

Justin P. Coon

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Current positions

Associate Professor, Department of Engineering Science, Oxford University
Emmott Fellow and Tutor in Engineering, Oriel College, Oxford University

Areas of specialization

Communication theory and optimization; network theory; quantum sensor networks.

Positions held

2012-2013 Reader (Electrical Engineering), University of Bristol, U.K.
2010-2012 Visiting Fellow (Mathematics), University of Bristol, U.K.
2004-2013 Research Engineer, Fellow, & Manager, Toshiba Research Europe Ltd., Bristol, U.K.

Education

2005 PH.D. in Electrical and Electronic Engineering (Communications)
University of Bristol, U.K.
2000 B.S. (*cum laude*) in Electrical Engineering
Calhoun Honors College, Clemson University, U.S.A.

Grants & funding

2019-2020 Topology Discovery via Spatial Graph Entropy, US Army (PI - \$97,198)
2018-2022 Beyond 5G Communications, Toshiba (PI - £28,300)
2018-2022 Networking Beyond 5G, Toshiba (PI - £77,300)
2017-2019 Advanced Modulation for Spectrally Efficient Communication, EPSRC (PI - £68,288)
2016-2020 Modelling and Analysis of Complex Networks, Moogsoft (PI - £87,700)
2015-2018 Spatially Embedded Networks, EPSRC (PI - £625,217)
2014-2019 Networked Quantum Information Technologies, EPSRC (CI - £38,029,961)
2014-2018 Advanced Error Correction for Flash Memory, Toshiba (PI - £58,944)
2013-2015 Dense Cooperative Wireless Cloud Network, FP7 (PI, Tech. Manager - €3,846,800)

Honors & awards

- 2019 Top 5 Editor Award, IEEE Wireless Communications Letters
- 2014 Top 15 Editor Award, IEEE Transactions on Vehicular Technology
- 2014 Best Paper Award, EuCNC
- 2013 Best Paper Award, ISWCS
- 2009 Distinguished Research Award, Toshiba Research Europe Ltd.
- 2000 General & Departmental Honors, Calhoun Honors College, Clemson University

Invited talks and keynotes

- 2018 Spatial network models for wireless communication (China Telecom Lecture, Cambridge)
- 2018 Spatial network models for wireless communication (China Telecom Lecture, Oxford)
- 2018 Spatial graph entropy (Georgia Tech, U.S.A.)
- 2018 Spatial graph entropy (*Keynote*, Workshop on Spatial Stochastic Models for Wireless Networks, Shanghai, China)
- 2018 On the entropy of wireless networks (*Keynote*, Workshop on Advances in Wireless Communications, Chengdu and Nanjing, China)
- 2018 On the complexity of wireless networks (*Keynote*, CommNet2 Workshop on Communications and Signal Processing for 5G++, Durham University, U.K.)
- 2018 On the entropy of spatial network ensembles (Imperial College London, U.K.)
- 2017 On the entropy of network ensembles (University of Nottingham, U.K.)
- 2016 Quantifying topological uncertainty in wireless networks (University of York, U.K.)
- 2016 Quantifying topological uncertainty in wireless networks (Newcastle University, U.K.)
- 2016 Entropy of random geometric graphs (Aston University, U.K.)
- 2016 Modelling wireless networks: a bottom-up approach (BT, U.K.)
- 2013 Connectivity properties of bounded wireless networks (University of Bedfordshire, U.K.)
- 2013 A new perspective on the connectivity of dense wireless networks (University of Reading, U.K.)
- 2013 A new perspective on the connectivity of dense wireless networks (University of York, U.K.)

Teaching

LECTURE COURSES

- 2014-present Semiconductor Devices - materials, quantum mechanics, semiconductors, pn junctions, photons in semiconductors, bipolar junction transistors
- 2014-present Digital Communications - probability and stochastic processes, information theory, error detection and correction, signal representation and modulation, signal demodulation and detection, dispersive channels
- 2015-present Wireless Communications - wireless channels, diversity, capacity and performance, multiple-input multiple-output, multicarrier and block modulation, impairments, multiple access, standards

TUTORIAL COURSES

Calculus
Complex Algebra and Fourier Series
Vectors and Matrices
Ordinary Differential Equations
Mathematical Modelling of Physical Systems
Linear Algebra
Probability and Statistics
Time-Frequency Analysis
Microcontroller Systems
Control Theory
Electromagnetism
Communications
Discrete Systems

Service to the profession

EDITORIAL POSITIONS

2017-present Editor for IEEE Communications Letters
2016-present Editor for IEEE Wireless Communications Letters
2013-2016 Editor for IEEE Transactions on Vehicular Technology
2007-2013 Editor for IEEE Transactions on Wireless Communications

CONFERENCE ORGANIZATION

2019 Co-chair, Communication Theory Symposium, ICC 2019
2019 Workshop Co-chair, IEEE/CIC International Conference on Communications in China (ICCC) 2019
2018 Chair, Wireless Networks: Protocols, Security, and Services track, VTC Spring 2018
2018 Co-organizer, CommNet2 Workshop on Communications and Signal Processing for 5G++, Durham University, U.K.
2017 Chair, 2nd Symposium on Spatial Networks, Oriel College, Oxford, U.K.
2017 Chair, Short Course on Complex Networks and Point Processes with Applications, Oriel College, Oxford, U.K.
2016 Chair, Ad-Hoc, M2M, and Sensor Networks track of VTC Spring 2016
2016 Chair, 1st Symposium on Spatial Networks, Oriel College, Oxford, U.K.
2016 Chair and Lecturer, Short Course on Random Graphs and Wireless Communication Networks, Oriel College, Oxford, U.K.
2015 Chair of the Wireless Networks and Security track, VTC Spring 2015
2015 Co-organizer, 14th Mathematics of Networks Meeting, Oriel College, Oxford, U.K.
2012 TPC Co-chair, IEEE International Workshop on Computer-Aided Modelling, Analysis, and Design of Communication Links and Networks (CAMAD)

PROFESSIONAL BODIES

- 2017-present Fellow, Institute of Mathematics and its Applications
2016-present Coordinator, SIG on Heterogeneous Ultra-Dense Networks, IEEE Communications Systems Integration and Modeling Technical Committee
2013 Chair, Visions Working Group, Mobile Virtual Center of Excellence
2010-present Senior Member, IEEE

EXTERNAL EXAMINATION

External PhD Examiner: University of Reading, Czech Technical University of Prague, Politecnico di Milano, University of Warwick, University of Strathclyde, Imperial College London, University of Kent

PEER REVIEW SERVICE

IEEE Transactions on Communications
IEEE Transactions on Wireless Communications
IEEE Transactions on Information Forensics and Security
IEEE Transactions on Vehicular Technology
IEEE Wireless Communications Letters
IEEE Communications Letters
Journal of Complex Networks

Non-executive roles and consultancy

- 2018-present Trustee, Dormer House School, Moreton-in-Marsh, UK
2015-present Member, Finance & Estates Committee, Oriel College, Oxford, UK
2013-present Governing Body Fellow and Trustee, Oriel College, Oxford, UK
2013-present Consultant to telecommunications industry (advising on technical/organizational strategy)

Journal publications (80)

- To appear B. Allen, D. Simmons, T. D. Drysdale, and J. P. Coon, "Performance analysis of an orbital angular momentum multiplexed amplify-and-forward radio relay chain with intermodal crosstalk," R. Soc. Open Sci., to appear.
- S. Dang, G. Chen, and J. P. Coon, "Lexicographic codebook design for OFDM with index modulation," IEEE Trans. Wireless. Commun., to appear.
- J. Tang, G. Chen, and J. P. Coon, "Joint coverage enhancement by power allocation in Poisson clustered out-of-band D2D networks," IEEE Trans. Veh. Tech., to appear.
- S. Dang, G. Chen, and J. P. Coon, "Outage performance of two-hop OFDM with index modulation and multi-carrier relay selections," IEEE Wireless Commun. Lett., to appear.
- J. Tang, G. Chen, and J. P. Coon, "Route selection based on connectivity-delay-trust in public safety networks," IEEE Syst. J., to appear.

2018

D. Hedges and J. P. Coon, "On the relationship between relay and infrastructure densities in geometrically bounded relay-assisted wireless networks," *IEEE Trans. Veh. Tech.*, vol. 67, no. 11, pp. 10983-10994, Nov. 2018.

G. Chen, J. P. Coon, and S. E. Tajbakhsh, "Secure routing for multi-hop ad hoc networks with inhomogeneous eavesdropper clusters," *IEEE Trans. Veh. Tech.*, vol. 67, no. 11, pp. 10660-10670, Nov. 2018.

S. Cho, G. Chen, and J. P. Coon, "Physical layer security in visible light communication systems with randomly located colluding eavesdroppers," *IEEE Wireless Commun. Lett.*, vol. 7, no. 5, pp. 7768-7771, Oct. 2018.

H. Ding, D. B. da Costa, J. P. Coon, and Y. Chen, "Relay when blocked: a hop-by-hop mmWave cooperative transmission protocol," *IEEE Commun. Lett.*, vol. 22, no. 9, pp. 1894-1897, Sep. 2018.

S. Dang, G. Chen, and J. P. Coon, "Multicarrier relay selection for full-duplex relay-assisted OFDM D2D systems," *IEEE Trans. Veh. Tech.*, vol. 67, no. 8, pp. 7204-7218, Aug. 2018.

T. D. Drysdale, B. Allen, C. Stevens, S. J. Berry, F. C. Smith, and J. P. Coon, "How orbital angular momentum modes are boosting the performance of radio links," *IET Microw. Antennas Propag.*, vol. 12, no. 10, pp. 1625-1632, Aug. 2018.

S. E. Tajbakhsh, J. P. Coon, and G. Chen, "Network coding for physical layer secrecy," *IEEE Wireless Commun. Lett.*, vol. 7, no. 4, pp. 642-645, Aug. 2018.

J. Tang, G. Chen, and J. P. Coon, "The meta distribution of the secrecy rate in the presence of randomly located eavesdroppers," *IEEE Wireless Commun. Lett.*, vol. 7, no. 4, pp. 630-633, Aug. 2018.

G. Chen, J. Tang, and J. P. Coon, "Optimal routing for multi-hop social-based D2D communications in the Internet of Things," *IEEE Internet Things J.*, vol. 5, no. 3, pp. 1880-1889, Jun. 2018.

S. Cho, G. Chen, and J. P. Coon, "Securing visible light communication systems by beamforming in the presence of randomly distributed eavesdroppers," *IEEE Trans. Wireless. Commun.*, vol. 17, no. 5, pp. 2918-2931, May 2018.

J. P. Coon, C. P. Dettmann, and O. Georgiou, "Entropy of spatial network ensembles," *Phys. Rev. E*, vol. 97, no. 4, 042319, Apr. 2018.

S. Dang, J. P. Coon, and G. Chen, "Adaptive OFDM with index modulation for two-hop relay-assisted networks," *IEEE Trans. Wireless. Commun.*, vol. 17, no. 3, pp. 1923-1936, Mar. 2018.

D. Simmons, J. P. Coon, and A. Datta, "The von Neumann Theil index: characterizing graph centralization using the von Neumann index," *J. Compl. Netw.*, cnx061, Jan. 2018.

2017

S. Dang, J. P. Coon, and G. Chen, "Outage performance of two-hop OFDM systems with spatially random decode-and-forward relays," *IEEE Access*, vol. 5, no. 3, pp. 27514-27524, Nov. 2017.

D. Simmons, J. P. Coon, and A. Datta, "Symmetric laplacians, quantum density matrix

ces and their von Neumann entropy,” *Linear Algebra and its Applications*, vol. 532, pp. 534-549, 1 Nov. 2017.

S. E. Tajbakhsh, J. P. Coon, and D. Simmons, “Accessibility and delay in random temporal networks,” *Phys. Rev. E*, vol. 96, no. 3, 032309, Sep. 2017.

M. Chafii, J. P. Coon, and D. Hedges, “DCT-OFDM with index modulation,” *IEEE Commun. Lett.*, vol. 21, no. 7, pp. 1489-1492, July 2017.

G. Chen and J. P. Coon, “Secrecy outage analysis in random wireless networks with antenna selection and user ordering,” *IEEE Wireless Commun. Lett.*, vol. 6, no. 3, pp. 334-337, June 2017.

N. Warsi and J. P. Coon, “Coding for classical-quantum channels with rate limited side information at the encoder: an information-spectrum approach,” *IEEE Trans. Info. Theory*, vol. 63, no. 5, pp. 3322-3331, May 2017.

H. Yassine, J. P. Coon, and D. E. Simmons, “Index programming for flash memory,” *IEEE Trans. Commun.*, vol. 65, no. 5, pp. 1886-1898, May 2017.

G. Chen, J. P. Coon, and M. Di Renzo, “Secrecy outage analysis for downlink transmissions in the presence of randomly located eavesdroppers,” *IEEE Trans. Info. Forens. & Secur.*, vol. 12, no. 5, pp. 1195-1206, May 2017.

S. Dang, G. Chen, and J. P. Coon, “Outage performance analysis of full-duplex relay-assisted device-to-device systems in uplink cellular networks,” *IEEE Trans. Veh. Tech.*, vol. 66, no. 5, pp. 4506-4510, May 2017.

S. Dang, J. P. Coon, and G. Chen, “Resource allocation for full-duplex relay-assisted device-to-device multicarrier systems,” *IEEE Wireless Commun. Lett.*, vol. 6, no. 2, pp. 166-169, Apr. 2017.

K. Koufos, C. P. Dettmann, and J. P. Coon, “Correlated interference from uncorrelated users in bounded ad hoc networks with blockage,” *IEEE Wireless Commun. Lett.*, vol. 6, no. 1, pp. 114-117, Feb. 2017.

E. Chatziantoniou, B. Allen, V. Velisavljevic, P. Karadimas, and J. P. Coon, “Energy detection based spectrum sensing over two-wave and diffuse power fading channels,” *IEEE Trans. Veh. Tech.*, vol. 66, no. 1, pp. 868-874, Jan. 2017.

S. Dang, J. P. Coon, and G. Chen, “An equivalence principle for OFDM-based combined bulk/per-subcarrier relay selection over equally spatially correlated channels,” *IEEE Trans. Veh. Tech.*, vol. 66, no. 1, pp. 122-133, Jan. 2017.

2016 T. T. Lam, M. Di Renzo, and J. P. Coon, “System-Level analysis of receiver diversity in SWIPT-enabled cellular networks,” *J. Commun. Netw.*, vol. 18, no. 6, pp. 926-937, Dec. 2016.

T. T. Lam, M. Di Renzo, and J. P. Coon, “System-level analysis of SWIPT MIMO cellular networks,” *IEEE Commun. Lett.*, vol. 20, no. 10, pp. 2011-2014, Oct. 2016.

D. E. Simmons and J. P. Coon, “Two-way OFDM-based nonlinear amplify-and-forward relay systems,” *IEEE Trans. Veh. Tech.*, vol. 65, no. 5, pp. 3808-3812, May 2016.

D. E. Simmons, J. P. Coon, and N. Warsi, “Capacity and power scaling laws for finite

antenna MIMO amplify-and-forward relay networks,” *IEEE Trans. Info. Theory*, vol. 62, no. 4, pp. 1993-2008, Apr. 2016.

2015 J. P. Coon, D. E. Simmons, and M. Di Renzo, “Approximating the outage probability of parallel fading channels,” *IEEE Commun. Lett.*, vol. 9, no. 12, pp. 2190-2193, Dec. 2015.

J. P. Coon, O. Georgiou, and C. P. Dettmann, “Connectivity scaling laws in wireless networks,” *IEEE Wireless Commun. Lett.*, vol. 4, no. 6, pp. 629-632, Dec. 2015.

Y. Wang and J. P. Coon, “Outage probability of fixed-gain dual-hop relay selection channels with heterogeneous fading,” *EURASIP Journal on Wireless Communications and Networking* 2015, 2015:195, doi:10.1186/s13638-015-0424-0.

M. Ismail, S. Denic, and J. P. Coon, “Efficient decoding of short length linear cyclic codes,” *IEEE Commun. Lett.*, vol. 19, no. 4, pp. 505-508, Apr. 2015.

O. Georgiou, M. Z. Bocus, M. R. Rahman, C. P. Dettmann, and J. P. Coon, “Network connectivity in non-convex domains with reflections,” *IEEE Commun. Lett.*, vol. 19, no. 3, pp. 427-430, Mar. 2015.

2014 J. P. Coon, “A theorem on the asymptotic outage behavior of fixed-gain amplify-and-forward relay systems,” *IEEE Commun. Lett.*, vol. 18, no. 9, pp. 1567-1570, Sep. 2014.

O. Georgiou, C. P. Dettmann, and J. P. Coon, “Connectivity of confined 3D networks with anisotropically radiating nodes,” *IEEE Trans. Wireless Commun.*, vol. 13, no. 8, pp. 4534-4546, Aug. 2014.

2013 S. Wang, F. Tosato, and J. P. Coon, “Reliable energy-efficient spectrum management and optimization in cognitive radio networks: how often shall we switch?” *IEEE Wireless Commun.*, vol. 20, no. 6, pp. 14-20, Dec. 2013.

S. Wang, K. Mimis, M. Z. Bocus, G. Watkins, and J. P. Coon, “Cognitive antenna selection relay for green heterogeneous healthcare networks,” *IEEE Wireless Commun.*, vol. 20, no. 5, pp. 44-52, Oct. 2013.

R. Cepeda and J. P. Coon, “Rate-lossless PAPR reduction in per-subcarrier antenna selection OFDM systems,” *Phys. Commun.*, vol. 9, pp. 112-124, Dec. 2013.

O. Georgiou, C. P. Dettmann, and J. P. Coon, “k-connectivity for confined random networks,” *European Physics Letters*, vol. 103, no. 2, Jul. 2013.

Y. Wang, M. Z. Bocus, and J. P. Coon, “Dynamic programming for route selection in multihop fixed gain amplify-and-forward relay networks,” *IEEE Commun. Lett.*, vol. 17, no. 5, pp. 932-935, May 2013.

M. Z. Bocus, C. P. Dettmann, and J. P. Coon, “An approximation of the first order Marcum Q-function with application to network connectivity analysis,” *IEEE Commun. Lett.*, vol. 17, no. 3, pp. 499-502, Mar. 2013.

J. P. Coon and C. P. Dettmann, “On the connectivity of 2-D random networks with anisotropically radiating nodes,” *IEEE Commun. Lett.*, vol. 17, no. 2, pp. 321-324, Feb. 2013.

M. Ismail, J. P. Coon, I. Ahmed, S. Armour, and J. P. McGeehan, “Turbo adaptive

threshold bit flipping for LDPC decoding,” *IEEE Wireless Commun. Lett.*, vol. 2, no. 1, pp. 118-121, Feb. 2013.

M. Ismail, I. Ahmed, and J. P. Coon, “Low power decoding of LDPC codes,” *ISRN Sensor Networks*, vol. 2013, Article ID 650740, 12 pages, 2013. doi:10.1155/2013/650740.

2012

J. P. Coon and R. Cepeda, “Power loading in parallel diversity channels based on statistical channel information,” *IEEE Commun. Lett.*, vol. 16, no. 7, pp. 1060-1063, Jul. 2012.

A. Müller, J. P. Coon, and R. Piechocki, “Diversity analysis for energy detection based spectrum sensing,” *IET Commun.*, vol. 6, no. 6, pp. 1-6, Jun. 2012.

O. Georgiou, C. P. Dettmann, and J. P. Coon, “Full connectivity: corners, edges and faces,” *J. Stat. Phys.*, vol. 147, no. 4, pp. 758-778, Jun. 2012.

M. Z. Bocus, J. P. Coon, C. N. Canagarajah, S. M. D. Armour, A. Doufexi, and J. P. McGeehan, “Per-subcarrier antenna selection for H.264 MGS/CGS video transmission over cognitive radio networks,” *IEEE Trans. Veh. Tech.*, vol. 61, no. 3, pp. 1060-1073, Mar. 2012.

M. Sandell and J. P. Coon, “Performance of combined bulk and per-tone antenna selection precoding in coded OFDM systems,” *IEEE Trans. Commun.*, vol. 60, no. 3, pp. 655-660, Mar. 2012.

L. Wang, Y. Wang, J. P. Coon, and A. Doufexi, “Energy-efficient spectrum sensing and access for cognitive radio networks,” *IEEE Trans. Veh. Tech.*, vol. 61, no. 2, pp. 906-912, Feb. 2012.

J. P. Coon, C. P. Dettmann, and O. Georgiou, “Impact of boundaries on fully connected random geometric networks,” *Phys. Rev. E*, vol. 85, no. 1, 011138, Jan. 2012.

2011

Y. Wang and J. P. Coon, “Difference antenna selection and power allocation for wireless cognitive systems,” *IEEE Trans. Commun.*, vol. 59, no. 12, pp. 3494-3503, Dec. 2011.

J. P. Coon and M. Sandell, “Performance of transmit antenna selection in space-time coded OFDM systems,” *IEEE Trans. Veh. Tech.*, vol. 60, no. 6, pp. 2824-2828, Jul. 2011.

Y. Wang and J. P. Coon, “MUI-reducing spreading code design for BS-CDMA in the presence of carrier frequency offset,” *IEEE Trans. Veh. Tech.*, vol. 60, no. 6, pp. 2583-2593, Jul. 2011.

M. Z. Bocus, J. P. Coon, C. N. Canagarajah, J. P. McGeehan, S. M. D. Armour, and A. Doufexi, “Resource allocation for OFDMA-based cognitive radio networks with application to H.264 scalable video transmission,” *EURASIP Journal on Wireless Communications and Networking* 2011, 2011:245673, doi:10.1155/2011/245673.

Y. Wang, M. Z. Bocus, and J. P. Coon, “Iterative successive interference cancellation for quasi-synchronous block spread CDMA based on the orders of the times of arrival,” *EURASIP Journal on Advances in Signal Processing* 2011, 2011:918046, doi:10.1155/2011/918046.

C. Vithanage, R. Cepeda, J. P. Coon and J. P. McGeehan, “MIMO-OFDM pilot placement algorithms for wideband indoor communications,” *IEEE Trans. Commun.*, vol.

- 59, no. 2, pp. 466-476, Feb. 2011.
- 2010 J. P. Coon and M. Sandell, "Combined bulk and per-tone transmit antenna selection in OFDM systems," *IEEE Commun. Lett.*, vol. 14, no. 5, pp. 426-428, May 2010.
- J. P. Coon and M. Sandell, "Designing unique words for near-optimal training in block transmission systems," *Eur. Trans. Telecommun.*, vol. 21, pp. 13-22, Jan. 2010.
- 2009 J. P. Coon, "Generalized precoded block-spread CDMA," *IEEE Trans. Commun.*, vol. 57, no. 7, pp. 1919-1923, Jul. 2009.
- M. Sandell and J. P. Coon, "Per-subcarrier antenna selection with power constraints in OFDM systems," *IEEE Trans. Wireless Commun.*, vol. 8, no. 2, pp. 673-677, Feb. 2009.
- C. M. Vithanage, M. Sandell, J. P. Coon, and Y. Wang, "Precoding in OFDM-based multi-antenna ultra-wideband systems," *IEEE Commun. Mag.*, vol. 47, no. 1, pp. 41-47, Jan. 2009.
- C. M. Vithanage, Y. Wang, and J. P. Coon, "Transmit beamforming methods for improved received SNR in EIRP constrained systems," *IET Communications*, vol. 3, no. 1, pp. 38-47, Jan. 2009.
- 2008 C. M. Vithanage, J. P. Coon, and S. C. J. Parker, "On capacity-optimal precoding for multiple antenna ultra wide-band systems," *IEEE Trans. Wireless Commun.*, vol. 7, no. 12, part 2, pp. 5182-5187, Dec. 2008.
- J. P. Coon, "Narrowband interference avoidance for ultra-wideband single-carrier block transmissions with frequency-domain equalization," *IEEE Trans. Wireless Commun.*, vol. 7, no. 10, pp. 4032-4039, Oct. 2008.
- 2007 J. P. Coon, "On the capacity of ultra wideband block transmission systems with narrowband interference avoidance," *IEEE Commun. Lett.*, vol. 11, no. 10, pp. 784-786, Oct. 2007.
- J. P. Coon and M. Sandell, "Constrained optimization of MIMO training sequences," *EURASIP Journal on Advances in Signal Processing*, vol. 2007, pp. Article ID 80 857, 13 pages, 2007, doi:10.1155/2007/80857.
- R. J. Haines, N. Fanning, T. Lewis, and J. Coon, "Bandwidth optimization in centralized WLANs for different traffic types," *EURASIP Journal on Wireless Communications and Networking*, vol. 2007, pp. Article ID 23 917, 14 pages, 2007, doi:10.1155/2007/23917.
- 2006 J. P. Coon, M. Sandell, M. Beach, and J. McGeehan, "Channel and noise variance estimation and tracking algorithms for unique-word based single-carrier systems," *IEEE Trans. Wireless Commun.*, vol. 5, no. 6, pp. 1488-1496, Jun. 2006.
- 2005 J. P. Coon, S. Armour, M. Beach, and J. McGeehan, "Adaptive frequency-domain equalization for single-carrier multiple-input multiple-output wireless transmissions," *Signal Processing, IEEE Transactions on [see also Acoustics, Speech, and Signal Processing, IEEE Transactions on]*, vol. 53, no. 8, pp. 3247-3256, Aug. 2005.
- 2004 J. P. Coon, M. Beach, and J. McGeehan, "Optimal training sequences for channel estimation in cyclic prefix-based single-carrier systems with transmit diversity," *IEEE Signal Process. Lett.*, vol. 11, no. 9, pp. 729-732, Sep. 2004.

J. P. Coon, M. A. Beach, and J. P. McGeehan, "Minimum mean-square error frequency-domain equalisation in unique-word based single-carrier systems," *Electronics Letters*, vol. 40, pp. 1003-1005, Aug. 5, 2004.

J. Siew, J. P. Coon, R. J. Piechocki, A. Dowler, A. Nix, M. Beach, S. Armour, and J. McGeehan, "A channel estimation algorithm for MIMO-SCFDE," *IEEE Commun. Lett.*, vol. 8, no. 9, pp. 555-557, Sep. 2004.

Conference publications (88)

2018

A. Cika, M.-A. Badiu, J. P. Coon, and S. E. Tajbakhsh, "Entropy rate of time-varying wireless networks," in *Global Telecommunications Conference, 2018. GLOBECOM '18*. IEEE, Dec. 9-13, 2018, pp. 1-6.

J. P. Coon, M.-A. Badiu, and D. Gunduz, "On the conditional entropy of wireless networks," in *Spatial Stochastic Models for Wireless Networks (SpaSWiN)*. International Workshop on, May 7, 2018, pp. 1-5, invited paper.

M.-A. Badiu and J. P. Coon, "On the distribution of random geometric graphs," in *Information Theory. ISIT 2018*. 2018 IEEE International Symposium on, Jul. 17-22, 2018, pp. 1-5.

T. T. Lam, M. Di Renzo, and J. P. Coon, "Stochastic geometry analysis of receiver diversity in cellular networks with SWIPT," in *Signal Processing Advances in Wireless Communications. SPAWC 2018*. IEEE International Workshop on, Jun. 24-27, 2018, pp. 1-5.

P. J. Smith and J. P. Coon, "Connectivity times for mobile D2D networks," in *International Conference on Communications, 2018. ICC '18*. IEEE, May 20-24, 2018, pp. 1-5.

S. Cho, G. Chen, H. Chun, J. P. Coon, and D. O'Brien, "Impact of multipath reflections on secrecy in VLC systems with randomly located eavesdroppers," in *Wireless Communications and Networking Conference, 2018. WCNC 2018*. IEEE, Apr. 15-18, 2018, pp. 1-6.

T. Drysdale, B. Allen, and J. P. Coon, "Spatial mode approaches to enhancing transport communications capacities," in the *12th European Conference on Antennas and Propagation, 2018. EuCap 2018*. Apr. 9-13, 2018, pp. 1-3.

B. Allen, T. Drysdale, S. Zhang, D. Isakov, A. Tennant, W. Whittow, C. Stevens, J. Vardaxoglou, and J. P. Coon, "Reduction of orbital angular momentum radio beam divergence using a 3D printed planar graded index lenses," in the *12th European Conference on Antennas and Propagation, 2018. EuCap 2018*. Apr. 9-13, 2018, pp. 1-3.

2017

D. Simmons, J. P. Coon, and A. Datta, "Quantum enhanced classical sensor networks," in *Global Telecommunications Conference: Workshop on Quantum Communications and Information Technology (QCIT), 2017. GLOBECOM '17*. IEEE, Dec. 4-8, 2017, pp. 1-5.

S. Dang, G. Chen, and J. P. Coon, "Power allocation for adaptive OFDM index modulation in cooperative networks," in *Global Telecommunications Conference: Workshop on Emerging Technologies for 5G and Beyond Wireless and Mobile Networks (ET5GB)*,

2017. GLOBECOM '17. IEEE, Dec. 4-8, 2017, pp. 1-5.

S. Tajbakhsh, G. Chen, and J. P. Coon, "On computational approaches to trust evaluation in large-scale social networks," in Communications and Networking (BlackSea-Com). International Black Sea Conference on, June 5-8, 2017, pp. 1-5.

S. Dang, J. P. Coon, G. Chen, and D. Simmons, "Outage performance analysis of multicarrier relay selection for cooperative networks," in Computers and Communications (ISCC). International Symposium on, July 3-6, 2017, pp. 1-5.

G. Chen and J. P. Coon, "Enhancing secrecy by full-duplex antenna selection in cognitive networks," in Computers and Communications (ISCC). International Symposium on, July 3-6, 2017, pp. 1-5.

A. Cika, J. P. Coon, and S. Kim, "Effects of directivity on wireless network complexity," in Spatial Stochastic Models for Wireless Networks (SpaSWiN). International Workshop on, May 19, 2017, pp. 1-5, invited paper.

S. Cho, G. Chen, and J. P. Coon, "Secrecy analysis in visible light communication systems with randomly located eavesdroppers," in International Conference on Communications: 3rd Workshop on Optical Wireless Communications (OWC), 2017. ICC '17. IEEE, May 21-25, 2017, pp. 1-5.

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