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Prof. Ryu is one of the best Korean leading specialists in the field of wireless and mobile communications. He is a valuable advisory committee member of Ministry of Knowledge and Economy, Korea government, taking advisory part in policy making with his expertise and vision in these areas.

He has published more than 240 papers (substantial part of which in IEEE Transactions) and has patents in Korea, USA, Canada and Europe. Since 1990, he has been paper reviewer in countless times, session chairs up to hundred times in the international and domestic conferences. Since 1988, he has actively worked several tens of times as member of the technical program committee (TPC) of the international conferences and domestic conferences.

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Fields of Interest:

- New Generation Mobile Communication, B4G/5G
- MIMO, OFDM system for Wireless, Mobile Communication
- Satellite communication and HAPS communication
- Spread Spectrum System , AJ and LPI Technology
- GPS, WLAN, Mobile Ad-hoc Network, Wireless Sensor Network.
- Welfare Communication for the Disabled Person
- Human Body Channel Communication
- PLC(power line communication) and Home Networking,
- Communication System for Assisted Living,
- Ubiquitous Health Care and System Development, etc

Several Transaction Papers

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(2) “PAPR reduction of the low complexity phase weighting method in OFDM communication system,”
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(3) "An Improved ICI reduction Method in OFDM Communication System" IEEE Transaction on Broadcasting, vol.51, no.3, pp.395-400, Sept. 2005.

(4) “Power Spectrum Analysis of the Cross/Inter-modulation in the Non-linear LNA,”
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(8) “ICI Compensation in MISO-OFDM System Affected by Frequency Offset and Phase Noise” Journal of Communication and Computer, Vol.5, no.12, pp.32-38, Dec. 2008.

(9) “Combination of PAPR Reduction and linearization for the OFDM Communication System,” Wireless Communications and Mobile Computing, Vol.10, Issue 5, May March, 2010.

(9) “Suppression of ICI and MAI in SC-FDMA Communication System with Carrier Frequency Offsets,” IEEE Transaction on Consumer Electronics, vol.56, no.2, pp.359-365, May, 2010.

(10) ”Inter-subcarrier interference compensation in the frequency-hopped single-carrier frequency division multiple access communication system," IET Commun., Volume 4, Issue 12, p.1443–1451, 13 August 2010.

(11) “Combination of PAPR Reduction and linearization for the OFDM Communication System, Wireless Communications and Mobile Computing, Vol.10, Issue 5, May, 2010.
(12)“Joint estimation and suppression of phase noise and carrier frequency offset in multiple-input multiple-output single carrier frequency division multiple access with single-carrier space frequency block coding," IET Commun., Volume 4, Issue 16, p.1998 - 2007, November 5 2010.
(13) “ICI problem and compensation in MIMO SC-FDMA system with SC-SFBC scheme,” International Journal of Communication Systems, Volume 23, Issue 12, Pages: 1521–1536, December 2010.
(14) “Quadrature Amplitude Position Modulation Combined with Multicarrier Communication System” Lecture Notes in Computer Science, ISSN 0302-9743, Springer Verlag, 22th-24th Sept. 2011.
(15) “Wireless Multimedia Acoustic Transmission with MIMO-OFDM ” Lecture Notes in Computer Science, ISSN 0302-9743, Springer Verlag, 22th-24th Sept. 2011.
(16) “Multicarrier-Based QAPM Modulation System for the Low Power Consumption and High Data Rates” Mobile Networks and Application, Volume 17, Number 1, pp. 45-52, February 2012.
(17) “On the Performance of Covariance Based Spectrum Sensing for Cognitive Radio,” IEEE Transactions on Signal Processing, Vol. 60 , Issue 7, pp. 3670 – 3682, July 2012.
(18) “Compensation of RF impairment in multi-band receiver based on RF sub-sampling” AEUE - International Journal of Electronics and Communications, Volume 66, issue 8, pp. 613-618, Aug. 2012.

A picture in the IARIA conference, VENICE, Italy June 2012.