＊ 沙庫瑪教授

Publications: Journal Articles

1. **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***, **Accepted, IF (2016): 4.181, Rank** *(Computer Science, Theory & Methods)*: **8/104=top 7.7%(Q1).**
2. **Prasan Kumar Sahoo,** S. Mohapatra, J.-P. Sheu, "*Dynamic Spectrum Allocation Algorithms for Industrial Cognitive Radio Networks*", ***IEEE Transactions onIndustrial Informatics***, **Accepted,IF (2016): 6.764, Rank** *(Computer Science, Interdisciplinary Application):***2/105 = top 1.9% (Q1).**
3. **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**. IF (2016): 2.677, Rank** *(Instruments & Instrumentation):***10/58 = top 17.2% (Q1).**
4. **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**. IF (2016): 2.677, Rank** *(Instruments & Instrumentation):***10/58 = top 17.2% (Q1).**
5. **Prasan Kumar Sahoo,** S. Pattanaik, S.-L. Wu, "*Design and Analysis of a Low Latency Deterministic Network MAC forWireless Sensor Networks*", ***Sensors***, 17 (10), 2185, Sep., 2017.**IF (2016): 2.677, Rank** *(Instruments & Instrumentation):***10/58 = top 17.2% (Q1).**
6. **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.**IF (2016): 2.677, Rank** *(Instruments & Instrumentation):***10/58 = top 17.2% (Q1).**
7. **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**. IF (2016): 2.677, Rank** *(Instruments & Instrumentation):***10/58 = top 17.2% (Q1).**
8. **Prasan Kumar Sahoo,** S. Pattanaik, S.-L. Wu, "*A Novel IEEE 802.15.4e DSME MAC for Wireless SensorNetworks*", ***Sensors,***17(1), 168, Jan., 2017. **IF (2016): 2.677, Rank** *(Instruments & Instrumentation):***10/58 = top 17.2% (Q1).**

9. **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.**IF (2016): 3.244, Rank** *(Computer Science, Information Systems):* **27/146=top 18% (Q1).**

10. **Prasan Kumar Sahoo*,** H. K. Thakkar, *"TLS: Traffic Load Based Scheduling Protocol forWireless Sensor Networks"*,***International Journal of Ad Hoc Ubiquitous Communications,*** Accepted, **IF (2016):0.705, (Q4).**

11. **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. **IF (2016):3.5, Rank** *(Computer Science, Software Engineering):* **6/106=top 5.7% (Q1).**

12. **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. **IF (2016): 8.085, Rank** *(Engineering, Electrical & Electronic):* **8/260=top 3.07%(Q1).**

13. 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.**IF(2016): 2.444, Rank: (Computer Science, Software Engineering): 22/106=top 20.7%(Q1).**

14. 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.**IF(2016): 3.5, Rank:** *(Computer Science, Software Engineering):***6/106=top 5.7%(Q1).**

15. **Prasan Kumar Sahoo,** M.-J. Chiang, S.-L. Wu, *"An Efficient Distributed Coverage Hole Detection Protocol for WirelessSensor Networks"*, ***Sensors,*** Vol. 16, Issue 3, 386: 1-21, Mar., 2016. **IF(2016): 2.677, Rank** *(Instruments & Instrumentation):* **10/58=top 17.2%(Q1)**.

16. **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. **IF(2016): 3.822, Rank** ***(****Computer Science, Information Systems****):*****13/146=top 8.9% (Q1).**

17. **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. **IF(2016): 2.677, Rank** *(Instruments & Instrumentation):* **10/58=top17.2% (Q1).**

18. **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**. IF(2016): 4.832, Rank** *(Computer Science, Information Systems):* **4/146 =top 4.7% (Q1).**

19. **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**.**

20. **Prasan Kumar Sahoo*, "***Efficient Security Mechanisms for mHealth Applications using Wireless Body Sensor Networks*", ***Sensors,*** Vol.12, pp. 12606-12633, Sept, 2012. **IF(2016): 2.677, Rank** *(Instruments & Instrumentation):* **10/58=top 17.2% (Q1).**

21. 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. **IF(2016): 3.5, Rank:** *(Computer Science, Software Engineering):***6/106=top 5.7%(Q1).**

22. **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. **IF(2016): 2.677, Rank** *(Instruments & Instrumentation):* **10/58=top 17.2% (Q1).**

23. **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. **IF(2016): 2.517, Rank** *(Computer Science, Hardware & Architecture):***13/52=top 25% (Q1).**

24. 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. IF(2016): 3.338, Rank** *(Computer Science, Information Systems):* **23/146=top 15.7% (Q1).**
25. **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.
26. **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. **IF (2016): 3.5, Rank:** *(Computer Science, Software Engineering):***6/106=top 5.7%(Q1).**
27. **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.
28. 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. **IF (2016): 0.951, Rank** *(Telecommunications):***76/89=top 85.3% (Q4).**
29. **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.**IF (2016): 3.5, Rank:** *(Computer Science, Software Eng.):***6/106=top 5.7% (Q1).**
30. **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.*****IF(2016): 3.338, Rank** *(Computer Science, Information Systems):* **23/146=top 15.7% (Q1).**
31. 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.*****IF (2016): 0.951, Rank** *(Telecommunications):***76/89=top 85.3% (Q4).**

32. 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.***
33. **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*.IF (2016): 1.530, Rank** *(Computer Science, Theory & Methods):***45/104=top 43% (Q2).**
34. **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,* IF (2016): 0.325(Q4).**

Papers Revised/under review (Journal Articles)

1.Prasan Kumar Sahoo, C. K.Dehury,"*CPU and Data Intensive Job Scheduling Algorithms for Cloud Computing*", (Revised), ***Computers & Electrical Engineering (SCI)*. IF (2016): 1.57.**

2. H. K. Thakkar, **Prasan Kumar Sahoo**[*]**,** "*Fast and Accurate Peak Selection for Annotating Seismocardiogram Signals using Machine Learning Models*", (Under Review), IEEE Transactions on Signal Processing.

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.

Publications: Conference Papers

1. 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

2.S. Mohapatra,**Prasan Kumar Sahoo**, "A Study of Channel Hopping Protocols in Cognitive Radio Networks", *International Conference on Information Technology*

and Computer Sciences(ITC), Tokyo, Japan, Aug., 2017.

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

4.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.

5. **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.

6. **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*, Bali, Indonesia, Aug., 2014.

7. 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.

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

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

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

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

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

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

14. **Prasan Kumar Sahoo*,** J.-P. Sheu, "Modeling IEEE 802.15.4 based Wireless

Sensor Network with Packet Retry Limits", *in Proc. ofACM PE-WASUN*, Vancouver, Canada, Oct, 2008.

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

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

17. **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.

18. **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, page: 1-9, Jan, 2007.

19. 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*.

20. **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.

21. **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, pp 541-546, April, 2005.

22. 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.

23. 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.

24. **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.

25. **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 & Book Chapters

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

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

Industry Projects

1. ***Implementation of Visa Format Preserving Encryption(FPE)***
   - **Funding source:**VISA Corporation, USA and Uniform Industrial Corporation (UIC), Taiwan
   - **Duration:***2015/11/01~2016/01/31*
   - **Role:** PrincipalInvestigator
2. ***Social Media Big Data Analysis for TOYOTA Car's Customers Rating***
   - **Funding source:**Chain Sea Information Integration Company, Taiwan
   - **Duration:***2015/11/01~2016/12/31,*
   - **Role:** PrincipalInvestigator

FundedResearch Projects

1. ***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***
   - **Source: CMRPG3H0021, Chang Gung Memorial Hospital, Taiwan**
   - **Duration: *2018/01/01~2018/12/31***
   - **Role: Co-PI**

2. ***Design and Performance Analysis of Channel Hopping Protocols forCognitive Radio enabled IoT Devices***
   - **Source:**MOST, Taiwan ***(*MOST-106-2221-E-182-014*)***
   - **Duration*: 2017/08/01~2018/7/31***
   - **Role:**PrincipalInvestigator
3. ***Design and Implementation of Data Processing Algorithms for Analyzing Real Time Big Data in Cloud***
   - **Source:**MOST, Taiwan ***(*MOST-105-2221-E-182-050*)***
   - **Duration*: 2016/08/01~2017/7/31***
   - **Role:**PrincipalInvestigator
4. ***Task Scheduling and Cost Optimization Models for Hadoop Frameworkof IoT Big Data in Cloud***
   - **Funding source:**MOST, Taiwan**(MOST-104-2221-E-182-004)**
   - **Duration:***2015/08/01~2016/7/31*
   - **Role:** PrincipalInvestigator
5. ***Design and Analysis of Performance Models for the Smart Internet of Things (IoT) Architecture***
   - **Funding source:**MOST, Taiwan**(MOST-103-2221-E-182-046)**
   - **Duration:***2014/08/01~2015/7/31*
   - **Role:** PrincipalInvestigator
6. ***Synchronization and Performance Modeling of Heterogeneous Devices in Internet of Things (IoT)***
   - **Funding source:** NSC, Taiwan**(NSC-102-2221-E-182-033)**
   - **Duration:***2013/08/01~2014/10/31*
   - **Role:** PrincipalInvestigator
7. ***Design Communication Models of WASN and VANET for an Intelligent Transport System***
   - **Funding source:** NSC, Taiwan**(NSC-101-2221-E-182-033)**
   - **Duration:***2012/08/01~2013/07/31*
   - **Role:** PrincipalInvestigator

8.***Design and Implementation of an Intelligent Traffic Navigation System***
   - **Funding source:** NSC, Taiwan**(NSC-101-2221-E-182-030)**
   - **Duration:***2012/08/01~2013/07/31*
   - **Role:** Co-Investigator

9.*Designing Communication Models for the Intelligent Transportation System (I)*
   - **Funding source:** NSC, Taiwan**(NSC-100-2221-E-182-069)**

• **Duration:***2011/08/01~2012/07/31*
• **Role:** Co-Investigator

10. ***Design and Implementation of an Intelligent Traffic Navigation System (I)***
● **Funding source:** NSC, Taiwan**(NSC-100-2221-E-82-027)**
• **Duration:***2011/08/01~2012/07/31*
• **Role:** Co-Investigator

11.*Mathematical Modeling of Hole Detection and Hole Maintenance Problems in Wireless Sensor Networks*
● **Funding source:** NSC, Taiwan**(NSC-98-2221-E-238-010)**
• **Duration:***2009/08/01~2010/07/31*
• **Role:**Principal Investigator

12. ***Coverage, Connectivity Maintenance and Energy Efficient Node Scheduling Algorithms in Wireless Sensor Networks***
● **Funding source:** NSC, Taiwan**(NSC-96-2221-E-238-001)**
• **Duration:***2007/08/01~2008/07/31*
• **Role:**Principal Investigator

13. ***Modeling and Performance Evaluation of Wireless Sensor Networks***
● **Funding source:** NSC, Taiwan**(NSC-95-2221-E-238-003)**
• **Duration:***2006/08/01~2007/07/31*
• **Role:**Principal Investigator

14. ***Modeling of Wireless Sensor Networks for Localization and Mobile Targets Tracking***
● **Funding source:** NSC, Taiwan**(NSC-94-2213-E-238-010)**
• **Duration:***2005/08/01~2006/07/31*
• **Role:**Principal Investigator

15. ***Energy-efficient Routing and Topology Construction in Wireless Sensor Networks***
● **Funding source:** NSC, Taiwan**(NSC-93-2213-E-238-009)**
• **Duration:***2004/08/01~2005/07/31*
• **Role:**Principal Investigator

Funded Research Projects (MOE-Taiwan)

1.*Developing Mobile Applications for e-Learning platform*
- **Funding source:** Ministry of Education (MOE), Taiwan
- **Duration:** *2010/10/01~2011/05/30*
- **Position:** Principal Investigator

Funded Research Projects (Chang Gung University)

1.*Clustering based Big Data Analytics for Health Care Management in Cloud*

- **Funding source:**Chang Gung University, Taiwan**(UERPD2D0061)**
- **Duration:***2014/08/01~2015/07/31*
- **Role:** PrincipalInvestigator

2.*Design and Implementation of Internet of Things (IoT) Architecture for Coexistence among Heterogeneous Devices*

- **Funding source:**Chang Gung University, Taiwan**(UERPD2C0021)**
- **Duration:***2013/08/01~2014/07/31*
- **Role:** Principal-Investigator

3. ***Design and Implementation of Communication Architecture for mHealth Using Biomedical Wireless Sensor Networks***

- **Funding source:**Chang Gung University, Taiwan**(UERPD2B0051)**
- **Duration:***2012/01/01~2012/12/31*
- **Role:**Co-Investigator

International Research Projects

1. *Design and Implementation of Wireless Embedded Sensor Networks Based Old Age Home Monitoring*

- **Funding source:**NSC, Taiwan and and DST, India**(NSC 101-2923-E-182-001-MY3)**
- **Duration:***2012/03/01~2014/12/31*
- **Role:** PrincipalInvestigat

UG Student's Projects (Implementation)

1. Project (2012): *Smart OldAge Home Monitoring Using WSN And Smart Phone*

Description: *Have developed codes to collect temperature, light, door opening or closing data using wireless sensors. Develop Android Apps to monitor the light, temperature and safety of an old age home.*

2. Project (2013): *Q-Free U-Shopping*

Description: *Develop Android Apps to navigate location of products in a shopping mall. Develop a U-cart using NFC reader, Arduino, and Wi-Fi modules to scan and buy any item anywhere in a shopping mall. Develop software to make secured payments online anywhere in a shopping mall and can check-out without standing in a queue to*

scan or to make payments.

3. **Project (2014):** ***A Smart Mailing System***

Description: *Design a communication module using NFC reader, Arduino, and Wi-Fi, which can be fitted in a mail box to detect the presence of a letter and to communicate the message to the receiver. Develop Android Apps to track and acknowledge the status of the mail to the sender, mail service provider and the receiver.*

4. **Project (2015):** ***Analysis and Visualization of Big Data in Hadoop Platform***

Description: *Have developed algorithms and codes to analyze the ECG batch data in the Hadoop platform using R. The processed data are stored in the HBase and Android Apps are developed for user friendly data visualization to check whether the ECG is normal or abnormal.*

Academic Honors/Awards

- Model Odia Award in Science, Technology and Education Category: By Indo European Chamber of Small and Medium Enterprises and Youth for Odisha, India. **Aug, 2017**
- Senior Member, IEEE **Nov, 2016**
- Best paper nomination: ACM SAMnet **2008**
- Excellent MS Project in Computer Science, Indian Institute of Technology, Kharagpur, India. **Dec, 2000**

Teaching

Under Graduate Courses:

✧ Network Security
✧ Linear Algebra
✧ Program Design in C
✧ Object Oriented Program Design (JAVA)
✧ Computer Networks
✧ Engineering Mathematics
✧ Discrete Mathematics

Graduate Courses:

✧ Service Oriented Architecture (Cloud Computing)
✧ Selected Topics on Networking (VANET, DSRC, IEEE 802.11p)
✧ Wireless Sensor Networks, IEEE 802.15.4
✧ Wireless Network

✧ System Performance Analysis

Services: University/College/Department

✧ Director, International Affairs Office (University level): Feb, 2013~Jan, 2017

✧ Member, Admission committee (Dept. level): Aug, 2012~Present

✧ Member, Academic affairs committee (Dept. level): Aug, 2012~Present

✧ Member, International exchange committee (Dept. level): Aug 2012~Present

Professional Activities

✧ **Editor:**

- International Journal of Vehicle Information and Communication Systems, Inderscience. **2016-Now**

✧ **Guest Editor:**

- Special issue of Int. J. of Computer and Communication Technology (IJCCT), Inderscience. **2010**

✧ **Review Panel:**

- IEEE Senior Member Application Review Panel, Oct, 2017. **2017**

✧ **Program Chair:**

- International Conference on Computer Technology (ICCT), India **2010**

✧ **Session Chair:**

- IEEE International Conference on Communications (ICC), Malaysia. **2016**
- IEEE International Conference on Measurement & Networking, Italy. **2013**
- IEEE International conference on computer, communication and informatics (ICCCI), Coimbatore, India **2012**
- ACM Workshop on Sensor, Ad Hoc, and Mesh Networks (SAMnet), Taiwan. **2008**
- IEEE Wireless and Optical Communications Networks (WOCN), Singapore **2007**

2005

- IEEE International Performance Computing and Communications Conference (IPCCC), Phoenix, USA **2018**

✧ **PC Member:**

- Wireless and Optical Communications Conference, Taiwan **2017**
- IEEE 13th International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob), Rome, Italy**,** **2017**
- Eleventh International Conference on Mobile Ubiquitous Computing, Systems, Services and Technologies, UBICOMM 2017, Barcelona, **2017**
- ACM International Symposium on Performance Evaluation of Wireless Ad Hoc, Sensor, and Ubiquitous Networks, Florida, USA **2017**
- International Conference on Big data, IoT, and Cloud Computing, Jeju, Korea **2016**
- International Conference on Energy Engineering and Smart Grids, Oxford, UK **2016**
- IEEE WiMob, New York, USA **2016**
- IEEE International Conference on Networking andNetwork Applications, Japan. **2016**
- International Conference on Sensorsand Electronic Instrumental Advances, Barcelona, Spain. **2016**
- International Conference on Environmental Research and Public Health, Shenzhen, China. **2015**
- International Conference on Sensors Engineering and Electronics Instrumental Advances, Dubai, UAE. **2015**
- International Conference on Ubiquitous Context-Awareness and Wireless Sensor Network, Korea. **2015**
- International Conference on Ubiquitous Computing Application and Wireless Sensor Network, Korea. **2014**
- 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. **2014**
- International Conference on Ubiquitous Computing Application and Wireless Sensor Network, Korea. **2013**
- 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. **2013**
- International Symposium on Wireless sensor network Technologies and Applications for Smart Space, Korea. **2011**
- IEEE International Conference on Emerging Ubiquitous Systems and Pervasive Networks, Canada. **2010**
- 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. **2010**
- IEEE Vehicular Technology Society (VTC)-Fall, Ottawa, Canada. **2009**
- IEEE Vehicular Technology Society (VTC)-Spring, Taipei, Taiwan. **2009**
- International Workshop on Advanced Distance Education Technologies, China. **2008**
- ACM PE-WASUN, Spain. **2008**
- Workshop on Ad hoc and Sensor Networks, China.

Journal Reviewer

- **2018:**Reviewer, IEEE Transactions on Vehicular Technology
- **2017:**Reviewer, IEEE Transactions onIndustrial Electronics
- **2017:**Reviewer, IEEE Transactions on Cloud Computing
- **2017:**Reviewer, Sensors journal
- **2017:** Reviewer, IEEE Transactions on Mobile Computing
- **2017:** Reviewer, Elsevier Computer Networks
- **2016:**Reviewer, IEEE Transactions on Mobile Computing

- **2016:**Reviewer, IEEE Transactions onIndustrial Electronics
- **2016:**Reviewer, IEEE Transactions on Cloud Computing
- **2016:**Reviewer, Sensors journal
- **2015:** Reviewer, IEEE Transactions on Mobile Computing
- **2015:** Reviewer, Elsevier Ad Hoc Networks
- **2015:** Reviewer, Telecommunication Systems
- **2015:** Reviewer, IEEE Transactions on Wireless Communications
- **2014:** Reviewer, IEEE Transactions on Biomedical Engineering
- **2014:** Reviewer, IEEE Transactions on Computers
- **2014:** Reviewer, Computer Networks
- **2014:** Reviewer, Computer Communications
- **2014:** Reviewer, Ad Hoc Networks
- **2014:** Reviewer, International Journal of Sensor Networks
- **2013:** Reviewer, IEEE Transactions on Wireless Communications
- **2013:** Reviewer, IEEE Transactions on Parallel and Distributed Systems
- **2013:** Reviewer, IEEE Transactions on Biomedical Engineering
- **2013:** Reviewer, Wireless Networks
- **2012:** Reviewer, EURASIP Journal on Communications and Networking
- **2012:** Reviewer, International Journal of Distributed Sensor Networks
- **2012:** Reviewer, International Journal of Digital Multimedia Broadcasting
- **2011:** Reviewer, IEEE Transactions on Parallel & Distributed Systems.
- **2011:** Reviewer, IEEE Sensor Journal
- **2011:** Reviewer, Computer Journal
- **2011:** Reviewer, IET Communications
- **2011:** Reviewer, IEEE Transactions on SMC-Part A
- **2010:** Reviewer, IEEE Transactions on Parallel & Distributed Systems.
- **2010:** Reviewer, Sensor journal.
- **2009:** Reviewer, Elsevier Journal of Information Sciences
- **2009:** Reviewer, Elsevier's Computer Communications.
- **2009:** Reviewer, IEEE Transactions on Mobile Computing.
- **2009:** Reviewer, Journal of Network and Computer Applications.
- **2009:** Reviewer, International Journal of Ad Hoc and Ubiquitous Computing.
- **2009:** Reviewer, Elsevier Journal of Performance Evaluation.
- **2008:** Reviewer, IEEE Transactions on Parallel & Distributed Systems.
- **2008:** Reviewer, IEEE Transactions on Mobile Computing.
- **2008:** Reviewer, Journal of Network and Computer Applications (JNCA).

Invited talks

- **2017:**MD Anderson Cancer Center, University of Texas, Houston, USA
- **2017:**Dept. of Oncology, Chang Gung Memorial Hospital, Linkou, Taiwan
- **2016:**Dept. of Comp. Science & Info. Engineering, Tamkang University, Taiwan
- **2016:** Dept. of Information Management, Tatung University, Taiwan
- **2015:**Dept. of Informatics, ENS, Lyon, France
- **2015:** ERIC Lab, Université Lyon I, France
- **2013:** Department of Computer Science, Old Dominion University, USA.
- **2013:** Guest Speaker, Taiwan Computer Association, Career Seminar at Tainan, Taichung and Hsinchu, Taiwan.
- **2013:** International Institute of Information Technology, Bhubaneswar, India
- **2012:** CITI Lab, INSA, Lyon, France
- **2012:** Department of Computer Science, Université Lyon I, France
- **2012:** Department of Computer Science, University of Cincinnati, USA
- **2012:** Dept. of Computer Science and Engineering, Indian Institute of Technology, Kharagpur, India
- **2012:** Institute of Technical Education and Research, Odisha, India
- **2012:** Odisha Mathematical Society, India
- **2010:** Dept. of Electronics Engineering, Chung Chou Institute of Technology, Taiwan.
- **2008:** Dept. of Electronics Engineering, Nan Kai University of Technology, Taiwan.
- **2008:** Dept. of Information Management, National Chiao-Tung University, Hsinchu, Taiwan.
- **2008:** Dept. of CSE, Yuan-Ze University, Chungli, Taiwan.

Students Advised

Past Graduated Students:

PhD:

1. SuvenduKumar Mohapatra, Graduated in July, 2017, First job: Assistant Professor, NTUST, Taiwan
2. Sudhir Ranjan Pattanaik, Graduated in July, 2017, First job: Faculty, K L University, India
3. Hwa-Chun Ma (Co-Advised), *Graduated in Feb, 2012*, First job: Assistant Professor, China University of Technology, Taipei
4. Ming-Jer Chiang, *Graduated in Feb, 2016*

Master (MS):

1. Cheng-Cheng Chien, *Graduated in July, 2014*
2. Sulagna Mohapatra, *Graduated in July, 2015*, PhD student in CGU
3. Djeane Debora Onthoni, *Graduated in Feb, 2016,* PhD student in CGU
4. Hamdani Arif: *Graduated inJuly, 2016*
5. Muhammad FebrianArdiansyah: *Graduated inJuly, 2016*
6. Toga AldilaCinderatama: *Graduated inJuly, 2016*
7. YoppyYunhasnaw: *Graduated inJuly, 2016*
8. ApriandyAngdresey: *Graduated inFeb, 2017*

Current students:

PhD:

1. Hiren Thakkar: *Joined Feb, 2014*
2. Chinmaya Dehury: *Joined Sept, 2014*
3. Djeane Debora Onthoni: *Joined Feb, 2016*
4. Pushpanjali Gupta: *Joined Sept, 2016*
5. Gone Nilakantham: *Joined Sept, 2016*
6. Sulagna Mohapatra:*Joined Feb, 2017*

Professional Membership

1. Senior Member: **IEEE since 2016**

2. Member: **ACM since 2005**