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LIST OF PUBLICATIONS

(Publications written in Hungarian are not included)

Edited Special Issues and Proceedings

- [1] G. Kolumbán, guest editor. Special issue on “Intelligent Systems, INTER–ACADEMIA.” *Periodica Polytechnica, Electrical Engineering*, vol. 50, no. 3–4, 2006.
- [2] C. K. Tse, G. Kolumbán and F. C. M. Lau, guest editors. Special Issue on “Application of Chaos in Communications.” *Circuits, Systems and Signal Processing*, vol. 24, no. 5, September–October 2005.
- [3] M. P. Kennedy and G. Kolumbán, guest editors. Special issue on “Noncoherent Chaotic Communications.” *IEEE Trans. Circuits and Syst. I*, vol. 47, no. 12, December 2000.
- [4] G. Kolumbán, editor. *Proc. of the 6th International Specialist Workshop on Nonlinear Dynamics of Electronic Systems, (NDES'98)*. Technical University of Budapest, Budapest, Hungary, July 16–18, 1998.

Book Chapters

- [1] G. Kolumbán, “Phase-locked loops,” in *The Encyclopedia of RF and Microwave Engineering*, K. Chang, Ed., vol. 4, pp. 3735–3767. Wiley, New York, 2005.
- [2] G. Kolumbán and M. P. Kennedy, “Correlator-based chaotic communications: Attainable noise and multipath performance,” in *Chaos in Circuits and Systems*, G. Chen and T. Ueta, Eds. World Scientific, Series on Nonlinear Science, Series B –vol. 11, pp. 443–485, Singapore, 2002.
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Referred International Journal Papers

- [1] J. Julow, Zs. Kolumbán, Á. Viola, T. Major, and G. Kolumbán, “Prediction of volumetric change in the “triple ring” caused by glioma I-125 brachytherapy,” *Neuro-Oncology*, vol. 10, no. 4, pp. 583–592, August 2008.
- [2] G. Kolumbán and T. Krébesz, “UWB radio: Digital communication with chaotic and impulse wavelets,” *IEICE Trans. on Fundamentals of Electronics, Communications and Computer Sciences*, vol. E90-A, no. 10, pp. 2248–2249, October 2007.
- [3] S. K. Yong, C. C. Chong, and G. Kolumbán, “Non-coherent UWB radio for low-rate WPAN applications: A chaotic approach,” *International Journal of Wireless Information Networks*, vol. 14, no. 2, pp. 121–131, June 2007.
- [4] Y. Xia, C. K. Tse, F. C. M. Lau and G. Kolumbán, “Performance of Frequency-Modulated Differential-Chaos-Shift-Keying Communication System Over Multipath Fading Channels with Delay Spread,” *International Journal of Bifurcation and Chaos*, vol. 15, no. 12, pp. 4027–4033, December 2005.
- [5] G. Kolumbán, F. C. M. Lau and C. K. Tse, “Generalization of Waveform Communications: The Fourier Analyzer Approach,” *Circuits, Systems and Signal Processing*, vol. 24, no. 5, pp. 451–477, September–October 2005.
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Patents Granted

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- [6] V. Bíró, G. Kolumbán, and K. Visegrádi, “Circuit configuration for stabilizing the output power of microwave frequency multipliers,” Hungarian patent number: 174 248, granted on June 8, 1977.

Invited Tutorials and Keynote Addresses

- [1] G. Kolumbán and T. Krébesz, “LR-WPAN and UWB data communication systems: A new possible application for chaotic carriers,” in *Proc. NOMA '07*, invited talk, University de Toulouse, INSA, France, December 13–14 2007, pp. 32–35.
- [2] G. Kolumbán, “Performance bounds on chaos communications: A systematic approach to the development of a chaotic communication system,” invited tutorial at *Workshop on the Transmission of Chaotic Signals*, University of Bristol, UK, August 1–3, 2006.
- [3] G. Kolumbán, “Ultra-wideband radio: Chaotic communications versus noncoherent impulse radio,” invited tutorial at *2005 European Conference on Circuit Theory and Design*, in Proc. ECCTD'05 Tutorial Session, University College Cork, Ireland September 2, 2005.
- [4] G. Kolumbán, “The theory and implementation of a robust chaotic digital communications system,” invited talk at *2003 Microwave Symposium Workshop* organized at IEEE International Microwave Symposium, Philadelphia, USA, June 9, 2003.
- [5] G. Kolumbán, “The theory and implementation of a robust chaotic digital communications system,” invited talk at *Winter School 2002* organized by the UCSD/UCLA/Stanford ARO MURI Program in Chaotic Communications, University of California, San Diego, USA, January 13–16, 2002.
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Other International Conferences

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