

Marc Kuhn, Veröffentlichungen vor Oktober 2020 :

- [1] **SDR Demonstration System for the Investigation of Cooperative Communication and the Scaling Behaviour of MANETs**
M.'a. Yüksel, M. Starcik, F. Hofmann, R. Rolny, M. Kuhn, and M. Kuhn, *Collaborative European Research Conference (CERC 2020)*, Sept. 2020.
- [2] **Inter-Node Distance Estimation from Multipath Delay Differences of Channels to Observer Nodes**
G. Dumphart, M. Kuhn, A. Wittneben, and F. Trösch, *IEEE International Conference on Communications (ICC)*, Shanghai, China, May 2019.
- [3] **On the Crucial Impact of Antennas and Diversity on BLE RSSI-based Indoor Localization**
H. Schulten, M. Kuhn, R. Heyn, G. Dumphart, F. Trösch, and A. Wittneben, *IEEE Vehicular Technology Conference (VTC Spring)*, Kuala Lumpur, Malaysia, Apr. 2019.
- [4] **User Tracking for Access Control with Bluetooth Low Energy**
R. Heyn, M. Kuhn, H. Schulten, G. Dumphart, J. Zwyssig, F. Trösch, and A. Wittneben, *IEEE Vehicular Technology Conference (VTC Spring)*, Kuala Lumpur, Malaysia, Apr. 2019.
- [5] **UWB Marine Engine Telemetry Sensor Networks: Enabling Reliable Low-Complexity Communication**
E. Slottke, M. Kuhn, A. Wittneben, H. Luecken, and C. Cartalemi, *IEEE Vehicular Technology Conference, VTC Fall*, Boston, USA, Sept. 2015.
- [6] **UWB Rapid-Bit-Exchange System for Distance Bounding**
N. O. Tippenhauer, H. Luecken, M. Kuhn, and S. Capkun, *Proceedings of the ACM Conference on Security and Privacy in Wireless and Mobile Networks (WiSec)*, June 2015.
- [7] **Group Decoders for Correlated Massive MIMO Systems: The Use of Random Matrix Theory**
Y. Hassan, M. Kuhn, and A. Wittneben, *IEEE Vehicular Technology Conference, VTC Spring*, Glasgow, Scotland, May 2015.
- [8] **Constrained Base Station Clustering for Cooperative Post-Cellular Relay Networks**
R. Rolny, M. Kuhn, and A. Wittneben, *IEEE Wireless Communications and Networking Conference (WCNC)*, New Orleans, USA, Mar. 2015.
- [9] **Decentralized Target Rate Optimization for MU-MIMO Leakage Based Precoding**
T. Rüegg, M. Kuhn, and A. Wittneben, *Asilomar Conference on Signals, Systems, and Computers*, Pacific Grove, CA, USA, Nov. 2014.
- [10] **The Cellular Relay Carpet: Distributed Cooperation with Ubiquitous Relaying**
R. Rolny, T. Rüegg, M. Kuhn, and A. Wittneben, *Springer International Journal of Wireless Information Networks*, June 2014.
- [11] **The Relay Carpet: Ubiquitous Two-Way Relaying in Cooperative Cellular Networks**
R. Rolny, M. Kuhn, and A. Wittneben, *PIMRC 2013*, London, UK, pp. 6, Sept. 2013.

- [12] **Multi-Cell Cooperation Using Subcarrier-Cooperative Two-Way Amplify-and-Forward Relaying**
R. Rolny, M. Kuhn, A. U. T. Amah, and A. Wittneben, *ISWCS 2013*, Ilmenau, Germany, pp. 5, Aug. 2013, (*invited paper*).
- [13] **The Impact of Combined Physical Layer Cooperation and Scheduling for the Downlink of LTE-Advanced Networks**
M. Kuhn, T. Sarmiento , M. Kuhn, and R. Rolny, *IEEE Vehicular Technology Conference* , VTC Spring, Dresden, Germany , June 2013.
- [14] **Relaying and Base Station Cooperation: a Comparative Survey for Future Cellular Networks**
R. Rolny, M. Kuhn, A. Wittneben, and T. Zasowski, *Asilomar Conference on Signals, Systems, and Computers*, Pacific Grove, CA, USA, Nov. 2012.
- [15] **Impact of Relays and Supporting Nodes on Locally Restricted Cooperation in Future Cellular Networks**
M. Kuhn, R. Rolny, and M. Kuhn, *IEEE International Symposium on Wireless Communication Systems, ISWCS 2011*, Aachen, Germany, Nov. 2011.
- [16] **The Potential of Restricted PHY Cooperation for the Downlink of LTE-Advanced**
M. Kuhn, R. Rolny, A. Wittneben, M. Kuhn, and T. Zasowski, *IEEE Vehicular Technology Conference*, VTC Fall, San Francisco, Sept. 2011.
- [17] **Performance Analysis of Distributed Cluster-Based MAC Protocol for Multiuser MIMO Wireless Networks**
A. Ettefagh, M. Kuhn, C. Esli, and A. Wittneben, *EURASIP Journal on Wireless Communications and Networking*, July 2011.
- [18] **Asymmetric Data Rate Transmission in Two-Way Relaying Systems With Network Coding**
J. Zhao, M. Kuhn, A. Wittneben, and G. Bauch, *IEEE International Conference on Communications (ICC)*, Cape Town, South Africa, May 2010.
- [19] **UWB Impulse Radio Based Distance Bounding**
M. Kuhn, H. Luecken, and N. O. Tippenhauer, *7th Workshop on Positioning, Navigation and Communication, WPNC 2010*, Dresden, Germany, pp. 28-37, Mar. 2010.
- [20] **Performance of a Cluster-Based MAC Protocol in Multiuser MIMO Wireless LANs**
A. Ettefagh, M. Kuhn, C. Esli, and A. Wittneben, *International ITG Workshop on Smart Antennas, WSA 2010*, Bremen, Germany, Feb. 2010.
- [21] **Recent Advances in Amplify-and-Forward Two-Hop Relaying**
S. Berger, T. Unger, M. Kuhn, A. Klein, and A. Wittneben, *Communications Magazine*, July 2009.
- [22] **Self-Interference Aided Channel Estimation in Two-Way Relaying Systems**
J. Zhao, M. Kuhn, A. Wittneben, and G. Bauch, *IEEE Global Telecommunications Conference*, Globecom 2008, New Orleans, USA, Nov. 2008.
- [23] **Optimum Time-Division in MIMO Two-Way Decode-and-Forward Relaying Systems**
J. Zhao, M. Kuhn, A. Wittneben, and G. Bauch, *42nd Annual Asilomar Conference on Signals, Systems, and Computers*, Pacific Grove, CA, Oct. 2008.
- [24] **Multihop-Enabled Orthogonalization in Distributed MIMO Networks**
J. Wagner, M. Kuhn, and A. Wittneben, *IEEE Personal, Indoor and Mobile Radio Conference (PIMRC)*, Cannes, France, Sept. 2008 (*invited paper*).

- [25] **Cooperative Processing for the WLAN Uplink**
M. Kuhn, J. Wagner, and A. Wittneben, *IEEE Wireless Communications and Networking Conference, WCNC 2008*, Las Vegas, USA, Mar. 2008.
- [26] **Throughput Performance of Two-way Relaying in IEEE 802.11 Networks**
A. Ettefagh, M. Kuhn, and A. Wittneben, *The 4th IEEE International Symposium on Wireless Communication Systems 2007, ISWCS*, Trondheim, Norway, Oct. 2007.
- [27] **Cooperative Transmission Schemes for Decode-and-Forward Relaying**
J. Zhao, M. Kuhn, A. Wittneben, and G. Bauch, *The 18th Annual IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC'07)*, Athens, Greece, Sept. 2007.
- [28] **MIMO Two-Way Relaying with Transmit CSI at the Relay**
I. Hammerström, M. Kuhn, C. Esli, J. Zhao, A. Wittneben, and G. Bauch, *IEEE Signal Processing Advances in Wireless Communications, SPAWC 2007*, Helsinki, Finland, pp. 5, June 2007, (invited paper).
- [29] **Speech Quality Evaluation and Benchmarking in Cellular Mobile Networks**
O. Nipp, M. Kuhn, A. Wittneben, and T. Schweinhuber, *IST Mobile & Wireless Communications Summit 2007*, Budapest, Hungary, pp. 5, June 2007.
- [30] **Coverage Analysis for Cellular Systems With Multiple Antennas Using Decode-and-Forward Relays**
J. Zhao, I. Hammerström, M. Kuhn, A. Wittneben, M. Herdin, and G. Bauch, *IEEE Vehicular Technology Conference (VTC) Spring 2007*, Dublin, Ireland, Apr. 2007.
- [31] **Distributed MIMO for Cellular Networks with Multihop Transmission Protocols**
I. Hammerström, M. Kuhn, and A. Wittneben, *Asilomar Conference on Signals, Systems, and Computers 2006*, Pacific Grove, CA, Oct. 2006.
- [32] **Two-way Communication for IEEE 802.11n WLANs using Decode and Forward Relays**
M. Kuhn, A. Ettefagh, I. Hammerström, and A. Wittneben, *Asilomar Conference on Signals, Systems, and Computers 2006*, Pacific Grove, CA, Oct. 2006.
- [33] **On the Range Performance of Decode-and-Forward Relays in IEEE 802.11 WLANs**
A. Ettefagh, M. Kuhn, I. Hammerström, and A. Wittneben, *The 17th Annual IEEE International Symposium on Personal, Indoor and Mobile Radio Communications, PIMRC*, Helsinki, Finland, Sept. 2006.
- [34] **Multi-Stream Interference Cancellation for MIMO-OFDM Systems with Outdated Channel State Information**
E. Auger, C. Mutti, M. Kuhn, and A. Wittneben, *3rd COST 289 Workshop*, Aveiro, Portugal, July 2006.
- [35] **Power-Line Enhanced Cooperative Wireless Communications**
M. Kuhn, S. Berger, I. Hammerström, and A. Wittneben, *IEEE JSAC Special Issue on Power Line Communication*, July 2006.
- [36] **Relaying to Enhance the Coverage Range of a Voice over WLAN System**
A. Ettefagh, M. Kuhn, and A. Wittneben, *IEEE Workshop on Smart Antennas, WSA 2006*, Ulm, Germany, Mar. 2006.

- [37] **Comparison of Distributed and Co-located Antenna Diversity Schemes for the Coverage Improvement of VoWLAN Systems**
A. Ettefagh, M. Kuhn, B. M. G. Cheetham, and A. Wittneben, *The 16th Annual IEEE International Symposium on Personal Indoor and Mobile Radio Communications*, Berlin, Sept. 2005.
- [38] **Time Domain Precoding for MIMO-OFDM Systems**
E. Auger, B. Rankov, M. Kuhn, and A. Wittneben, *10th International OFDM-Workshop*, Aug. 2005.
- [39] **Coverage Enhancement for High-Quality Voice over WLAN Systems based on Diversity Techniques**
A. Ettefagh, M. Kuhn, A. Lunn, A. Wittneben, and F. M. Krause, *14th IST Mobile & Wireless Communications Summit*, Dresden, June 2005.
- [40] **Wireless Relaying with Partial Cooperation Based on Power-Line Communication**
M. Kuhn and A. Wittneben, *6th IEEE International Workshop on Signal Processing Advances in Wireless Communications, SPAWC 2005*, New York, June 2005.
- [41] **Providing Professional Quality VoWLAN using DECT**
A. Lunn, M. Kuhn, and B. M. G. Cheetham, *Wi-Fi Voice Conference 2005*, Paris, May 2005.
- [42] **Joint Cooperative Diversity and Scheduling in Low Mobility Wireless Networks**
A. Wittneben, I. Hammerström, and M. Kuhn, *IEEE Global Telecommunications Conference, Globecom 2004*, Nov. 2004.
- [43] **High Quality Telephony over WLAN**
A. Lunn, M. Kuhn, M. Kuhn, A. Ettefagh, B. M. G. Cheetham, and M. Spegel, *European Conference on Wireless Technology, ECWT 2004*, Oct. 2004.
- [44] **Channel Adaptive Scheduling for Cooperative Relay Networks**
I. Hammerström, M. Kuhn, and A. Wittneben, *IEEE Vehicular Technology Conference, VTC Fall 2004*, Los Angeles, Sept. 2004.
- [45] **Impact of Relay Gain Allocation on the Performance of Cooperative Diversity Networks**
I. Hammerström, M. Kuhn, and A. Wittneben, *IEEE Vehicular Technology Conference, VTC Fall 2004*, Los Angeles, Sept. 2004.
- [46] **Professional Quality Voice over WLAN**
M. Kuhn, A. Ettefagh, M. Kuhn, A. Lunn, B. M. G. Cheetham, and M. Spegel, *IEEE Vehicular Technology Conference, VTC Fall 2004*, Sept. 2004.
- [47] **Cooperative Diversity by Relay Phase Rotations in Block Fading Environments**
I. Hammerström, M. Kuhn, and A. Wittneben, *Signal Processing Advances in Wireless Communications, SPAWC 2004*, pp. 5, July 2004.
- [48] **Linear Scalable Dispersion Codes: Signal Design and Performance Analysis**
M. Kuhn, I. Hammerström, and A. Wittneben, *IEEE Vehicular Technology Conference, VTC Spring 2004*, May 2004.
- [49] **Space-Time Processing for Cooperative Relay Networks**
I. Hammerström, M. Kuhn, B. Rankov, and A. Wittneben, *IEEE Vehicular Technology Conference, VTC Fall 2003*, Oct. 2003.
- [50] **Linear Scalable Dispersion Codes for Frequency Selective Channels**
M. Kuhn, I. Hammerström, and A. Wittneben, *Proc. of the 8th International OFDM-Workshop*, Sept. 2003.

- [51] **Linear Scalable Space-Time Codes: Tradeoff between Spatial Multiplexing and Transmit Diversity**
M. Kuhn, I. Hammerström, and A. Wittneben, *Signal Processing Advances in Wireless Communications, SPAWC 2003*, June 2003.
- [52] **Indoor PLC networks: channel capacity and efficient coding scheme**
M. Kuhn and A. Wittneben, *VDE, Net&Home, Kongress zur Telekommunikation in Gebäuden*, Nov. 2002.
- [53] **Low complexity decoding of a class of linear space-time block codes by subspace partitioning**
M. Kuhn and A. Wittneben, *IEEE Vehicular Technology Conference, VTC Fall 2002*, Sept. 2002.
- [54] **Spectral spreading by linear block codes for OFDM in Powerline Communications**
D. Benyoucef, M. Kuhn, and A. Wittneben, *Proc. of the 7th International OFDM-Workshop*, Sept. 2002.
- [55] **A new concatenated linear high rate space-time block code**
A. Wittneben and M. Kuhn, *IEEE Vehicular Technology Conference, VTC Spring 2002*, May 2002.
- [56] **A new scalable decoder for linear block codes with intersymbol interference**
M. Kuhn and A. Wittneben, *IEEE Vehicular Technology Conference, VTC Spring 2002*, May 2002.
- [57] **Linear block codes for frequency selective PLC channels with colored noise and multiple narrowband interference**
M. Kuhn, D. Benyoucef, and A. Wittneben, *IEEE Vehicular Technology Conference, VTC Spring 2002*, May 2002.
- [58] **PLC enhanced wireless access networks: a link level capacity consideration**
M. Kuhn and A. Wittneben, *IEEE Vehicular Technology Conference, VTC Spring 2002*, May 2002.

Patent-Anmeldungen:

- [1] **Zugangskontrollsystem und Verfahren zum Betreiben eines Zugangskontrollsysteins**
F. Trösch, A. Wittneben, H. Schulten, J. Zwyssig, and M. Kuhn, *European Patent Office*, Application No. EP19171358.5, June 2019, submitted.
- [2] **System und Verfahren zur Positionsbestimmung in einem Gebäude**
F. Trösch, A. Wittneben, G. Dumphart, and M. Kuhn, *European Patent Office*, Application No. EP18200011.7, Oct. 2018, submitted.
- [3] **Zugangskontrollsystem und Verfahren zum Betreiben eines Zugangskontrollsysteins**
F. Trösch, A. Wittneben, G. Dumphart, and M. Kuhn, *European Patent Office*, Application No. EP18200002.6, Oct. 2018, submitted.
- [4] **Method and System for Monitoring or Controlling an Engine**
A. Wittneben, Z. W. Mekonnen, E. Slottke, M. Kuhn, and C. Cartalemi, *European Patent Office*, Patent application KR20160131914 (A), CN106124218 (A) , Nov. 2016.
- [5] **Method for deploying a cellular communication network**
T. Zasowski, M. Kuhn, and R. Rolny, *Schweizer Patentanmeldung; European Patent Office*, Application/ Patent No 11405379.6 - 1525, Dec. 2011.

- [6] **Apparatus for providing a combined digital signal**
J. Zhao, M. Kuhn, A. Wittneben, and G. Bauch, *European Patent Office*, Patent No. 09001925.8 - 1237, 2009-02-11.
- [7] **Method, apparatus and system for channel estimation in two-way relaying networks**
A. Wittneben, J. Zhao, M. Kuhn, and G. Bauch, *European Patent Office*, Patent No. 08000511.9 - 2411, 2008-01-11.
- [8] **Verfahren zum Übertragen von digitalen Informationen**
A. Wittneben and M. Kuhn, *Schweizer Patentanmeldung*, Patentgesuch Nummer 2002 0740 / 02, May 2002.
- [9] **Verfahren zur iterativen Interferenz-Kompensation bei der Übertragung von digitalen Informationen**
A. Wittneben and M. Kuhn, *Schweizer Patentanmeldung*, Patentgesuch Nummer 2002 0739 / 02, May 2002.

Dissertation:

- **Space-Time Codes und ihre Anwendungen in zukünftigen Kommunikationssystemen**
M. Kuhn, *Dissertation*, Universität des Saarlandes, Logos Verlag Berlin, 2003.