

Research outputs

Listing of Research outputs

Joint Blocklength and Location Optimization for URLLC-enabled UAV Relay Systems

Pan, C., Ren, H., Deng, Y., Elkashlan, M. & Nallanathan, A., 2019, In : IEEE COMMUNICATIONS LETTERS.

Research output: Contribution to journal › Article

Transceiver Observations in Asymmetric and Symmetric Diffusive Molecular Communication Systems

Zha, L., Deng, Y., Noel, A., Elkashlan, M. & Nallanathan, A., 15 Jul 2018, *IEEE Globecom* .

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Robust sum secrecy rate optimization for MIMO two-way full duplex systems

Chu, Z., Le, T. A., Nguyen, H. X., Nallanathan, A. & Karamanoglu, M., 8 Feb 2018, *2017 IEEE 86th Vehicular Technology Conference, VTC Fall 2017 - Proceedings*. Institute of Electrical and Electronics Engineers Inc., Vol. 2017-September. p. 1-5 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

RACH Preamble Repetition in NB-IoT Network

Jiang, N., Deng, Y., Condoluci, M., Guo, W., Nallanathan, A. & Dohler, M., 15 Jan 2018, In : IEEE COMMUNICATIONS LETTERS. PP, 99, 4 p.

Research output: Contribution to journal › Article

A New Spatio-Temporal Model for Random Access in Massive IoT Networks

Jiang, N., Deng, Y., Nallanathan, A. & Kang, X., 4 Dec 2017, *IEEE GLOBECOM*.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Massive MIMO-enabled HetNets with Full Duplex Small Cells

Akbar, S., Deng, Y., Nallanathan, A., Elkashlan, M. & Karagiannidis, G. K., 4 Dec 2017, *IEEE Global Communication Conference 2017 (GLOBECOM)*.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Microfluidic Feed Forward Loop Pulse Generator for Molecular Communication

Deng, Y., Pierobon, M. & Nallanathan, A., 4 Dec 2017, *IEEE Globecom*.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Secure Communications in Cognitive Underlay Networks over Nakagami-m Channel

Nguyen, N-P., Thanh, T. L., Duong, T. Q. & Nallanathan, A., Dec 2017, In : PHYCOM: Physical Communication. 25, 2, p. 610-618 9 p.

Research output: Contribution to journal › Article

A Microfluidic Feed Forward Loop Pulse Generator for Molecular Communication

Deng, Y., Pierobon, M. & Nallanathan, A., Nov 2017, *IEEE GLOBECOM* .

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Achieving High Availability in Heterogeneous Cellular Networks via Spectrum Aggregation

Jia, J., Deng, Y., Chen, J., Aghvami, A-H. & Nallanathan, A., 26 Sep 2017, In : IEEE Transactions on Vehicular Technology. 14 p.

Research output: Contribution to journal › Article

Modeling and Analysis of D2D Millimeter-Wave Networks with Poisson Cluster Processes

Yi, W., Liu, Y. & Nallanathan, A., 25 Aug 2017, In : IEEE Transactions on Communications. 15 p.

Research output: Contribution to journal › Article

Physical Layer Security in the Presence of Interference

Karas, D. S., Boulogeorgos, A. A. A., Karagiannidis, G. K. & Nallanathan, A., 24 Aug 2017, In : IEEE Wireless Communications Letters.

Research output: Contribution to journal › Article

Video Packet Scheduling with Stochastic QoS for Cognitive Heterogeneous Networks

Xu, L., Nallanathan, A. & Yang, Y., 11 Aug 2017, In : IEEE Transactions on Vehicular Technology. 66, 8
Research output: Contribution to journal › Article

Maximizing achievable rate of cognitive radio networks through efficient spectrum sensing and multi-level power allocation

Khomejani, S., Nguyen, H. X., Nallanathan, A. & Aghvami, H., 31 Jul 2017, *Proceedings of the 24th International Conference on Telecommunications: Intelligence in Every Form, ICT 2017*. Institute of Electrical and Electronics Engineers Inc., 7998262

Research output: Chapter in Book/Report/Conference proceeding › Other chapter contribution

Robust beamforming for secrecy rate in cooperative cognitive radio multicast communications

Nguyen, V-D., Duong, T. Q., Shin, O-S., Nallanathan, A. & Karagiannidis, G. K., 31 Jul 2017, *IEEE Proceeding of ICC'2017*. IEEE, 6 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Optimizing availability in CoMP and CA-enabled HetNets

Jia, J., Deng, Y., Chen, J., Aghvami, H., Nallanathan, A. & Wang, X., 28 Jul 2017, *2017 IEEE International Conference on Communications, ICC 2017*. Institute of Electrical and Electronics Engineers Inc., 6 p. 7996531

Research output: Chapter in Book/Report/Conference proceeding › Other chapter contribution

Two-dimensional distributed spectrum reusing in cognitive radio network: Based on game theory

Fan, C., Li, B., Zhao, C. & Nallanathan, A., 28 Jul 2017, *2017 IEEE International Conference on Communications, ICC 2017*. Institute of Electrical and Electronics Engineers Inc., 7996999

Research output: Chapter in Book/Report/Conference proceeding › Other chapter contribution

A stochastic geometry approach for analysing secrecy rate of multi-power level CRNs

Khomejani, S., Nguyen, H. X., Nallanathan, A. & Aghvami, H., 20 Jul 2017, *2017 14th IEEE Annual Consumer Communications and Networking Conference, CCNC 2017*. IEEE, p. 916-921 6 p. 7983255. (Consumer Communications & Networking Conference (CCNC), 2017 14th IEEE Annual).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Massive Multiuser MIMO in Heterogeneous Cellular Networks with Full Duplex Small Cells

Akbar, S., Deng, Y., Nallanathan, A., Elkashlan, M. & Karagiannidis, G. K., 18 Jul 2017, In : IEEE TRANSACTIONS ON COMMUNICATIONS. 65, 11, p. 4704-4719 16 p.

Research output: Contribution to journal › Article

Optimizing DF Cognitive Radio Networks with Full-Duplex-Enabled Energy Access Points

Xing, H., Kang, X., Wong, K. K. & Nallanathan, A., 1 Jul 2017, In : IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS. 16, 7, p. 4683-4697 15 p., 7924326.

Research output: Contribution to journal › Article

Angle Domain Signal Processing aided Channel Estimation for Indoor 60GHz TDD/FDD Massive MIMO Systems

Fan, D., Gao, F., Wang, G., Zhong, Z. & Nallanathan, A., 28 Jun 2017, In : IEEE Journal on Selected Areas in Communications. 1 p.

Research output: Contribution to journal › Article

Full-Duplex Small Cells for Next Generation Heterogeneous Cellular Networks: A Case Study of Outage and Rate Coverage Analysis

Al-Kadri, M. O., Deng, Y., Aijaz, A. & Nallanathan, A., 7 Jun 2017, In : IEEE Access. 5, p. 8025-8038 14 p.

Research output: Contribution to journal › Article

Industrial wireless sensor networks 2016

Sun, Q., Li, S., Zhao, S., Sun, H., Xu, L. & Nallanathan, A., 3 Jun 2017, In : International journal of distributed sensor networks. 13, 6, p. 1-2 2 p.

Research output: Contribution to journal › Editorial

Availability analysis and optimization in CoMP and CA-enabled HetNets

Jia, J., Deng, Y., Chen, J., Aghvami, A-H. & Nallanathan, A., 1 Jun 2017, In : IEEE Transactions on Communications. 65, 6, p. 2438-2450 13 p., 7874164.

Research output: Contribution to journal › Article

Performance Analysis of NOMA with Fixed Gain Relaying over Nakagami-m Fading Channels

Yue, X., Liu, Y., Kang, S. & Nallanathan, A., 17 May 2017, In : IEEE Access. 5, p. 5445-5454 10 p., 7870605.

Research output: Contribution to journal › Article

Wireless Powered Cognitive Radio Networks with Compressive Sensing and Matrix Completion

Qin, Z., Liu, Y., Gao, Y., Elkashlan, M. & Nallanathan, A., 1 Apr 2017, In : IEEE Transactions on Communications. 65, 4, p. 1464-1476 13 p., 7731231.

Research output: Contribution to journal › Article

Pattern Division for Massive MIMO Networks with Two-stage Precoding

Ma, J., Zhang, S., Li, H., Zhao, N. & Nallanathan, A., 27 Mar 2017, In : IEEE COMMUNICATIONS LETTERS. 21, p. 1665 - 1668

Research output: Contribution to journal › Article

Optimizing Availability in CoMP and CA-enabled HetNets

Jia, J., Deng, Y., Chen, J., Aghvami, A-H., Nallanathan, A. & Wang, X., 8 Mar 2017, *IEEE Proceeding of ICC'2017*. IEEE

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Reed Solomon Codes for Molecular Communication with Full Absorption Receiver

Dissanayake, M., Deng, Y., Nallanathan, A., Ekanayake, N. & Elkashlan, M., 20 Feb 2017, In : IEEE COMMUNICATIONS LETTERS. p. 1245-1248

Research output: Contribution to journal › Article

3D Stochastic Geometry Model for Large-Scale Molecular Communication Systems

Deng, Y., Noel, A., Guo, W., Nallanathan, A. & Elkashlan, M., 6 Feb 2017, *2016 IEEE Global Communications Conference, GLOBECOM 2016 - Proceedings*. Institute of Electrical and Electronics Engineers Inc., 7841486

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

High Availability Optimization in Heterogeneous Cellular Networks

Jia, J., Deng, Y., Ping, S., Aghvami, A-H. & Nallanathan, A., 6 Feb 2017, *Proceedings of IEEE GLOBECOM'2016*. Washington D.C, USA: IEEE, 6 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Non-orthogonal Multiple Access in Massive MIMO Aided Heterogeneous Networks

Liu, Y., Qin, Z., Elkashlan, M., Gao, Y. & Nallanathan, A., 6 Feb 2017, *Proceedings of IEEE GLOBECOM'2016*. Washington D.C, USA: IEEE

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Optimization for DF Relaying Cognitive Radio Networks with Multiple Energy Access Points

Xing, H., Kang, X., Wong, K-K. & Nallanathan, A., 6 Feb 2017, *Proceedings of IEEE GLOBECOM'2016*. Washington D.C, USA: IEEE, 7 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Outage probability of heterogeneous cellular networks with full-duplex small cells

Al-Kadri, M. O., Deng, Y. & Nallanathan, A., 6 Feb 2017, *2016 IEEE Global Communications Conference, GLOBECOM 2016 - Proceedings*. Washington D.C, USA: IEEE, 6 p. 7842119

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Enabling Energy Efficient Molecular Communication via Molecule Energy Transfer

Deng, Y., Guo, W., Noel, A., Nallanathan, A. & Elkashlan, M., 1 Feb 2017, In : IEEE COMMUNICATIONS LETTERS. 21, 2, p. 254-257 4 p., 16668401.

Research output: Contribution to journal › Article

Sensing Time Optimization and Power Control for Energy Efficient Cognitive Small Cell with Imperfect Hybrid Spectrum Sensing

Zhang, H., Nie, Y., Cheng, J., Leung, V. C. M. & Nallanathan, A., 1 Feb 2017, In : IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS. 16, 2, p. 730-743

Research output: Contribution to journal › Article

Joint Downlink/Uplink Design for Wireless Powered Networks with Interference

Diamantoulakis, P., Pappi, K., Karagiannidis, G. K., Xing, H. & Nallanathan, A., 25 Jan 2017, In : IEEE Access. 5, p. 1534-1547

Research output: Contribution to journal › Article

Resource allocation based on double auction for cloud computing system

Xu, L., Wang, J., Nallanathan, A. & Li, Y., 20 Jan 2017, *Proceedings - 18th IEEE International Conference on High Performance Computing and Communications, 14th IEEE International Conference on Smart City and 2nd IEEE International Conference on Data Science and Systems, HPCC/SmartCity/DSS 2016*. Institute of Electrical and Electronics Engineers Inc., p. 1538-1543 6 p. 7828562

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Joint Video Packet Scheduling, Subchannel Assignment and Power Allocation for Cognitive Heterogeneous Networks

Xu, L., Nallanathan, A. & Song, X., 16 Jan 2017, In : IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS. 16, 3, p. 1703-1712 10 p.

Research output: Contribution to journal › Article

Analyzing Large-Scale Multiuser Molecular Communication via 3-D Stochastic Geometry

Deng, Y., Noel, A., Guo, W., Nallanathan, A. & Elkashlan, M., 2017, In : IEEE Transactions on Molecular, Biological and Multi-Scale Communications.

Research output: Contribution to journal › Article

Exploiting Interference for Energy Harvesting: A Survey, Research Issues, and Challenges

Zhao, N., Zhang, S., Yu, F. R., Chen, Y., Nallanathan, A. & Leung, V. C. M., 2017, In : IEEE Access. 5, p. 10403-10421 19 p., 7931537.

Research output: Contribution to journal › Article

SMIET: Simultaneous Molecular Information and Energy Transfer

Guo, W., Deng, Y., Yilmaz, H. B., Farsad, N., Elkashlan, M., Eckford, A., Nallanathan, A. & Chae, C-B., 2017, In : IEEE WIRELESS COMMUNICATIONS.

Research output: Contribution to journal › Article

Training Based DOA Estimation in Hybrid mmWave Massive MIMO Systems

Fan, D., Deng, Y., Gao, F., Liu, Y., Wang, G., Zhong, Z. & Nallanathan, A., 2017, *IEEE GLOBECOM*.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Wireless Information and Power Transfer: A New Green Communications Paradigm

Guo, W., Deng, Y. & Nallanathan, A., 2017, *Springer*.

Research output: Chapter in Book/Report/Conference proceeding › Chapter

Physical Layer Security Jamming: Theoretical Limits and Practical Designs in Wireless Networks

Cumanan, K., Xing, H., Xu, P., Zheng, G., Dai, X., Nallanathan, A., Ding, Z. & Karagiannidis, G. K., 15 Dec 2016, In : IEEE Access. 5, p. 3603-3611 9 p.

Research output: Contribution to journal › Article

Secrecy and Energy Efficiency in Massive MIMO Aided Heterogeneous C-RAN: A New Look at Interference

Wang, L., Wong, K-K., Elkashlan, M., Nallanathan, A. & Lambotharan, S., Dec 2016, In : IEEE Journal Of Selected Topics In Signal Processing. 10, 8, p. 1375-1389 15 p., 7544500.

Research output: Contribution to journal › Article

Secure Resource Allocation for OFDMA Two-Way Relay Wireless Sensor Networks Without and With Cooperative Jamming

Zhang, H., Xing, H., Cheng, J., Nallanathan, A. & Victor C.M. Leung, V., 12 Oct 2016, In : IEEE Transactions on Industrial Informatics. 12, 5, p. 1714-1725

Research output: Contribution to journal › Article

Rate Enhancement in Cognitive Radio Networks Using Multi-level Power Transmission strategy

Khomejani, S., Nguyen, H., Nallanathan, A. & Aghvami, A-H., Oct 2016, *2016 Ninth IEEE International Workshop on Selected Topics in Mobile and Wireless Computing*. IEEE

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Wireless Powered Large-Scale Multi-Antenna AF Relaying for Cooperative Jamming-Aided Secrecy

Xing, H., Deng, Y., Wong, K-K. & Nallanathan, A., 11 Aug 2016, *IEEE International workshop on Signal Processing advances in Wireless Communications*. Institute of Electrical and Electronics Engineers Inc., Vol. 2016-August. 7536864

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Enhancing Secrecy Rate in Cognitive Radio Networks via Stackelberg Game

Al-Talabani, A. M. N. H., Deng, Y., Nallanathan, A. & Nguyen, H., 12 Jul 2016, In : IEEE Transactions on Communications. 64, 11, p. 4764-4775 12 p., 7508963.

Research output: Contribution to journal › Article

A Receiver-based Routing Protocol for Cognitive Radio Enabled AMI Networks

Yang, Z., Ping, S., Nallanathan, A. & Zhang, L., 5 Jul 2016, *IEEE Vehicular Technology Conference, 2016*. July ed. Institute of Electrical and Electronics Engineers Inc., Vol. 2016. 5 p. 7504100

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Enhancing Secrecy Rate in Cognitive Radio Networks via Multi-level Stackelberg Game

Al-Talabani, A. M. N. H., Deng, Y., Nallanathan, A. & Nguyen, H., 8 Jun 2016, In : IEEE COMMUNICATIONS LETTERS.

Research output: Contribution to journal › Article

Full-Duplex Spectrum Sharing in Cooperative Single Carrier Systems

Deng, Y., Kim, K. J., Duong, T., Elkashlan, M., Karagiannidis, G. K. & Nallanathan, A., 6 Jun 2016, In : IEEE Transactions on Cognitive Communications and Networking.

Research output: Contribution to journal › Article

Physical Layer Security in Three-Tier Wireless Sensor Networks: A Stochastic Geometry Approach

Deng, Y., Wang, L., Elkashlan, M., Nallanathan, A. & Mallik, R., Jun 2016, In : IEEE Transactions on Information Forensics and Security. 11, 6, p. 1128 - 1138

Research output: Contribution to journal › Article

Simultaneous Wireless Information and Power Transfer in K-tier Heterogeneous Cellular Networks

Akbar, S., Deng, Y., Nallanathan, A., Elkashlan, M. & Aghvami, A-H., 18 May 2016, In : IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS.

Research output: Contribution to journal › Article

An Improved K-Nearest-Neighbor Indoor Localization Method Based on Spearman Distance

Xie, Y., Wang, Y., Nallanathan, A. & Wang, L., Mar 2016, In : IEEE SIGNAL PROCESSING LETTERS. 23, 3, p. 351-355

Research output: Contribution to journal › Article

Cooperative Wideband Spectrum Sensing over Fading Channels

Sun, H., Nallanathan, A., Cui, S. & Wang, C-X., 26 Feb 2016, In : IEEE Transactions on Vehicular Technology. 99

Research output: Contribution to journal › Article

Robust Radar Emitter Recognition Based on the Three-Dimensional Distribution Feature and Transfer Learning

Yang, Z., Qiu, W., Sun, H. & Nallanathan, A., 25 Feb 2016, In : SENSORS. 16, 3

Research output: Contribution to journal › Article

An Energy-Efficient Full-Duplex MAC Protocol for Distributed Wireless Networks

Al Kadri, M. O. O., Aijaz, A. & Nallanathan, A., Feb 2016, In : IEEE Wireless Communications Letters. 5, 1, p. 44-47

Research output: Contribution to journal › Article

Performance Analysis of MIMO MRC Systems With Feedback Delay and Channel Estimation Error

Li, M., Lin, M., Zhu, W-P., Huang, Y., Nallanathan, A. & Yu, Q., Feb 2016, In : IEEE Transactions on Vehicular Technology. 65, 2, p. 707-717

Research output: Contribution to journal › Article

Energy-Efficient Chance-Constrained Resource Allocation for Multicast Cognitive OFDM Network

Xu, L. & Nallanathan, A., 21 Jan 2016, In : IEEE Journal on Selected Areas in Communications. 99, 1 p.

Research output: Contribution to journal › Article

Cooperative spectrum sensing with secondary user selection for cognitive radio networks over Nakagami-m fading channels

Vien, Q. T., Nguyen, H. X. & Nallanathan, A., 4 Jan 2016, In : IET Communications. 10, 1, p. 91-97 7 p.

Research output: Contribution to journal › Article

Downlink and Uplink Transmission in K-Tier Heterogeneous Cellular Network with Simultaneous Wireless Information and Power Transfer

Akbar, S., Deng, Y., Nallanathan, A. & ElKashlan, M., Dec 2015, *2015 IEEE Global Communications Conference (GLOBECOM)*. Institute of Electrical and Electronics Engineers Inc., 6 p. 7417762

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Hybrid Spectrum Sensing Based Power Control for Energy Efficient Cognitive Small Cell Network

Zhang, H., Nie, Y., Cheng, J., Leung, V. & Nallanathan, A., Dec 2015, *2015 IEEE Global Communications Conference (GLOBECOM)*.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Secure Multi-Antenna Transmission in Three-Tier Wireless Sensor Networks

Deng, Y., Wang, L., ElKashlan, M., Nallanathan, A. & Mallik, R., Dec 2015, *2015 IEEE Global Communications Conference (GLOBECOM)*.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Throughput Analysis for Compressive Spectrum Sensing with Wireless Power Transfer

Qin, Z., Liu, Y., Gao, Y., ElKashlan, M. & Nallanathan, A., Dec 2015, *2015 IEEE Global Communications Conference (GLOBECOM)*.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

To Harvest and Jam: A Paradigm of Self-Sustaining Friendly Jammers for Secure AF Relaying

Xing, H., Wong, K-K., Chu, Z. & Nallanathan, A., Dec 2015, In : IEEE Transactions on Signal Processing. 63, 24, p. 6616-6631

Research output: Contribution to journal › Article

Joint Design of Pilot Power and Pilot Pattern for Sparse Cognitive Radio Systems

Qi, C., Wu, L., Huang, Y. & Nallanathan, A., 1 Nov 2015, In : IEEE Transactions on Vehicular Technology. 64, 11, p. 5384-5390 7 p., 6966783.

Research output: Contribution to journal › Article

Estimation accuracy of multi-cell massive multiple-input multiple-output systems in correlated Rician fading channel
Al-Salihi, H. Q. K., Said, F., Nallanathan, A. & Wong, K. K., 22 Oct 2015, In : IEE Electronics Letters. 51, 22, p. 1830-1832 3 p.

Research output: Contribution to journal › Article

Safeguarding massive MIMO aided hetnets using physical layer security

Deng, Y., Wang, L., Wong, K-K., Nallanathan, A., Elkashlan, M. & Lambotharan, S., Oct 2015, *International Conference on Wireless Communications & Signal Processing (WCSP), 2015*.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

A Practical Semidynamic Clustering Scheme Using Affinity Propagation in Cooperative Picocells

Zhang, H., Liu, H., Jiang, C., Chu, X., Nallanathan, A. & Wen, X., Sep 2015, In : IEEE Transactions on Vehicular Technology. 64, 9, p. 4372-4377 6 p.

Research output: Contribution to journal › Article

On the security of cognitive radio networks

Elkashlan, M., Wang, L., Duong, T. Q., Karagiannidis, G. K. & Nallanathan, A., 11 Aug 2015, In : IEEE Transactions on Vehicular Technology. 64, 8, p. 3790-3795 6 p.

Research output: Contribution to journal › Article

Deep sensing for future 5G communications with mobile primary users

Li, B., Nan, Y., Zhao, C. & Nallanathan, A., 21 Jul 2015, *IEEE: International Conference on Digital Signal Processing (DSP), 2015*. p. 521 - 525

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

A Bayesian approach for nonlinear equalization and signal detection in millimeter-wave communications

Li, B., Zhao, C., Sun, M., Zhang, H., Zhou, Z. & Nallanathan, A., 1 Jul 2015, In : IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS. 14, 7, p. 3794-3809 16 p., 7058359.

Research output: Contribution to journal › Article

Deep Sensing for Future Spectrum and Location Awareness 5G Communications

Li, B., Li, S., Nallanathan, A. & Zhao, C., 1 Jul 2015, In : IEEE Journal on Selected Areas in Communications. 33, 7, p. 1331-1344 14 p.

Research output: Contribution to journal › Article

Deep Sensing for Next-Generation Dynamic Spectrum Sharing: More Than Detecting the Occupancy State of Primary Spectrum

Li, B., Li, S., Nallanathan, A., Nan, Y., Zhao, C. & Zhou, Z., 1 Jul 2015, In : IEEE Transactions on Communications. 63, 7, p. 2442-2457 16 p.

Research output: Contribution to journal › Article

Joint optimisation of secret key capacity and sparse channel estimation based on pilot power allocation

Qi, C., Nallanathan, A. & Wu, L., 25 Jun 2015, In : IEE Electronics Letters. 51, 13, p. 1033-1035 3 p.

Research output: Contribution to journal › Article

Deep sensing for 5G spectrum sharing: A random finite set approach

Li, B., Zhao, C., Nan, Y. & Nallanathan, A., 8 Jun 2015, *IEEE: International Conference on Communications 2015*. p. 4793-4798

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Enhancing physical layer security of Cognitive Radio transceiver via chaotic OFDM

Al-Talabani, A. M. N. H., Nallanathan, A. & Nguyen, H., 8 Jun 2015, *IEEE: International Conference on Communications*. p. 4805-4810

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Secure wireless energy harvesting-enabled AF-relaying SWIPT networks

Xing, H., Wong, K.-K. & Nallanathan, A., 8 Jun 2015, *IEEE: International Conference on Communications*. p. 2307-2312
Research output: Chapter in Book/Report/Conference proceeding › Conference paper

A Bayesian Approach for Adaptively Modulated Signals Recognition in Next-Generation Communications

Li, B., Li, S., Hou, J., Fu, J., Zhao, C. & Nallanathan, A., 2 Jun 2015, In : *IEEE Transactions on Signal Processing*. 63, 16, p. 4359-4372 14 p., 7116588.

Research output: Contribution to journal › Article

Ergodic Capacity of Interference Coordinated HetNet with Full-Duplex Small Cells

Al Kadri, O., Aijaz, A. & Nallanathan, A., May 2015, *European Wireless 2015: 21th European Wireless Conference; Proceedings of*. Berlin, Offenbach, Germany: VDE VERLAG GMBH, p. 521-526 6 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Interference alignment with delayed channel state information and dynamic AR-model channel prediction in wireless networks

Zhao, N., Yu, F. R., Sun, H., Yin, H., Nallanathan, A. & Wang, G., May 2015, In : *WIRELESS NETWORKS*. 21, 4, p. 1227-1242 16 p.

Research output: Contribution to journal › Article

A Novel Chaos Based Cost Function for Power Control of Cognitive Radio Networks

Al Talabani, A., Nallanathan, A. & Nguyen, H. X., 8 Apr 2015, In : *IEEE COMMUNICATIONS LETTERS*. 19, 4, p. 657-660 4 p.

Research output: Contribution to journal › Article

Pilot Design Schemes for Sparse Channel Estimation in OFDM Systems

Qi, C., Yue, G., Wu, L., Huang, Y. & Nallanathan, A., 1 Apr 2015, In : *IEEE Transactions on Vehicular Technology*. 64, 4, p. 1493-1505 13 p.

Research output: Contribution to journal › Article

Enhancing throughput of cognitive radio system with multiple power levels for primary users

Khomejani, S., Nallanathan, A., Nguyen, H. & Aghvami, A.-H., Apr 2015, *22nd International Conference on Telecommunications (ICT), 2015*. IEEE, 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Full-duplex spectrum sharing in cooperative single carrier systems

Deng, Y., Kim, K. J., Duong, T. Q., Elkashlan, M., Karagiannidis, G. K. & Nallanathan, A., Mar 2015, *Wireless Communications and Networking Conference (WCNC), 2015 IEEE*. IEEE, p. 25-30 6 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Energy Detection Based Spectrum Sensing for Cognitive Radios Over Time-Frequency Doubly Selective Fading Channels

Li, B., Sun, M., Li, X., Nallanathan, A. & Zhao, C., 15 Jan 2015, In : *IEEE Transactions on Signal Processing*. 63, 2, p. 402-417 16 p.

Research output: Contribution to journal › Article

Efficient and Robust Cluster Identification for Ultra-Wideband Propagations Inspired by Biological Ant Colony Clustering

Li, B., Zhao, C., Zhang, H., Zhou, Z. & Nallanathan, A., 14 Jan 2015, In : *IEEE Transactions on Communications*. 63, 1, p. 286-300 15 p.

Research output: Contribution to journal › Article

Paving a Wider Way for Multimedia over Cognitive Radios: An Overview of Wideband Spectrum Sensing Algorithms

Ahmad, B., Sun, H., Ling, C. & Nallanathan, A., 2015, *Multimedia over Cognitive Radio Networks: Algorithms, Protocols, and Experiments*. Hu, F. & Kumar, S. (eds.). CRC PRESS-TAYLOR & FRANCIS GROUP, p. 33-82 49 p. 2

Research output: Chapter in Book/Report/Conference proceeding › Chapter

Harvest-and-jam: Improving security for wireless energy harvesting cooperative networks

Xing, H., Chu, Z., Ding, Z. & Nallanathan, A., 9 Dec 2014, *2014 IEEE Global Communications Conference, GLOBECOM 2014*. Institute of Electrical and Electronics Engineers Inc., p. 3145-3150 6 p. 7037289

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Resource management in cognitive opportunistic access femtocells with imperfect spectrum sensing

Zhang, H., Jiang, C., Mao, X. & Nallanathan, A., 9 Dec 2014, *2014 IEEE Global Communications Conference, GLOBECOM 2014*. Institute of Electrical and Electronics Engineers Inc., p. 3098-3102 5 p. 7037281

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Two-way relaying networks with wireless power transfer: Policies design and throughput analysis

Liu, Y., Wang, L., Elkashlan, M., Duong, T. Q. & Nallanathan, A., 9 Dec 2014, *2014 IEEE Global Communications Conference, GLOBECOM 2014*. Institute of Electrical and Electronics Engineers Inc., p. 4030-4035 6 p. 7037438

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Energy detection based spectrum sensing in the presence of time-frequency double selective fading propagations

Li, B., Zhao, C., Sun, M. & Nallanathan, A., Dec 2014, *Global Communications Conference (GLOBECOM), 2014 IEEE*. IEEE, p. 3051-3056 6 p.

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Joint inter-cell interference coordination and forced cooperative scheduling for the downlink of LTE systems

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Spectrum Sensing for Cognitive Radios in Time-Variant Flat-Fading Channels: A Joint Estimation Approach

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Research output: Contribution to journal › Article

On the feasibility of the CJ three-user interference alignment scheme for SISO OFDM systems

Zhang, Q., Yong, Q., Qin, J. & Nallanathan, A., 1 Feb 2014, In : *IEEE COMMUNICATIONS LETTERS*. 18, 2, p. 309-312 4 p., 6708134.

Research output: Contribution to journal › Article

Efficient Beamforming Training for 60-GHz Millimeter-Wave Communications: A Novel Numerical Optimization Framework

Li, B., Zhou, Z., Zhang, H. & Nallanathan, A., Feb 2014, In : *IEEE Transactions on Vehicular Technology*. 63, 2, p. 703-717 15 p., 6587076.

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Research output: Contribution to journal › Article

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Research output: Contribution to journal › Editorial

Sub-Nyquist Sampling and Compressed Sensing in Cognitive Radio Networks

Sun, H., Nallanathan, A. & Jiang, J., 2014, *Compressed Sensing & Sparse Filtering*. Berlin: Springer Berlin Heidelberg, p. 149-185 37 p. (Signals and Communication Technology).

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Distributed switch-and-stay combining in cognitive relay networks under spectrum sharing constraints

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Research output: Chapter in Book/Report/Conference proceeding › Conference paper

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Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Biological cluster identification for ultra-wideband multipath propagations

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A Novel Interference Alignment Scheme Based on Sequential Antenna Switching in Wireless Networks

Zhao, N., Yu, F. R., Sun, H., Nallanathan, A. & Yin, H., Oct 2013, In : *IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS*. 12, 10, p. 5008-5021 14 p.

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Modified compressive sensing based receiver for impulse radio communications in UWB channels

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Block Coordinated Beamforming Algorithm for Multi-Cell MISO Downlink Systems

He, S., Huang, Y., Nallanathan, A., Yang, L., Jiang, L., Lei, M. & Jin, S., Jun 2013, *2013 IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS (ICC)*. NEW YORK: IEEE, p. 4926-4930 5 p. 6655358. (IEEE International Conference on Communications).

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WIDEBAND SPECTRUM SENSING FOR COGNITIVE RADIO NETWORKS: A SURVEY

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Research output: Contribution to journal › Article

Cognitive Amplify-and-Forward Relaying with Best Relay Selection in Non-Identical Rayleigh Fading

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Joint estimation based spectrum sensing for cognitive radios in time-variant fading channels

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Numerical Optimization Based Efficient Beam Switching for 60GHz Millimeter-wave Communications

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Research output: Contribution to journal › Article

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Hybrid radar emitter recognition based on rough k-means classifier and SVM

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Research output: Contribution to journal › Article

A Multi-Cell Beamforming Design by Uplink-Downlink Max-Min SINR Duality

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An Energy-Efficient Cooperative Spectrum Sensing Scheme for Cognitive Radio Networks

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Distributed Space-Time Coding in Two-Way Fixed Gain Relay Networks over Nakagami-m Fading

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Invited Paper: Secure Resource Allocation for OFDMA Two-Way Relay Networks via Cooperative Jamming

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Performance of Beamforming in Correlated MISO Systems with Estimation Error and Feedback Delay

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Optimization of Cooperative Spectrum Sensing in Cognitive Radio

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Research output: Contribution to journal › Article

Effect of Feedback Delay on Amplify-and-Forward Relay Networks With Beamforming

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Research output: Chapter in Book/Report/Conference proceeding › Conference paper

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A UWB Localization Scheme for LOS and NLOS Environments Using Orthogonal Codes

Cao, W., Zhang, Q. & Nallanathan, A., 2011, *2011 IEEE INTERNATIONAL CONFERENCE ON ULTRA-WIDEBAND (ICUWB)*. NEW YORK: IEEE, p. 91-95 5 p.

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Amplify-and-Forward Relaying with Optimal and Suboptimal Transmit Antenna Selection

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Research output: Contribution to journal › Article

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OSTBC Transmission in MIMO AF Relay Systems with Keyhole and Spatial Correlation Effects

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Research output: Contribution to journal › Article

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Optimal Training Sequences for Channel Estimation in Bi-Directional Relay Networks with Multiple Antennas

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Research output: Contribution to journal › Article

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Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Cramer-Rao Lower Bounds for UWB Localization with Antenna Array

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Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Doubly Iterative Receiver for MIMO Amplify-and-Forward Relay Networks

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Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Joint Channel Estimation and Data Detection for MIMO-OFDM Two-Way Relay Networks

Pham, T-H., Liang, Y-C., Garg, H. K. & Nallanathan, A., 2010, *2010 IEEE GLOBAL TELECOMMUNICATIONS CONFERENCE GLOBECOM 2010*. NEW YORK: IEEE, 5 p. (IEEE Global Telecommunications Conference (Globecom)).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

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Delay-Tolerant Distributed Linear Convolutional Space-Time Code with Minimum Memory Length under Frequency-Selective Channels

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Research output: Contribution to journal › Article

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Research output: Contribution to journal › Article

Combined Synchronization and Power Control for Differentially-Encoded Di-Symbol Time-Division Multiuser Impulse Radio

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Research output: Contribution to journal › Article

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Doubly Iterative Receiver for Block Transmissions with EM-Based Channel Estimation

Pham, T-H., Liang, Y-C. & Nallanathan, A., Feb 2009, In : IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS. 8, 2, p. 656 - 661 6 p., 4786424.

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Optimal Power Allocation for Fading Channels in Cognitive Radio Networks: Ergodic Capacity and Outage Capacity

Kang, X., Liang, Y-C., Nallanathan, A., Garg, H. K. & Zhang, R., Feb 2009, In : IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS. 8, 2, p. 940 - 950 11 p., 4786456.

Research output: Contribution to journal › Article

A Joint Channel Estimation and Data Detection Receiver for Multiuser MIMO OFDM Systems

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A Novel High Data Rate Prerake UWB System Using Orthogonal Codes and Chip-Interleaving

Cao, W., Zhang, Q., Nallanathan, A. & Garg, H. K., 2009, *2009 IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS, VOLS 1-8*. NEW YORK: IEEE, p. 3594-3598 5 p. (IEEE International Conference on Communications).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Channel Estimation for Amplify-and-Forward Two-Way Relay Network with Power Allocation

Jiang, B., Gao, F., Gao, X. & Nallanathan, A., 2009, *2009 IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS, VOLS 1-8*. NEW YORK: IEEE, p. 3066-3070 5 p. (IEEE International Conference on Communications).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Delay-Tolerant Distributed Linear Convolutional Space-Time Code under Frequency-selective Channels

Zhong, Z., Zhu, S. & Nallanathan, A., 2009, *2009 IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS, VOLS 1-8*. NEW YORK: IEEE, p. 4108-4112 5 p. (IEEE International Conference on Communications).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Iterative Receiver for Multi-Input Multi-Output (MIMO) Two-Way Wireless Relay Systems

Pham, T-H., Liang, Y-C., Nallanathan, A. & Krishna, G. H., 2009, *2009 IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS, VOLS 1-8*. NEW YORK: IEEE, p. 3187-3191 5 p. (IEEE International Conference on Communications).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

OPTIMIZATION IN DISTRIBUTED COOPERATIVE SPECTRUM SENSING FOR COGNITIVE RADIO

Cui, T., Gao, F. & Nallanathan, A., 2009, *SPAWC: 2009 IEEE 10TH WORKSHOP ON SIGNAL PROCESSING ADVANCES IN WIRELESS COMMUNICATIONS*. NEW YORK: IEEE, p. 106-110 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

On the Design of Optimal Training Sequence for Bi-Directional Relay Networks

Pham, T-H., Liang, Y-C., Nallanathan, A. & Krishna, G. H., 2009, In : *IEEE SIGNAL PROCESSING LETTERS*. 16, 1-3, p. 200-203 4 p.

Research output: Contribution to journal › Article

Optimum training sequence design for multi-input multi-output (MIMO) two-way wireless relay networks

Pham, T. H., Liang, Y. C., Nallanathan, A. & Krishna, G. H., 2009, *ICICS 2009 - Conference Proceedings of the 7th International Conference on Information, Communications and Signal Processing*. (ICICS 2009 - Conference Proceedings of the 7th International Conference on Information, Communications and Signal Processing).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Semi-Blind Channel Estimation for Space-Time Coded Amplify-and-Forward Relay Networks

Lu, Y., Gao, F., Sadasivan, P. & Nallanathan, A., 2009, *GLOBECOM 2009 - 2009 IEEE GLOBAL TELECOMMUNICATIONS CONFERENCE, VOLS 1-8*. Ulema, M. (ed.). NEW YORK: IEEE, p. 1684-1688 5 p. (IEEE Global Telecommunications Conference (Globecom)).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Optimal Training Sequence Design for Bi-Directional Relay Networks

Pham, T-H., Liang, Y-C. & Nallanathan, A., 4 Dec 2008, *GLOBECOM 2008 - 2008 IEEE GLOBAL TELECOMMUNICATIONS CONFERENCE*. NEW YORK: IEEE, 5 p. (IEEE Global Telecommunications Conference (Globecom)).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Delay-Sum Antenna Array Reception for Transmitted-Reference Impulse Radio (TR-IR) Systems

Zhang, Q. & Nallanathan, A., Dec 2008, In : *IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS*. 7, 12, p. 5208 - 5213 6 p., 4723326.

Research output: Contribution to journal › Article

Optimal Training Design for Channel Estimation in Decode-and-Forward Relay Networks With Individual and Total Power Constraints

Gao, F., Cui, T. & Nallanathan, A., Dec 2008, In : *IEEE Transactions on Signal Processing*. 56, 12, p. 5937 - 5949 13 p., 4608751.

Research output: Contribution to journal › Article

A Computationally Efficient Joint Channel Estimation and Data Detection for SIMO Systems

Pham, T-H., Nallanathan, A. & Liang, Y-C., Nov 2008, In : IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS. 7, 11, p. 4041 - 4046 6 p., 4684574.

Research output: Contribution to journal › Article

Transmitted-Reference Impulse Radio Systems Based on Selective Combining

Zhang, Q. & Nallanathan, A., Nov 2008, In : IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS. 7, 11, p. 4105 - 4109 5 p., 4684585.

Research output: Contribution to journal › Article

A novel High Data Rate Prerake DS UWB multiple access system: Interference modeling and tradeoff between energy capture and imperfect channel estimation effect

Cao, W., Nallanathan, A. & Chai, C. C., Sep 2008, In : IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS. 7, 9, p. 3558-3567 10 p.

Research output: Contribution to journal › Article

ML Based Estimation of Frequency and Phase Offsets in DCT-OFDM Systems via Non-Circular Sources: Algorithms, Analysis and Comparisons

Gao, F., Cui, T., Nallanathan, A. & Tellambura, C., Sep 2008, In : IEEE TRANSACTIONS ON COMMUNICATIONS. 56, 9, p. 1425 - 1429 5 p.

Research output: Contribution to journal › Article

Improved MUSIC under the coexistence of both circular and noncircular sources

Gao, F. F., Nallanathan, A. & Wang, Y. D., Jul 2008, In : IEEE Transactions on Signal Processing. 56, 7, p. 3033 - 3038 6 p.

Research output: Contribution to journal › Article

On channel estimation and optimal training design for amplify and forward relay networks

Gao, F. F., Cui, T. & Nallanathan, A., May 2008, In : IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS. 7, 5, p. 1907 - 1916 10 p., 4524288.

Research output: Contribution to journal › Article

Scattered pilots and virtual carriers based frequency offset tracking for OFDM systems: Algorithms, identifiability, and performance analysis

Gao, F. F., Cui, T. & Nallanathan, A., Apr 2008, In : IEEE TRANSACTIONS ON COMMUNICATIONS. 56, 4, p. 619 - 629 11 p.

Research output: Contribution to journal › Article

Joint channel and frequency offset estimation in distributed MIMO flat-fading channels

Pham, T-H., Nallanathan, A. & Liang, Y-C., Feb 2008, In : IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS. 7, 2, p. 648-656 9 p.

Research output: Contribution to journal › Article

Robust subspace blind channel estimation for cyclic prefixed MIMO OFDM systems: Algorithm, identifiability and performance analysis

Gao, F. F., Zeng, Y. H., Nallanathan, A. & Ng, T. S., Feb 2008, In : IEEE Journal on Selected Areas in Communications. 26, 2, p. 378 - 388 11 p.

Research output: Contribution to journal › Article

Resolving Multi-Dimensional Ambiguity in Blind Channel Estimation of MIMO-FIR Systems via Block Precoding

Gao, F. & Nallanathan, A., Jan 2008, In : IEEE Transactions on Vehicular Technology. 57, 1, p. 11 - 21 11 p.

Research output: Contribution to journal › Article

A Novel Distributed Space-Time Trellis Code for Asynchronous Cooperative Communications under Frequency-Selective Channels

Zhong, Z., Zhu, S. & Nallanathan, A., 2008, *GLOBECOM 2008 - 2008 IEEE GLOBAL TELECOMMUNICATIONS CONFERENCE*. NEW YORK: IEEE, 5 p. 4786441. (IEEE Global Telecommunications Conference (Globecom)).
Research output: Chapter in Book/Report/Conference proceeding › Conference paper

A Symbol-by-Symbol Channel Estimation Receiver for Space-Time Block Coded Systems and its Performance Analysis on the Nonselective Rayleigh Fading Channel

Shan, C., Kam, P. Y. & Nallanathan, A., 2008, In : *IEEE TRANSACTIONS ON COMMUNICATIONS*. 56, 12, p. 2116 - 2124 9 p.

Research output: Contribution to journal › Article

An Iterative Receiver for Distributed Multi-Input Multi-Output (MIMO) Flat-Fading Channels

Pham, T-H., Nallanathan, A. & Liang, Y-C., 2008, *GLOBECOM 2008 - 2008 IEEE GLOBAL TELECOMMUNICATIONS CONFERENCE*. NEW YORK: IEEE, 5 p. (IEEE Global Telecommunications Conference (Globecom)).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Exact BER Analysis of DS UWB Multiple Access System in Lognormal Multipath Fading Channels

Cao, W., Nallanathan, A. & Chai, CC., 2008, In : *IEE Proceedings in Communications*. 2, 3, p. 410 - 421 12 p.

Research output: Contribution to journal › Article

Improved cooperative spectrum sensing in cognitive radio

Chen, Q., Gao, F., Nallanathan, A. & Xin, Y., 2008, *2008 IEEE 67TH VEHICULAR TECHNOLOGY CONFERENCE-SPRING, VOLS 1-7*. NEW YORK: IEEE, p. 1418-1422 5 p. (IEEE VTS Vehicular Technology Conference Proceedings).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Joint channel estimation and data detection for Multi Input Multi Output Single Carrier Cyclic Prefix (MIMO SCCP) systems

Pham, T. H., Liang, Y. C. & Nallanathan, A., 2008, *2008 IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS, PROCEEDINGS, VOLS 1-13*. NEW YORK: IEEE, p. 594-598 5 p. (IEEE International Conference on Communications).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Maximum Likelihood Channel Estimation in Decode-and-Forward Relay Networks

Gao, F., Cui, T. & Nallanathan, A., 2008, *2008 IEEE INTERNATIONAL SYMPOSIUM ON INFORMATION THEORY PROCEEDINGS, VOLS 1-6*. NEW YORK: IEEE, p. 1233-1237 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Maximum Likelihood Detection for Differential Unitary Space-Time Modulation with Carrier Frequency Offset

Gao, F., Cui, T., Nallanathan, A. & Tellambura, C., 2008, In : *IEEE TRANSACTIONS ON COMMUNICATIONS*. 56, 11, p. 1881 - 1891 11 p.

Research output: Contribution to journal › Article

Optimal power allocation for fading channels in cognitive radio networks: Delay-limited capacity and outage capacity

Kang, X., Liang, Y-C. & Nallanathan, A., 2008, *2008 IEEE 67TH VEHICULAR TECHNOLOGY CONFERENCE-SPRING, VOLS 1-7*. NEW YORK: IEEE, p. 1544-1548 5 p. (IEEE VTS Vehicular Technology Conference Proceedings).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Optimal power allocation for fading channels in cognitive radio networks under transmit and interference power constraints

Kang, X., Liang, Y-C. & Nallanathan, A., 2008, *2008 IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS, PROCEEDINGS, VOLS 1-13*. NEW YORK: IEEE, p. 3568-3572 5 p. (IEEE International Conference on Communications).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Reduced Complexity ML Detection for Differential Unitary Space-Time Modulation with Carrier Frequency Offset

Gao, F., Nallanathan, A. & Tellambura, C., 2008, *GLOBECOM 2008 - 2008 IEEE GLOBAL TELECOMMUNICATIONS CONFERENCE*. NEW YORK: IEEE, 6 p. (IEEE Global Telecommunications Conference (Globecom)).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Training signal design for channel estimation in decode and forward relay networks

Gao, F., Cui, T. & Nallanathan, A., 2008, *2008 IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS, PROCEEDINGS, VOLS 1-13*. NEW YORK: IEEE, p. 4306-4310 5 p. (IEEE International Conference on Communications).
Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Performance analysis of prerake DS UWB multiple access system under imperfect channel estimation

Cao, W., Nallanathan, A. & Chat, C. C., Nov 2007, In : *IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS*. 6, 11, p. 3892-3896 5 p.

Research output: Contribution to journal › Article

Chase decoding of linear Z(4) codes at low to moderate rates

Armand, M. A., Halim, A. & Nallanathan, A., Oct 2007, In : *IEEE COMMUNICATIONS LETTERS*. 11, 10, p. 811-813 3 p.

Research output: Contribution to journal › Article

Blind channel estimation for cyclic-prefixed single-carrier system's by exploiting real symbol characteristics

Gao, F., Nallanathan, A. & Tellambura, C., Sep 2007, In : *IEEE Transactions on Vehicular Technology*. 56, 5, p. 2487-2498 12 p.

Research output: Contribution to journal › Article

Blind channel estimation for OFDM systems via a generalized precoding

Gao, F. & Nallanathan, A., May 2007, In : *IEEE Transactions on Vehicular Technology*. 56, 3, p. 1155-1164 10 p.

Research output: Contribution to journal › Article

Reply to "A comment on 'Blind maximum likelihood CFO estimation for OFDM systems via polynomial rooting'"

Gao, F. & Nallanathan, A., Apr 2007, In : *IEEE SIGNAL PROCESSING LETTERS*. 14, 4, p. 292-292 1 p.

Research output: Contribution to journal › Editorial

Blind channel estimation for MIMO OFDM systems via nonredundant linear precoding

Gao, F. & Nallanathan, A., Feb 2007, In : *IEEE Transactions on Signal Processing*. 55, 2, p. 784-789 6 p.

Research output: Contribution to journal › Article

A novel High Data Rate Prerake DS UWB multiple access system and its accurate interference model

Cao, W., Nallanathan, A., Chai, C. C. & Nallanathan, A., 2007, *GLOBECOM 2007: 2007 IEEE GLOBAL TELECOMMUNICATIONS CONFERENCE, VOLS 1-11*. NEW YORK: IEEE, p. 3781-3785 5 p. (IEEE Global Telecommunications Conference (Globecom)).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

A novel blind channel estimation for CP-based MIMO OFDM systems

Gao, F., Wu, W., Zeng, Y., Nallanathan, A. & Nallanathan, A., 2007, *2007 IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS, VOLS 1-14*. NEW YORK: IEEE, p. 2586-2591 6 p. (IEEE International Conference on Communications).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

A novel high data rate DS UWB communication system via superposition of chip waveforms

Cao, W., Nallanathan, A. & Chai, C. C., 2007, *2007 IEEE International Conference on Ultra-Wideband, ICUWB*. p. 423-428 6 p. (2007 IEEE International Conference on Ultra-Wideband, ICUWB).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Doubly iterative receiver for single carrier cyclic-prefix transmissions with EM-based channel estimation

Pham, T-H., Liang, Y-C., Nallanathan, A. & Nallanathan, A., 2007, *GLOBECOM 2007: 2007 IEEE GLOBAL TELECOMMUNICATIONS CONFERENCE, VOLS 1-11*. NEW YORK: IEEE, p. 2852-2856 5 p. (IEEE Global Telecommunications Conference (Globecom)).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Frequency offset tracking for OFDM systems via scattered pilots and virtual carriers

Cui, T., Gao, F. & Nallanathan, A., 2007, *2007 IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS, VOLS 1-14*. NEW YORK: IEEE, p. 5120-5125 6 p. (IEEE International Conference on Communications).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

ML CFO and PO estimation in DCT OFDM systems under non-circular transmissions

Cui, T., Gao, F., Nallanathan, A. & Tellambura, C., 2007, *2007 IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS, VOLS 1-14*. NEW YORK: IEEE, p. 6275-6280 6 p. (IEEE International Conference on Communications).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Maximum likelihood detection and optimal code design for differential unitary space-time modulation with carrier frequency offset

Cui, T., Gao, F., Nallanathan, A. & Tellambura, C., 2007, *GLOBECOM 2007: 2007 IEEE GLOBAL TELECOMMUNICATIONS CONFERENCE, VOLS 1-11*. NEW YORK: IEEE, p. 2811-2815 5 p. (IEEE Global Telecommunications Conference (Globecom)).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Optimal training design for channel estimation in amplify and forward relay networks

Cui, T., Gao, F. & Nallanathan, A., 2007, *GLOBECOM 2007: 2007 IEEE GLOBAL TELECOMMUNICATIONS CONFERENCE, VOLS 1-11*. NEW YORK: IEEE, p. 4015-4019 5 p. (IEEE Global Telecommunications Conference (Globecom)).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Coexistence of wireless LANs and Bluetooth networks in mutual interference environment: An integrated analysis

Nallanathan, A., Feng, W. & Garg, H. K., 15 Dec 2006, In : *COMPUTER COMMUNICATIONS*. 30, 1, p. 192-201 10 p.

Research output: Contribution to journal › Article

Low-cost blind carrier frequency offset estimator for down-link MIMO multicarrier systems

Mi, L., Attallah, S. & Nallanathan, A., Dec 2006, In : *IEE Proceedings in Communications*. 153, 6, p. 901-908 8 p.

Research output: Contribution to journal › Article

Modeling of multiple access interference and BER derivation for TH and DS UWB multiple access systems

Niranjan, S., Nallanathan, A. & Kannan, B., Oct 2006, In : *IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS*. 5, 10, p. 2794-2804 11 p.

Research output: Contribution to journal › Article

Identifiability of data-aided carrier-frequency offset estimation over frequency selective channels

Gao, F. & Nallanathan, A., Sep 2006, In : *IEEE Transactions on Signal Processing*. 54, 9, p. 3653-3657 5 p.

Research output: Contribution to journal › Article

A non-resampling sequential Monte Carlo detector for coded OFDM systems based on periodic termination of differential phase trellis

John, T. S., Nallanathan, A. & Armand, M. A., Jul 2006, In : *IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS*. 5, 7, p. 1846-1856 11 p.

Research output: Contribution to journal › Article

Performance of DS-UWB multiple-access systems with diversity reception in dense multipath environments

Tan, S-S., Nallanathan, A. & Kannan, B., Jul 2006, In : *IEEE Transactions on Vehicular Technology*. 55, 4, p. 1269-1280 12 p.

Research output: Contribution to journal › Article

Performance of UWB multiple-access impulse radio systems with antenna array in dense multipath environments

Tan, SS., Kannan, B. & Nallanathan, A., Jun 2006, In : *IEEE Transactions on Communications*. 54, 6, p. 966-970 5 p.

Research output: Contribution to journal › Article

Blind maximum likelihood CFO estimation for OFDM systems via polynomial rooting

Gao, FF. & Nallanathan, A., Feb 2006, In : *IEEE SIGNAL PROCESSING LETTERS*. 13, 2, p. 73-76 4 p.

Research output: Contribution to journal › Article

Multiple access capacity of UWB M-ary impulse radio systems with antenna array

Tan, SS., Karman, B. & Nallanathan, A., Jan 2006, In : IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS. 5, 1, p. 61-66 6 p.

Research output: Contribution to journal › Article

A Novel Subspace-Based Blind Channel Estimation for Cyclic Prefixed Single-Carrier Transmissions

Gao, F., Nallanathan, A. & Nallanathan, A., 2006, *2006 IEEE WIRELESS COMMUNICATIONS AND NETWORKING CONFERENCE (WCNC 2006), VOLS 1-4*. NEW YORK: IEEE, p. 1537-1542 6 p. (IEEE Wireless Communications and Networking Conference).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

A Simple Subspace-Based Blind Channel Estimation for OFDM Systems

Gao, F., Nallanathan, A. & Nallanathan, A., 2006, *2006 IEEE WIRELESS COMMUNICATIONS AND NETWORKING CONFERENCE (WCNC 2006), VOLS 1-4*. NEW YORK: IEEE, p. 1515-1518 4 p. (IEEE Wireless Communications and Networking Conference).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

An EM-based joint channel estimation and data detection for SIMO systems

Pham, T-H., Nallanathan, A. & Liang, Y-C., 2006, *2006 IEEE ASIA PACIFIC CONFERENCE ON CIRCUITS AND SYSTEMS*. NEW YORK: IEEE, p. 143-146 4 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Blind Channel Estimation for OFDM Systems via A General Non-Redundant Precoding

Gao, F., Nallanathan, A. & Nallanathan, A., 2006, *2006 IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS, VOLS 1-12*. NEW YORK: IEEE, p. 4612-4617 6 p. (IEEE International Conference on Communications).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Exact BER Analysis of DS PAM UWB Multiple Access System in Lognormal Multipath Fading Channels

Cao, W., Nallanathan, A., Chai, C. C. & Nallanathan, A., 2006, *2006 IEEE 64TH VEHICULAR TECHNOLOGY CONFERENCE, VOLS 1-6*. NEW YORK: IEEE, p. 687-691 5 p. (IEEE VTS Vehicular Technology Conference Proceedings).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Exact BER Analysis of DS PPM UWB Multiple Access System in Lognormal Multipath Fading Channels

Cao, W., Nallanathan, A., Chai, C. C. & Nallanathan, A., 2006, *GLOBECOM 2006 - 2006 IEEE GLOBAL TELECOMMUNICATIONS CONFERENCE*. NEW YORK: IEEE, 5 p. (IEEE Global Telecommunications Conference (Globecom)).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Higher-Dimensional Ambiguity Free Blind Channel Estimation for MIMO-FIR Systems via Linear Block Precoding

Gao, F. & Nallanathan, A., 2006, *GLOBECOM 2006 - 2006 IEEE GLOBAL TELECOMMUNICATIONS CONFERENCE*. NEW YORK: IEEE, 6 p. (IEEE Global Telecommunications Conference (Globecom)).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Identifiability of Training Based CFO Estimation over Frequency Selective Channels

Gao, F., Nallanathan, A. & Nallanathan, A., 2006, *2006 IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS, VOLS 1-12*. NEW YORK: IEEE, p. 1421-1426 6 p. (IEEE International Conference on Communications).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Improved MUSIC by exploiting both real and complex sources

Gao, F., Wang, Y. & Nallanathan, A., 2006, *MILCOM 2006, Vols 1-7*. NEW YORK: IEEE, p. 311-316 6 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Joint Channel Estimation and Data Detection for SIMO Systems: An EM-Based Approach

The-Hanh Pham, N. V., Nallanathan, A., Liang, Y. -C. & Nallanathan, A., 2006, *2006 IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS, VOLS 1-12*. NEW YORK: IEEE, p. 4285-4290 6 p. (IEEE International

Conference on Communications).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Joint channel estimation and data detection for MIMO systems: A SAGE-based approach

Pham, T-H., Nallanathan, A. & Liang, Y. -C., 2006, *MILCOM 2006, Vols 1-7*. NEW YORK: IEEE, p. 2096-2102 7 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

On the Tradeoff between Data Rate and BER Performance of Pre-RAKE DS UWB System

Cao, W., Nallanathan, A., Chai, C. C. & Nallanathan, A., 2006, *GLOBECOM 2006 - 2006 IEEE GLOBAL TELECOMMUNICATIONS CONFERENCE*. NEW YORK: IEEE, 5 p. (IEEE Global Telecommunications Conference (Globecom)).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

On the multiple access performance of Prerake DS UWB system

Cao, W., Nallanathan, A. & Chai, C. C., 2006, *MILCOM 2006, Vols 1-7*. NEW YORK: IEEE, p. 342-348 7 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Polynomial Rooting Based Maximum Likelihood Carrier Frequency Offset Estimation for OFDM Systems

Gao, F., Nallanathan, A. & Nallanathan, A., 2006, *2006 IEEE WIRELESS COMMUNICATIONS AND NETWORKING CONFERENCE (WCNC 2006), VOLS 1-4*. NEW YORK: IEEE, p. 1046-1049 4 p. (IEEE Wireless Communications and Networking Conference).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Subspace-Based Blind Channel Estimation for SISO, MISO and MIMO OFDM Systems

Gao, F., Nallanathan, A. & Nallanathan, A., 2006, *2006 IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS, VOLS 1-12*. NEW YORK: IEEE, p. 3025-3030 6 p. (IEEE International Conference on Communications).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

TRANSMIT ANTENNA SELECTION FOR SPACE-TIME BLOCK CODED SYSTEMS WITH CHANNEL ESTIMATION

Shan, C., Kam, P. Y., Nallanathan, A. & Nallanathan, A., 2006, *2006 IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS, VOLS 1-12*. NEW YORK: IEEE, p. 1532-1536 5 p. (IEEE International Conference on Communications).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Ultra-wideband communication systems: Technology and applications

Svensson, A., Nallanathan, A. & Tewfik, A., 2006, In : *Eurasip Journal On Wireless Communications And Networking*. 3 p. , 16497.

Research output: Contribution to journal › Editorial

A low-cost blind carrier offset estimator for MIMO-OFDM systems

Mi, L., Nallanathan, A. & Attallah, S., 2005, *MILCOM 2005 - 2005 IEEE MILITARY COMMUNICATIONS CONFERENCE, VOLS 1-5*. NEW YORK: IEEE, p. 2558-2562 5 p. (IEEE Military Communications Conference).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

A pilot-aided non-resampling sequential Monte Carlo detector for coded MIMO-OFDM systems

John, TS., Nallanathan, A. & Armand, MA., 2005, *GLOBECOM '05: IEEE GLOBAL TELECOMMUNICATIONS CONFERENCE, VOLS 1-6*. NEW YORK: IEEE, p. 2250-2254 5 p. (IEEE Global Telecommunications Conference (Globecom)).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

An iterative interference cancellation scheme for STBC multirate multiuser systems

Pham, TH., Nallanathan, A. & Kannan, B., 2005, *2005 IEEE Wireless Communications and Networking Conference, Vols 1-4*. NEW YORK: IEEE, p. 521-526 6 p. (IEEE Wireless Communications and Networking Conference).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Blind carrier offset estimation for MIMO MC-CDMA systems with low complexity

Mi, L., Nallanathan, A. & Attallah, S., 2005, *ISSPA 2005: The 8th International Symposium on Signal Processing and its Applications, Vols 1 and 2, Proceedings*. NEW YORK: IEEE, p. 127-130 4 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Characterization of a cascade LMS predictor

Huang, DY., Su, W. & Nallanathan, A., 2005, *2005 IEEE INTERNATIONAL CONFERENCE ON ACOUSTICS, SPEECH, AND SIGNAL PROCESSING, VOLS 1-5*. NEW YORK: IEEE, p. 173-176 4 p. (International Conference on Acoustics Speech and Signal Processing ICASSP).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Exact BER analysis of DS PPM UWB multiple access system under imperfect power control

Cao, W., Nallanathan, A., Kannan, B. & Chai, C. C., 2005, *MILCOM 2005 - 2005 IEEE MILITARY COMMUNICATIONS CONFERENCE, VOLS 1-5*. NEW YORK: IEEE, p. 977-982 6 p. (IEEE Military Communications Conference).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Exact BER analysis of DS-UWB multiple access system under imperfect power control

Wei, C., Nallanathan, A., Kannan, B. & Chai, CC., 2005, *VTC2005-FALL: 2005 IEEE 62ND VEHICULAR TECHNOLOGY CONFERENCE, 1-4, PROCEEDINGS*. NEW YORK: IEEE, p. 986-990 5 p. (IEEE VTS Vehicular Technology Conference Proceedings).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Exact Modeling of multiple access interference and BER derivation for TH-PPM UWB

Niranjayan, S., Nallanathan, A. & Kannan, B., 2005, *2005 IEEE Wireless Communications and Networking Conference, Vols 1-4*. NEW YORK: IEEE, p. 801-806 6 p. (IEEE Wireless Communications and Networking Conference).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Modeling of multiple access interference and SER derivation for M-ary TH-PAM/PPM UWB systems

Niranjayan, S., Nallanathan, A. & Kannan, B., 2005, *VTC2005-SPRING: 2005 IEEE 61ST VEHICULAR TECHNOLOGY CONFERENCE, VOLS 1-5, PROCEEDINGS*. NEW YORK: IEEE, p. 2008-2012 5 p. (IEEE VTS Vehicular Technology Conference Proceedings).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Multiple access performance of direct sequence ultra wideband communications with diversity reception

Tan, SS., Nallanathan, A. & Kannan, B., 2005, *GLOBECOM '05: IEEE Global Telecommunications Conference, Vols 1-6*. NEW YORK: IEEE, p. 2434-2438 5 p. (IEEE Global Telecommunications Conference (Globecom)).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

On the performance of LDPC-Coded OFDM system with periodically terminated differential phase modulation

John, TS., Nallanathan, A. & Armand, MA., 2005, *ICC 2005: IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS, VOLS 1-5*. NEW YORK: IEEE, p. 1957-1961 5 p. (IEEE International Conference on Communications).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Turbo differential space-time block codes with iterative demodulation and decoding

Nallanathan, A. & Yan, LP., 2005, *ICC 2005: IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS, VOLS 1-5*. NEW YORK: IEEE, p. 1891-1895 5 p. (IEEE International Conference on Communications).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

High sampling rate audio signal modeling

Xinrong, S., Huang, D. & Nallanathan, A., 7 Nov 2004, *IEEE: Thirty-Eighth Asilomar Conference on Signals, Systems and Computers, 2004*. p. 2310 2314 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

A new class of signal constellations for differential unitary space-time modulation (DUSTM)

Shan, C., Nallanathan, A. & Kam, PY., Jan 2004, In : *IEEE COMMUNICATIONS LETTERS*. 8, 1, p. 1-3 3 p.

Research output: Contribution to journal › Article

A new analytical method for exact bit error rate computation of TH-PPM UWB multiple access systems

Niranjan, S., Nallanathan, A. & Kannan, B., 2004, *2004 IEEE 15TH INTERNATIONAL SYMPOSIUM ON PERSONAL, INDOOR AND MOBILE RADIO COMMUNICATIONS, VOLS 1-4, PROCEEDINGS*. NEW YORK: IEEE, p. 2968-2972 5 p.
Research output: Chapter in Book/Report/Conference proceeding › Conference paper

A pilot symbol assisted channel estimation scheme for UWB IR systems with diversity reception

Tan, S. S., Nallanathan, A. & Kannan, B., 2004, *Eighth IEEE International Symposium on Spread Spectrum Techniques and Applications - Programme and Book of Abstracts (IEEE Cat. No.04TH8738)*. (Eighth IEEE International Symposium on Spread Spectrum Techniques and Applications - Programme and Book of Abstracts (IEEE Cat. No.04TH8738)).
Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Adaptive channel estimation and interference cancellation in space-time coded OFDM systems

Nallanathan, A. & Sen, QS., 2004, *VTC2004-SPRING: 2004 IEEE 59TH VEHICULAR TECHNOLOGY CONFERENCE, VOLS 1-5, PROCEEDINGS*. NEW YORK: IEEE, p. 1760-1764 5 p.
Research output: Chapter in Book/Report/Conference proceeding › Conference paper

An adaptive transmit diversity scheme based on spatial signal combining for TH-PPM UWB

Niranjan, S., Nallanathan, A. & Kannan, B., 2004, *Eighth IEEE International Symposium on Spread Spectrum Techniques and Applications - Programme and Book of Abstracts (IEEE Cat. No.04TH8738)*. (Eighth IEEE International Symposium on Spread Spectrum Techniques and Applications - Programme and Book of Abstracts (IEEE Cat. No.04TH8738)).
Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Decoupled maximum likelihood blind carrier offset estimator for OFDM systems

Lu, MM., Nallanathan, A. & Tjhung, TT., 2004, *VTC2004-FALL: 2004 IEEE 60TH VEHICULAR TECHNOLOGY CONFERENCE, VOLS 1-7*. NEW YORK: IEEE, p. 507-510 4 p.
Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Delay tuning based transmit diversity scheme for TH-PPM UWB: Performance with RAKE reception and comparison with multi RX schemes

Niranjan, S., Nallanathan, A. & Kannan, B., 2004, *JOINT UWBST & IWUWBS 2004, CONFERENCE PROCEEDINGS*. NEW YORK: IEEE, p. 341-345 5 p.
Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Eigenbeam-space division multiplexing for OFDM systems with optimum resource allocation

Nallanathan, A. & Yun, CL., 2004, *GLOBECOM '04: IEEE GLOBAL TELECOMMUNICATIONS CONFERENCE, VOLS 1-6*. NEW YORK: IEEE, p. 2366-2370 5 p. (IEEE Global Telecommunications Conference (Globecom)).
Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Introducing packet segmentation for the IEEE 802.11b throughput enhancement in the presence of Bluetooth

Feng, W., Nallanathan, A. & Garg, HK., 2004, *VTC2004-SPRING: 2004 IEEE 59TH VEHICULAR TECHNOLOGY CONFERENCE, VOLS 1-5, PROCEEDINGS*. NEW YORK: IEEE, p. 2252-2256 5 p.
Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Iterative multiuser receiver for space-time coded asynchronous CDMA systems

Tao, H., Nallanathan, A. & Garg, HK., 2004, *VTC2004-SPRING: 2004 IEEE 59TH VEHICULAR TECHNOLOGY CONFERENCE, VOLS 1-5, PROCEEDINGS*. NEW YORK: IEEE, p. 308-312 5 p.
Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Multiple access performance of UWB M-ary impulse radio systems with diversity reception

Tan, SS., Kannan, B. & Nallanathan, A., 2004, *JOINT UWBST & IWUWBS 2004, CONFERENCE PROCEEDINGS*. NEW YORK: IEEE, p. 346-350 5 p.
Research output: Chapter in Book/Report/Conference proceeding › Conference paper

On the performance improvement through the use of parallel interference cancellation in channel estimation for multipath CDMA systems

Tie, LT., Chew, YH. & Nallanathan, A., 2004, *GLOBECOM '04: IEEE GLOBAL TELECOMMUNICATIONS CONFERENCE, VOLS 1-6*. NEW YORK: IEEE, p. 2339-2343 5 p. (IEEE Global Telecommunications Conference (Globecom)).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

On the performance of MC-CDMA with transmit diversity over fast frequency selective fading channels

Nallanathan, A. & Meng, PH., 2004, *VTC2004-SPRING: 2004 IEEE 59TH VEHICULAR TECHNOLOGY CONFERENCE, VOLS 1-5, PROCEEDINGS*. NEW YORK: IEEE, p. 1361-1365 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

On the performance of space-time block coded systems with channel estimation

Shan, C., Kam, PY. & Nallanathan, A., 2004, *VTC2004-FALL: 2004 IEEE 60TH VEHICULAR TECHNOLOGY CONFERENCE, VOLS 1-7*. NEW YORK: IEEE, p. 2439-2443 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Performance of PHY and MAC layers of a Bluetooth piconet in multi-Bluetooth interference environment

Feng, W., Nallanathan, A. & Garg, HK., 2004, *GLOBECOM '04: IEEE GLOBAL TELECOMMUNICATIONS CONFERENCE, VOLS 1-6*. NEW YORK: IEEE, p. 3614-3618 5 p. (IEEE Global Telecommunications Conference (Globecom)).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Theoretical performance of space-time block coded systems with channel estimation

Shan, C., Kam, Y. & Nallanathan, A., 2004, *GLOBECOM '04: IEEE GLOBAL TELECOMMUNICATIONS CONFERENCE, VOLS 1-6*. NEW YORK: IEEE, p. 3666-3670 5 p. (IEEE Global Telecommunications Conference (Globecom)).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

A computationally efficient channel estimation with signal detection for MIMO-OFDM systems

Suthaharan, S., Nallanathan, A. & Kannan, B., 2003, *PIMRC 2003: 14TH IEEE 2003 INTERNATIONAL SYMPOSIUM ON PERSONAL, INDOOR AND MOBILE RADIO COMMUNICATIONS PROCEEDINGS, VOLS 1-3 2003*. Gong, K. & Niu, ZH. (eds.). BEIJING: PUBLISHING HOUSE ELECTRONICS INDUSTRY, p. 1245-1249 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

An adaptive channel estimation scheme for OFDM system with transmitter diversity

Kuan, KY., Suthaharan, S. & Nallanathan, A., 2003, *GLOBECOM'03: IEEE GLOBAL TELECOMMUNICATIONS CONFERENCE, VOLS 1-7*. NEW YORK: IEEE, p. 873-877 5 p. (IEEE Global Telecommunications Conference (Globecom)).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Channel estimation for space-time block coded system under spatially correlated Rayleigh fading channel

Sheng, JG., Nallanathan, A. & Tjhung, TT., 2003, *PIMRC 2003: 14TH IEEE 2003 INTERNATIONAL SYMPOSIUM ON PERSONAL, INDOOR AND MOBILE RADIO COMMUNICATIONS PROCEEDINGS, VOLS 1-3 2003*. Gong, K. & Niu, ZH. (eds.). BEIJING: PUBLISHING HOUSE ELECTRONICS INDUSTRY, p. 2148-2151 4 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Computationally efficient channel estimation for space-time block coded system

Sheng, JG., Nallanathan, A. & Tjhung, TT., 2003, *57TH IEEE VEHICULAR TECHNOLOGY CONFERENCE, VTC 2003-SPRING, VOLS 1-4, PROCEEDINGS*. NEW YORK: IEEE, p. 2614-2617 4 p. (IEEE VTS Vehicular Technology Conference Proceedings).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Joint interference cancellation and decoding scheme for next generation wireless LAN systems

Suthaharan, S., Nallanathan, A. & Kannan, B., 2003, *2003 4th IEEE Workshop on Signal Processing Advances in Wireless Communications - SPAWC 2003 (IEEE Cat. No.03EX689)*. NEW YORK: IEEE, p. 284-288 5 p. (2003 4th IEEE Workshop on Signal Processing Advances in Wireless Communications - SPAWC 2003 (IEEE Cat. No.03EX689)).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

On the performance of chip-interleaved turbo coded DS-CDMA system under impulse noise

John, TS. & Nallanathan, A., 2003, *PIMRC 2003: 14TH IEEE 2003 INTERNATIONAL SYMPOSIUM ON PERSONAL, INDOOR AND MOBILE RADIO COMMUNICATIONS PROCEEDINGS, VOLS 1-3 2003*. Gong, K. & Niu, ZH. (eds.). BEIJING: PUBLISHING HOUSE ELECTRONICS INDUSTRY, p. 588-592 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Performance of UWB multiple access impulse radio systems in multipath environment with antenna array

Tan, SS., Kannan, B. & Nallanathan, A., 2003, *GLOBECOM'03: IEEE GLOBAL TELECOMMUNICATIONS CONFERENCE, VOLS 1-7*. NEW YORK: IEEE, p. 2182-2186 5 p. (IEEE Global Telecommunications Conference (Globecom)).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Performance of physical (PHY) and medium access control (MAC) layers of IEEE 802.11b in the presence of Bluetooth piconets

Feng, W., Nallanathan, A. & Krishna, GH., 2003, *57TH IEEE VEHICULAR TECHNOLOGY CONFERENCE, VTC 2003-SPRING, VOLS 1-4, PROCEEDINGS*. NEW YORK: IEEE, p. 1489-1492 4 p. (IEEE VTS Vehicular Technology Conference Proceedings).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Signal constellations for differential unitary space-time modulation with multiple transmit antennas

Shan, C., Nallanathan, A. & Kam, PY., 2003, *57TH IEEE VEHICULAR TECHNOLOGY CONFERENCE, VTC 2003-SPRING, VOLS 1-4, PROCEEDINGS*. NEW YORK: IEEE, p. 713-716 4 p. (IEEE VTS Vehicular Technology Conference Proceedings).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Ultra-wideband impulse radio systems with temporal and spatial diversities

Tan, SS., Kannan, B. & Nallanathan, A., 2003, *2003 IEEE 58TH VEHICULAR TECHNOLOGY CONFERENCE, VOLS 1-5, PROCEEDINGS*. NEW YORK: IEEE, p. 607-611 5 p. (IEEE VTS Vehicular Technology Conference Proceedings).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Impact of interference on performance of Bluetooth Piconet in 2.4GHz ISM band

Feng, W., Nallanathan, A. & Garg, HK., 5 Dec 2002, In : *IEE Electronics Letters*. 38, 25, p. 1721-1723 3 p.

Research output: Contribution to journal › Article

Performance of LSE-RLS-based interference cancellation scheme for STBC multiuser systems

Mahinthan, N. V., Kannan, B. & Nallanathan, A., 5 Dec 2002, In : *IEE Electronics Letters*. 38, 25, p. 1729-1730 2 p.

Research output: Contribution to journal › Article

Integer lapped transforms and their applications to image coding

Fong, WC., Chan, SC., Nallanathan, A. & Ho, KL., Oct 2002, In : *IEEE TRANSACTIONS ON IMAGE PROCESSING*. 11, 10, p. 1152-1159 8 p.

Research output: Contribution to journal › Article

Adaptive channel estimation and interference suppression in space-time coded multiuser systems

Mahinthan, N. V., Kannan, B. & Nallanathan, A., 2002, *GLOBECOM'02: IEEE GLOBAL TELECOMMUNICATIONS CONFERENCE, VOLS 1-3, CONFERENCE RECORDS*. NEW YORK: IEEE, p. 439-442 4 p. (IEEE Global Telecommunications Conference (Globecom)).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Impact of interference on a Bluetooth network in the 2.4 GHz ISM band

Feng, W., Arumugam, N., Krishna, GH. & Nallanathan, A., 2002, *ICCS 2002: 8TH INTERNATIONAL CONFERENCE ON COMMUNICATIONS SYSTEMS, VOLS 1 AND 2, PROCEEDINGS*. NEW YORK: IEEE, p. 820-823 4 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Joint channel estimation and interference cancellation in space-time coded multiuser systems

Mahinthan, N. V., Kannan, B. & Nallanathan, A., 2002, *2002 4TH INTERNATIONAL WORKSHOP ON MOBILE AND WIRELESS COMMUNICATION NETWORK*. NEW YORK: IEEE, p. 434-438 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Performance of a Bluetooth piconet in the presence of IEEE 802.11 WLANs

Feng, W., Arumugam, N., Krishna, GH. & Nallanathan, A., 2002, *13TH IEEE INTERNATIONAL SYMPOSIUM ON PERSONAL, INDOOR AND MOBILE RADIO COMMUNICATIONS, VOL 1-5, PROCEEDINGS*. NEW YORK: IEEE, p. 1742-1746 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Performance of a Bluetooth system in multipath fading channels and interference

Jia, W., Nallanathan, A. & Garg, HK., 2002, *2002 4TH INTERNATIONAL WORKSHOP ON MOBILE AND WIRELESS COMMUNICATION NETWORK*. NEW YORK: IEEE, p. 579-582 4 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Performance of space-time coded MC-CDMA over time and frequency selective fading channel

Tao, H., Arumugam, N., Krishna, GH. & Nallanathan, A., 2002, *2002 4TH INTERNATIONAL WORKSHOP ON MOBILE AND WIRELESS COMMUNICATION NETWORK*. NEW YORK: IEEE, p. 419-423 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Performance of ultra-wideband time-hopping spread spectrum impulse radio systems with antenna array

Tan, SS., Kannan, B. & Nallanathan, A., 2002, *ICCS 2002: 8TH INTERNATIONAL CONFERENCE ON COMMUNICATIONS SYSTEMS, VOLS 1 AND 2, PROCEEDINGS*. NEW YORK: IEEE, p. 399-403 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Space-time and space-frequency diversity schemes for data rate enhancement in a Bluetooth system

Raghavan, S., Nallanathan, A. & Garg, HK., 2002, *ICCS 2002: 8TH INTERNATIONAL CONFERENCE ON COMMUNICATIONS SYSTEMS, VOLS 1 AND 2, PROCEEDINGS*. NEW YORK: IEEE, p. 178-182 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Space-time coded MIMO-OFDM for high capacity and high data-rate wireless communication over frequency selective fading channels

Suthaharan, S., Nallanathan, A. & Kannan, B., 2002, *2002 4TH INTERNATIONAL WORKSHOP ON MOBILE AND WIRELESS COMMUNICATION NETWORK*. NEW YORK: IEEE, p. 424-428 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

A class of M-channel linear-phase biorthogonal filter banks and their applications to subband coding

Chan, SC., Nallanathan, A., Ng, TS. & Kwok, PCK., Feb 1999, In : *IEEE Transactions on Signal Processing*. 47, 2, p. 564-571 8 p.

Research output: Contribution to journal › Article

A family of spread-sequences for CDMA system in a multipath fading channel

Nallanathan, A., Chan, SC. & Ng, TS., 1999, *1999 IEEE 49TH VEHICULAR TECHNOLOGY CONFERENCE, VOLS 1-3*. NEW YORK: IEEE, p. 1814-1818 5 p. (IEEE VTS Vehicular Technology Conference Proceedings).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Lapped orthogonal transform with integer coefficients

Nallanathan, A., Chan, SC. & Ng, TS., 1999, *42ND MIDWEST SYMPOSIUM ON CIRCUITS AND SYSTEMS, PROCEEDINGS, VOLS 1 AND 2*. RamirezAngulo, J. (ed.). NEW YORK: IEEE, p. 1065-1068 4 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Generalized lapped transform (GLT) based high-speed transmission for wireless mobile communications

Nallanathan, A., Chan, SC. & Ng, TS., 1998, *48TH IEEE VEHICULAR TECHNOLOGY CONFERENCE, VOLS 1-3*. NEW YORK: IEEE, p. 1409-1413 5 p. (IEEE VEHICULAR TECHNOLOGY CONFERENCE PROCEEDINGS).

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Performance of generalized lapped transform (GLT) based CDMA system in a multipath fading channel

Nallanathan, A., Chan, SC. & Ng, TS., 1998, *1998 IEEE 5TH INTERNATIONAL SYMPOSIUM ON SPREAD SPECTRUM TECHNIQUES AND APPLICATIONS - PROCEEDINGS, VOLS 1-3*. NEW YORK: IEEE, p. 239-244 6 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference paper

Bayesian model selection applied to spatial signal processing

Nallanathan, A., 1994, In : *IEE PROCEEDINGS VISION IMAGE AND SIGNAL PROCESSING*. 141, 1, p. 76 1 p.

Research output: Contribution to journal › Article

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