, Korea.

ACM International Symposium on Performance Evaluation of Wireless Ad-Hoc, Sensor, and Ubiquitous Networks, Canada.

2014 IEEE International Workshop on Ad Hoc and Ubiquitous Computing (AHUC), Taiwan.

International Conference on Ubiquitous Computing Application and Wireless Sensor Network, Korea.

International Workshop on Mobile Systems, E-commerce and Agent Technology (MSEAT), Japan.

2013 International Conference on Ubiquitous Context-Awareness and Wireless Sensor Network (UCAWSN), Korea.

International Symposium on Wireless sensor network Technologies and Applications for Smart Space, Korea.

IEEE International Conference on Emerging Ubiquitous Systems and Pervasive Networks, Canada.

2011 IEEE International Workshop on Ad Hoc and Ubiquitous Computing, Taiwan.

2010 International Workshop on Applications of Wireless Ad Hoc and Sensor Networks (AWASN 2011), Taiwan.

IEEE Vehicular Technology Society (VTC)-Fall, Ottawa, Canada

IEEE Vehicular Technology Society (VTC)-Spring, Taipei, Taiwan.

2009 International Workshop on Advanced Distance Education Technologies, China.

2008 ACM PE-WASUN, Spain.

Workshop on Ad hoc and Sensor Networks, China.

Invited Talks:

2021 Institute of Business and Management, National Chiao-Tung University, Taiwan

National Taipei University of Business, Taipei, Taiwan

National Institute of Technology, Meghalaya, India

2020 Dept. of Comp. Science & Engineering, Galgotias University, India

2019 Dept. of Comp. Science & Info. Engineering, Tamkang University, Taiwan

Taiwan Stroke Treatment and Research Society, Taipei, Taiwan

National Institute of Technology, Meghalaya, India

2017 MD Anderson Cancer Center, University of Texas, Houston, USA

Dept. of Oncology, Chang Gung Memorial Hospital, Linkou, Taiwan

2016 Dept. of Comp. Science & Info. Engineering, Tamkang University, Taiwan

Dept. of Information Management, Tatung University, Taiwan

2015 Dept. of Informatics, ENS, Lyon, France

ERIC Lab, Université Lyon I, France

2013 Department of Computer Science, Old Dominion University, USA

Guest Speaker, Taiwan Computer Association, Taiwan

International Institute of Information Technology, Bhubaneswar, India

2012 CITI Lab, INSA, Lyon, France

Department of Computer Science, Université Lyon I, France

Department of Computer Science, University of Cincinnati, USA

Dept. of Comp. Sc. and Engineering, IIT, Kharagpur, India

Institute of Technical Education and Research, Odisha, India

Odisha Mathematical Society, India

2010 Dept. of Electronics Engineering, Chung Chou Institute, Taiwan

2008 Dept. of Electronics Engineering, Nan Kai University, Taiwan

Dept. of Inform. Management, National Chiao-Tung University, Taiwan

Dept. of CSE, Yuan-Ze University, Chungli, Taiwan.

Thank you