

# List of publications of François Quitin

List fulfilling the [Guide for applicants 2017](#)'s requirements

## 2. Book chapters or participation to a collective book, as an author or a co-author of the section

1. Oestges, C., Lienard, M., Molina-Garcia-Pardo, J., Degli-Esposti, V., Joseph, W., Tanghe, E., **Quitin, F.**, De Doncker, P., Narandzic, M., Czink, N., Haneda, K., Poutanen, J., & Liu, L. (2012). Radio Channel Modelling for 4G Networks. In *COST Action 2100 – Pervasive Mobile & Ambient Wireless Communications*. Springer.

## 3. Articles published in peer-review journals

1. **Quitin, F.**, Govindaraj, V., Zhong, X., & Tay, W. P. (2017, March). Virtual multi-antenna array for estimating the angle-of-arrival of a RF transmitter. *IEEE VTS ... Vehicular Technology Conference.*, 7881965. doi:10.1109/VTCTFall.2016.7881965
2. Madadi, Z., **Quitin, F.**, & Tay, W. P. (2017, March). Receiver tracking using signals of opportunity from asynchronous RF beacons in GNSS-denied environments. *IEEE VTS ... Vehicular Technology Conference.*, 7881191. doi:10.1109/VTCTFall.2016.7881191
3. **Quitin, F.**, Irish, A., & Madhow, U. (2016). A scalable architecture for distributed receive beamforming: analysis and experimental demonstration. *IEEE transactions on wireless communications*, 15(3), 10.1109/TWC.2015.2497687, 2039 - 2053. doi:10.1109/TWC.2015.2497687
4. Leng, M., **Quitin, F.**, Tay, W. P., Cheng, C., Razul, S. G., & See, C. M. S. (2016). Anchor-Aided Joint Localization and Synchronization Using SOOP: Theory and Experiments. *IEEE transactions on wireless communications*, 15(11), 7670 - 7685.
5. Xu, W., **Quitin, F.**, Leng, M., Tay, W. P., & Razul, S. (2015). Distributed localization of a RF target in NLOS environments. *IEEE journal on selected areas in communications*, 33(7).
6. Van Roy, S., **Quitin, F.**, Liu, L., Oestges, C., Horlin, F., Dricot, J.-M., & De Doncker, P. (2013, April). Dynamic Channel Modeling for Multi-Sensor Body Area Networks. *IEEE transactions on antennas and propagation*, 61(4), 2200-2208. doi:10.1109/TAP.2012.2231917
7. Liu, L. L., Van Roy, S., **Quitin, F.**, De Doncker, P., & Oestges, C. (2013). Statistical characterization and modeling of doppler spectrum in dynamic on-body channels. *IEEE antennas and wireless propagation letters*, 12, 6450040, 186-189. doi:10.1109/LAWP.2013.2245094
8. **Quitin, F.**, Rahman, M., Mudumbai, R., & Madhow, U. (2013). A scalable architecture for distributed transmit beamforming with commodity radios: design and proof of concept. *IEEE transactions on wireless communications*, 12(3).

9. **Quitin, F.**, Oestges, C., Panahandeh, A., Horlin, F., & De Doncker, P. (2012, December). Tri-polarized MIMO systems in real-world channels: channel investigation and performance analysis. *Physical Communication*, 5(4), 308-316. doi:10.1016/j.phycom.2012.04.004
10. **Quitin, F.**, Oestges, C., Van Roy, S., Bellens, F., Horlin, F., & De Doncker, P. (2012, August). Model parametrization and validation for specular-diffuse clustered channel models. *IEEE transactions on antennas and propagation*, 60(8), 4019-4022. doi:10.1109/TAP.2012.2201095
11. Liu, L., Oestges, C., Poutanen, J., Haneda, K., Vainikainen, P., **Quitin, F.**, Tufvesson, F., & De Doncker, P. (2012). The COST 2100 MIMO Channel Model. *IEEE wireless communications*, 19(6), 6393523, 92-99. doi:10.1109/MWC.2012.6393523
12. Mani, F., **Quitin, F.**, & Oestges, C. (2012). Directional spreads of dense multipath components in indoor environments: Experimental validation of a Ray-Tracing approach. *IEEE transactions on antennas and propagation*, 60(7), 6193144, 3389-3396. doi:10.1109/TAP.2012.2196942
13. van Laethem,, **Quitin, F.**, Bellens, F., Oestges, C., & De Doncker, P. (2012). Correlation for multi-frequency propagation in urban environments. *Progress in Electromagnetics Research Letters*, 29, 151-156. doi:10.2528/PIERL11111701
14. Bellens, F., **Quitin, F.**, Dricot, J.-M., Horlin, F., Benlarbi-Delaï, A., & De Doncker, P. (2011, June). A Wideband Channel Model for Intravehicular Nomadic Systems. *International Journal of Antennas and Propagation*, 2011, 468072, 9. doi:10.1155/2011/468072
15. Mani, F., **Quitin, F.**, & Oestges, C. (2011). Accuracy of Depolarization and Delay Spread Predictions using Advanced Ray Based Modeling in Indoor Scenarios. *EURASIP Journal on wireless communications and networking*. doi:10.1186/1687-1499-2011-11
16. **Quitin, F.**, Oestges, C., Horlin, F., & De Doncker, P. (2010, October). A polarized clustered channel model for indoor multiantenna systems at 3.6 GHz. *IEEE transactions on vehicular technology*, 59(8), 5545427, 3685-3693. doi:10.1109/TVT.2010.2064795
17. **Quitin, F.**, Oestges, C., Horlin, F., & De Doncker, P. (2010, January). Polarization Measurements and Modeling in Indoor NLOS Environments. *IEEE transactions on wireless communications*, 9(1), 21-25. doi:10.1109/TWC.2010.01.081144
18. **Quitin, F.**, Oestges, C., Horlin, F., & De Doncker, P. (2009, September). Multipolarized MIMO channel characteristics: Analytical study and experimental results. *IEEE transactions on antennas and propagation*, 57(9), 2739-2745. doi:10.1109/TAP.2009.2027041
19. **Quitin, F.**, Oestges, C., Horlin, F., & De Doncker, P. (2009, February). Small-Scale Variations of Cross Polar Discrimination in Ricean Fading Channels. *Electronics Letters*, 45(4), 213-214. doi:10.1049/el:20092524

#### 4. Articles published in conference proceedings

1. Horlin, F., Van Eeckhaute, M., Van der Vorst, T., **Quitin, F.**, Bourdoux, A., & De Doncker, P. (2017, June). Iterative ToA-based Terminal Positioning in Emerging Cellular Systems. *Proc. of the IEEE International Conference on Communications*. Paris, France: IEEE.  
<https://dipot.ulb.ac.be/dspace/bitstream/2013/247091/3/Iterative-ToA-based-Terminal-Positioning.pdf>
2. Oguz-Ekim, P., Khaled, A., Madadi, Z., **Quitin, F.**, & Tay, W. P. (2016, November). Proof of concept study using DSRC, IMU and map fusion for vehicle localization in GNSS-denied environments. *IEEE 19th International Conference on Intelligent Transportation Systems (ITSC), 2016*.
3. **Quitin, F.**, Govindaraj, V., Zhong, X., & Tay, W. P. (2016). Virtual multi-antenna array for estimating the angle-of-arrival of a RF transmitter. *2016 IEEE 84th Vehicular Technology Conference (VTC2016-Fall)*.
4. Madadi, Z., **Quitin, F.**, & Tay, W. P. (2016). Receiver Tracking using Signals of Opportunity from Asynchronous RF Beacons in GNSS-denied Environments. *2016 IEEE 84th Vehicular Technology Conference: VTC2016-Fall*.
5. Leng, M., **Quitin, F.**, Cheng, C., Tay, W. P., Razul, S., & See, C. (2015, September). Joint Navigation and Synchronization using SOOP in GPS-denied environments: Algorithm and Empirical Study. *Sensor Signal Processing for Defence 2015 Conference*.
6. Madadi, Z., **Quitin, F.**, & Tay, W. P. (2015, April). Vehicle localization using periodic transmissions from an RSU in GNSS denied environments. *14th Intelligent Transportation Systems Asia Pacific Forum 2015*.
7. **Quitin, F.**, Madadi, Z., & Tay, W. P. (2015). RF transmitter geolocation based on signal periodicity: concept and implementation. *2015 International Conference on Communications (ICC2015)*.
8. Madadi, Z., **Quitin, F.**, & Tay, W. P. (2015). Periodic RF transmitter geolocation using a mobile receiver. *2015 International Conference on Acoustics, Speech and Signal Processing (ICASSP 2015)*.
9. Xu, W., **Quitin, F.**, Leng, M., Tay, W. P., & Razul, S. (2014, June). Distributed localization of a non-cooperative RF target in NLOS environments. *17th International Conference on Information Fusion (Fusion 2014)*.
10. Isaacs, J., Irish, A., **Quitin, F.**, Madhow, U., & Hespanha, J. P. (2014, May). Bayesian Localization and Mapping Using GNSS SNR Measurements. *Proc. of 2014 IEEE/ION Position Location and Navigation Symposium (PLANS)*.
11. Isaacs, J., Magee, C., Subbaraman, A., **Quitin, F.**, Fregene, K., Madhow, U., & Hespanha, J. P. (2014). GPS-optimal micro air vehicle navigation in degraded environments. *2014 American Control Conference (ACC 2014)*.
12. Irish, A., Isaacs, J., **Quitin, F.**, Hespanha, J. P., & Madhow, U. (2014). Belief propagation based localization and mapping using sparsely samples GNSS SNR measurements. *2014 IEEE International Conference on Robotics and Automation (ICRA 2014)*.

13. Irish, A., Isaacs, J., **Quitin, F.**, Hespanha, J. P., & Madhow, U. (2014). Probabilistic 3D Mapping based on GNSS SNR Measurements. *2014 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP 2014)*.
14. Isaacs, J., **Quitin, F.**, Garcia Carrillo, L., Madhow, U., & Hespanha, J. P. (2014). Quadrotor Control for RF Source Localization and Tracking. *International Conference on Unmanned Aircraft Systems (ICUAS 2014)*.
15. Irish, A., **Quitin, F.**, Madhow, U., & Rodwell, M. (2013, November). Achieving multiple degrees of freedom in long-range mm-wave MIMO channels using randomly distributed relays. *47th Asilomar Conference on Signals, Systems and Computers*.
16. **Quitin, F.**, Irish, A., & Madhow, U. (2013, May). Distributed receive beamforming: a scalable architecture and its proof of concept. *77th IEEE Vehicular Technology Conference (VTC-spring 2013)*.
17. Irish, A., **Quitin, F.**, Madhow, U., & Rodwell, M. (2013, February). Sidestepping the Rayleigh limit for LoS spatial multiplexing: a distributed architecture for long-range wireless fiber. *2013 Information Theory and Application Workshop (ITA 2013)*.
18. **Quitin, F.**, Madhow, U., Rahman, M., & Mudumbai, R. (2012, June). Demonstrating distributed transmit beamforming with software defined radios. *13th International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM2012)*.
19. **Quitin, F.**, Rahman, M., Mudumbai, R., & Madhow, U. (2012, June). Distributed beamforming with software-defined radios: frequency synchronization and digital feedback. *2012 Global Communications Conference (Globecom 2012)*.
20. Panahandeh, A., **Quitin, F.**, Dricot, J.-M., Horlin, F., Oestges, C., & De Doncker, P. (2012, March). Characterization of the Polarization of Received Electromagnetic Waves in Indoor Communication Channels. *Proc. of the 31st Progress In Electromagnetics Research Symposium*. Kuala Lumpur, Malaysia.
21. Mavridis, T., Bellens, F., **Quitin, F.**, Benlarbi-Delaï, A., & De Doncker, P. (2012, March). Analytical and Experimental Study of Spatial Focusing by UWB Time-Reversal in Indoor Environment. *Proc. of the 31st Progress in Electromagnetics Research Symposium* (pp. 1436 - 1440). Kuala Lumpur, Malaysia.  
[https://dipot.ulb.ac.be/dspace/bitstream/2013/119533/1/3P7\\_1436.pdf](https://dipot.ulb.ac.be/dspace/bitstream/2013/119533/1/3P7_1436.pdf)
22. Panahandeh, A., **Quitin, F.**, Dricot, J.-M., Horlin, F., Oestges, C., & De Doncker, P. (2012, January). A Time-Variant Statistical Model for the Polarization of Received Electromagnetic Waves in Indoor Communication Channels. *Proc. of the International Conference on Computing, Networking and Communications: Vol. 1* (p. 262). Maui, Hawaii, USA: IEEE. doi:10.1109/ICCNC.2012.6167424
23. **Quitin, F.**, Oestges, C., Bellens, F., Van Roy, S., Horlin, F., & De Doncker, P. (2011, September). Extracting specular-diffuse clusters from MIMO channel measurements. *Proc. of the 22nd annual IEEE Symposium on Personal, Indoor and Mobile Radio Communications*. Toronto, Canada: IEEE. doi:10.1109/PIMRC.2011.6140107

24. Mavridis, T., Bellens, F., **Quitin, F.**, Benlarbi-Delaï, A., & De Doncker, P. (2011, May). Spatial focusing of electromagnetic waves using the UWB time reversal method. *Proc. of the 32nd WIC Symposium on Information Theory in the Benelux: First Joint WIC/IEEE SP Symposium on Information Theory and Signal Processing in the Benelux*. Brussels, Belgium.  
<https://dipot.ulb.ac.be/dspace/bitstream/2013/136808/1/Mavridis-WICSP28.pdf>
25. Bellens, F., **Quitin, F.**, Dricot, J.-M., Horlin, F., Benlarbi-Delaï, A., & De Doncker, P. (2011, April). Performance evaluation of time reversal in intra-vehicular environment. *Proc. of the 5th European Conference on Antennas and Propagation*. Roma, Italy: IEEE.
26. Liu, L., Poutanen, J., **Quitin, F.**, Haneda, K., Tufvesson, F., De Doncker, P., Vainikainen, P., & Oestges, C. (2011, March). The COST 2100 MIMO Channel Model. *Proc. of the NEWCOM++ / COST2100 Joint Workshop on Wireless Communications*. Paris, France.
27. **Quitin, F.**, Bellens, F., Panahandeh, A., Dricot, J.-M., Dossin, F., Horlin, F., Oestges, C., & De Doncker, P. (2010, September). A Time-Variant Statistical Channel Model for Tri-Polarized Antenna Systems. *Proc. of the 21st annual IEEE Symposium on Personal, Indoor and Mobile Radio Communications*. Istanbul, Turkey: IEEE. doi:10.1109/PIMRC.2010.5671701
28. Dricot, J.-M., Ferrari, G. G. F., **Quitin, F.**, Horlin, F., & De Doncker, P. (2010, September). Primary Exclusive Region and Optimality of the Link-Level Throughput of Cognitive Terminals. *Proc. of the 21st annual IEEE Symposium on Personal, Indoor and Mobile Radio: Workshop on Cognitive Wireless Cloud Networks*. Istanbul, Turkey. doi:10.1109/PIMRCW.2010.5670517
29. Dricot, J.-M., Ferrari, G. G. F., **Quitin, F.**, Panahandeh, A., Horlin, F., & De Doncker, P. (2010, June). Polarization Orthogonality for the Co-Existence of Wideband Fading Cognitive Networks. *Proc. of the 5th International Conference on Cognitive Radio and Oriented Wireless Networks and Communications*. Cannes, France: IEEE. doi:10.4108/ICST.CROWNCOM2010.9207
30. Fickers, J., **Quitin, F.**, Emplit, P., & Horlin, F. (2010, May 01). Frequency Domain Equalization for Dispersive Birefringent Nonlinear Optical Fibers. *IEEE Symposium on Information Theory*.
31. Panahandeh, A., **Quitin, F.**, Dricot, J.-M., Horlin, F., Oestges, C., & De Doncker, P. (2010, May). Multi-Polarized Channel Statistics for Outdoor-to-Indoor and Indoor-to-Indoor Channels. *Proc. of the 71st IEEE Vehicular Technology Conference*. Taipei, Taiwan. doi:10.1109/VETECS.2010.5494107
32. Horlin, F., **Quitin, F.**, Fickers, J., & Emplit, P. (2010, May). Polarization Division Multiplexing for SC-FDE Communications over Dispersive Optical Fibers. *Proceedings of the 2010 IEEE International Conference on Communications* (pp. 1-5). Piscataway: IEEE. doi:10.1109/ICC.2010.5502056
33. **Quitin, F.**, Oestges, C., Horlin, F., & De Doncker, P. (2010, April). Diffuse Multipath Component Characterization for Indoor MIMO Channels. *Proc. of the 4th European Conference on Antennas and Propagation*. Barcelona, Spain: IEEE.



34. Panahandeh, A., **Quitin, F.**, Dricot, J.-M., Horlin, F., Oestges, C., & De Doncker, P. (2010, April). Orientation-free XPD and CPR model in outdoor-to-indoor and indoor-to-indoor channels. *Proc. of the 4th European Conference on Antennas and Propagation*. Barcelona, Spain: IEEE.
35. Bellens, F., **Quitin, F.**, Horlin, F., & De Doncker, P. (2009, October). UWB Channel Analysis Within a Moving Car. *Proc. of the 9th International Conference on ITS Telecommunications*. Lille, France: IEEE. doi:10.1109/ITST.2009.5399271
36. Bellens, F., **Quitin, F.**, Horlin, F., & De Doncker, P. (2009, September). Channel Measurements and MB-OFDM performance inside a driving car. *Proc. of the 11th International Conference on Electromagnetism in Advanced Applications*. Torino, Italy: IEEE. doi:10.1109/ICEAA.2009.5297412
37. **Quitin, F.**, Oestges, C., Horlin, F., & De Doncker, P. (2009, September). Clustered Channel Characterization for Indoor Polarized MIMO Systems. *Proc. of the 20th IEEE International Symposium on Personal, Indoor and Mobile Radio Communications*. Tokyo, Japan: IEEE. doi:10.1109/PIMRC.2009.5450268
38. **Quitin, F.**, Oestges, C., Horlin, F., & De Doncker, P. (2009, April). Polarimetric Measurements for Spatial Wideband MIMO Channels. *Proc. of the 69th Vehicular Technology Conference*. Barcelona, Spain: IEEE. doi:10.1109/VETECS.2009.5073806
39. **Quitin, F.**, Oestges, C., Horlin, F., & De Doncker, P. (2009, March). Small-Scale Variations of Cross-Polar Discrimination in Polarized MIMO Systems. *Proc. of the 3rd European Conference on Antennas and Propagation*. Berlin, Germany: IEEE.
40. **Quitin, F.**, Oestges, C., Horlin, F., & De Doncker, P. (2009, March). Un modèle de canal indoor par cluster pour systèmes MIMO polarisés. *Actes des Journées Scientifiques 2009 URSI France: Propagation et Télédétection*. Paris, France: URSI.
41. **Quitin, F.**, Oestges, C., Horlin, F., & De Doncker, P. (2008, September). Channel Correlation and Cross-Polar Ratio in Multi-Polarized MIMO Channels: Analytical Derivation and Experimental Validation. *Proc. of the IEEE 68th Vehicular Technology Conference*. Calgary, Alberta. doi:10.1109/VETECF.2008.40
42. **Quitin, F.**, Oestges, C., Horlin, F., & De Doncker, P. (2008, September). Analytical Model and Experimental Validation of Cross-Polar Ratio in Polarized MIMO Channels. *Proc. of the 19th IEEE International Symposium on Personal, Indoor and Mobile Radio Communications*. Cannes, France: IEEE. doi:10.1109/PIMRC.2008.4699565
43. **Quitin, F.**, Horlin, F., Oestges, C., & De Doncker, P. (2008, May). A New Precoding Scheme for Compact Cross-Polarized Multi-Antenna Systems. *Proc. of the 29th Symposium on Information Theory in the Benelux*. Leuven, Belgium.

## 5. Oral presentations during conferences, which include a review committee

1. **Quitin, F.** (2017, February). *Virtual multi-antenna arrays for radio transmitter bearing estimation*. Paper session presented at Free and Open Source Developers' European Meeting (FOSDEM) 2017 (Brussels, Belgium).
2. Horlin, F., De Doncker, P., **Quitin, F.**, Van Eeckhaute, M., & Van der Vorst, T. (2016, November). *Evolution of 5G Networks: Communications and Positioning Interplay*. Paper session presented at BESTCOM Workshop (November 2016: Louvain-la-Neuve, Belgium).
3. **Quitin, F.**, Govindaraj, V., Zhong, X., & Tay, W. P. (2016). *Virtual multi-antenna array for estimating the angle-of-arrival of a RF transmitter*. Paper session presented at COST IRACON 2nd MC meeting and first technical meeting.
4. Van Roy, S., **Quitin, F.**, Liu, L., Oestges, C., Dricot, J.-M., Horlin, F., & De Doncker, P. (2012, May). *Dynamic channel modeling and validation for multi-sensor body area networks*. Paper session presented at COST IC1004 (May 2012: Lyon, France).
5. Liu, L., Poutanen, J., **Quitin, F.**, Haneda, K., Tufvesson, F., De Doncker, P., Vainikainen, P., & Oestges, C. (2011, March). *The COST 2100 MIMO channel model*. Paper session presented at COST 2100 (March 2011: Paris, France).
6. **Quitin, F.**, Bellens, F., Van Roy, S., Horlin, F., Oestges, C., & De Doncker, P. (2010, November). *Extracting specular-diffuse clusters from MIMO channel measurements*. Paper session presented at COST 2100, TD(10) 12065 (November 2010: Bologna, Italy).  
<https://dipot.ulb.ac.be/dspace/bitstream/2013/74598/1/conferencePaperCOST2100Bologna.pdf>
7. Chambers, P., Castiglione, P., Liu, L., Mani, F., **Quitin, F.**, Renaudin, O., Sanchez, F., Czink, N., & Oestges, C. (2010, June). *PUSCO Radio Measurement Campaign*. Paper session presented at COST 2100, TD(10) 11015 (June 2010: Aalborg, Denmark).
8. Panahandeh, A., **Quitin, F.**, Dricot, J.-M., Horlin, F., Oestges, C., & De Doncker, P. (2009, May). *Cross-Polar Discrimination Statistics for Outdoor-to-Indoor and Indoor-to-Indoor Channels*. Paper session presented at COST 2100, TD(09) 815 (May 2009: Valencia, Spain).
9. **Quitin, F.**, Oestges, C., Horlin, F., & De Doncker, P. (2009, May). *Cluster Parametrisation for Indoor Polarized MIMO Channels*. Paper session presented at COST 2100, TD(09) 818 (May 2009: Valencia, Spain).
10. **Quitin, F.**, Oestges, C., Horlin, F., & De Doncker, P. (2009, February). *A Spatio-Temporal Channel Model for Modeling the Diffuse Multipath Component in Indoor Environments*. Paper session presented at COST 2100, TD(10) 10003 (February 2009: Athens, Greece).
11. Mani, F., **Quitin, F.**, & Oestges, C. (2009, February). *Evaluation of Diffuse Scattering Contribution in Office Scenario*. Paper session presented at COST 2100, TD(10) 10001 (February 2009: Athens, Greece).

12. **Quitin, F.**, Oestges, C., Horlin, F., & De Doncker, P. (2008, October). *Small-Scale Variations of Cross-Polar Discrimination in Polarized MIMO Systems*. Paper session presented at COST 2100, TD(08) 603 (October 2008: Lille, France).
13. **Quitin, F.**, Oestges, C., Horlin, F., & De Doncker, P. (2008, October). *Spatio-Temporal Characterization of Polarized MIMO Channels*. Paper session presented at COST 2100 TD(08) 602 (October 2008: Lille, France).
14. **Quitin, F.**, Oestges, C., Horlin, F., & De Doncker, P. (2007, September). *Cross-Polarized MIMO Channel Measurements for Indoor Environments*. Paper session presented at COST 2100, TD(07) 388 (September 2007: Duisburg, Germany).

## 6. Patents

1. Irish, A., Isaacs, J., **Quitin, F.**, Madhow, U., & Hespanha, J. P. (2014, December). *Probabilistic 3D mapping based on GNSS SNR measurements: PCT Application Serial No. PCT/US2014/068220*.
2. Tay, W. P., Madadi, Z., & **Quitin, F.** (2014, December). *Geo-location using virtual TDOA with asynchronous clocks: Singapore provisional patent 10201408393V*.
3. Tay, W. P., & **Quitin, F.** (2014, June). *Localization of non-cooperative RF targets in cluttered environment: US provisional patent number 62/016,249*.