

Appendix D

Publications and Projects

D.1 Publications

In this section, the publications derived during the development of this thesis are presented.

Book chapter

- R. Boluda-Ruiz, B. Castillo-Vázquez, C. Castillo-Vázquez, and A. García-Zambrana, "New Results in DF Relaying Schemes Using Time Diversity for Free-Space Optical Links," Dr. Narottam Das (Ed.), Chapter 8. InTech. pp.195-213, 2014. ISBN 978-953-51-1730-8.

Journal papers

- R. Boluda-Ruiz, A. García-Zambrana, B. Castillo-Vázquez, and C. Castillo-Vázquez, "On the effect of correlated sways on generalized misalignment fading for terrestrial FSO links," *Photonics Journal, IEEE*, **9**(3), 1–13, 2017 (Impact factor 2.177, 60/257 Engineering, Electrical and Electronic Q1 JCR 2015).
- R. Boluda-Ruiz, A. García-Zambrana, C. Castillo-Vázquez, B. Castillo-Vázquez, and Steve Hranilovic, "Outage Performance of Exponentiated Weibull FSO Links Under Generalized Pointing Errors," *J. of Lightwave Technol., IEEE/OSA*, vol. 35, no. 9, pp. 1605–1613, 2017 (Impact factor 2.567, 20/90 Optics Q1 JCR 2015).
- R. Boluda-Ruiz, A. García-Zambrana, C. Castillo-Vázquez, and B. Castillo-Vázquez, "Novel approximation of misalignment fading modeled by Beckmann distribution on free-space optical links," *Opt. Express* **24**(20), 22635–22649, 2016 (Impact factor 3.148, 14/90 Optics Q1 JCR 2015).

- R. Boluda-Ruiz, A. García-Zambrana, B. Castillo-Vázquez, and C. Castillo-Vázquez, "Impact of nonzero boresight pointing error on ergodic capacity of MIMO FSO communication systems," *Opt. Express* **24**(4), 3513–3534, 2016 (Impact factor 3.148, 14/90 Optics Q1 JCR 2015).
- R. Boluda-Ruiz, A. García-Zambrana, B. Castillo-Vázquez, and C. Castillo-Vázquez, "Ergodic capacity analysis of decode-and-forward relay-assisted FSO systems over alpha-mu fading channels considering pointing errors," *Photonics Journal, IEEE*, **8**(1), 1–11, 2016 (Impact factor 2.177, 60/257 Engineering, Electrical and Electronic Q1 JCR 2015).
- R. Boluda-Ruiz, A. García-Zambrana, B. Castillo-Vázquez, and C. Castillo-Vázquez, "MISO relay-assisted FSO systems over gamma-gamma fading channels with pointing errors," *Photonics Technology Letters, IEEE* **28**(3), 229–232, 2016 (Impact factor 1.945, 72/257 Engineering, Electrical and Electronic Q2 JCR 2015).
- A. García-Zambrana, R. Boluda-Ruiz, C. Castillo-Vázquez, and B. Castillo-Vázquez, "Novel space-time trellis codes for free-space optical communications using transmit laser selection," *Opt. Express* **23**(19), 24195–24211, 2015 (Impact factor 3.488, 9/86 Optics Q1 JCR 2013).
- R. Boluda-Ruiz, A. García-Zambrana, B. Castillo-Vázquez, and C. Castillo-Vázquez, "On the capacity of MISO FSO systems over gamma-gamma and misalignment fading channels," *Opt. Express* **23**(17), 22371–22385, 2015 (Impact factor 3.488, 9/86 Optics Q1 JCR 2013).
- R. Boluda-Ruiz, A. García-Zambrana, B. Castillo-Vázquez, and C. Castillo-Vázquez, "Ergodic capacity analysis for DF strategies in cooperative FSO systems," *Opt. Express* **23**(17), 21565–21584, 2015 (Impact factor 3.488, 9/86 Optics Q1 JCR 2013).
- C. Castillo-Vázquez, R. Boluda-Ruiz, B. del Castillo-Vázquez, and A. García-Zambrana, "Outage performance of DF relay assisted FSO communications using time-diversity," *Photonics Technology Letters, IEEE* **27**(11), 1149–1152, 2015 (Impact factor 2.110, 56/249 Engineering, Electrical and Electronic Q1 JCR 2013).
- R. Boluda-Ruiz, A. García-Zambrana, B. Castillo-Vázquez, and C. Castillo-Vázquez, "Impact of relay placement on diversity order in adaptive selective DF relay-assisted FSO communications," *Opt. Express* **23**(3), 2600–2617, 2015 (Impact factor 3.488, 9/86 Optics Q1 JCR 2013).
- A. García-Zambrana, R. Boluda-Ruiz, C. Castillo-Vázquez, and B. Castillo-Vázquez, "Transmit alternate laser selection with time diversity for FSO communications," *Opt. Express* **22**(20), 23,861–23,874, 2014 (Impact factor 3.488, 9/86 Optics Q1 JCR 2013).
- R. Boluda-Ruiz, A. García-Zambrana, C. Castillo-Vázquez, and B. Castillo-Vázquez, "Adaptive selective relaying in cooperative free-space optical systems over atmospheric

turbulence and misalignment fading channels,” *Opt. Express* **22**(13), 16,629–16,644, 2014 (Impact factor 3.488, 9/86 *Optics Q1 JCR* 2013).

Conference papers

- R. Boluda-Ruiz, A. García-Zambrana, B. Castillo-Vázquez, and C. Castillo-Vázquez, “Rate-adaptive selective relaying using time diversity for relay-assisted FSO communications”, *IEEE Global Signal and Information Processing Conference (GlobalSIP’15)* December 14-16, 2015, Orlando, Florida, USA).
- C. Castillo-Vázquez, R. Boluda-Ruiz, B. Castillo-Vázquez, and A. García-Zambrana, “Outage Performance of DF Relay-Assisted FSO Communications Using Time-Diversity”, *IEEE International Photonics Conference (IPC)*, (28th Annual Conference of the IEEE Photonics Society, October 4-8, 2015, Reston, Virginia, USA).
- R. Boluda-Ruiz, A. García-Zambrana, B. Castillo-Vázquez, and C. Castillo-Vázquez, “Evaluating pointing errors on ergodic capacity of DF relay-assisted FSO communication systems”, *IEEE 82th Vehicular Technology Conference (VTC-Fall)* September 6-9, 2015, Boston, USA).
- R. Boluda-Ruiz, A. García-Zambrana, B. Castillo-Vázquez, and C. Castillo-Vázquez, “Análisis de la capacidad ergódica en sistemas cooperativos de comunicaciones ópticas no guiadas,” *XXX Symposium Nacional de la Unión Científica Internacional de Radio (URSI)* September 2-4, 2015, Pamplona, España).
- R. Boluda-Ruiz, A. García-Zambrana, B. Castillo-Vázquez, and C. Castillo-Vázquez, “Average channel capacity analysis of BDF relaying over alpha-mu fading channels”, *11th International Wireless Comunicaciones and Mobile Computing Conference (IWCMC)* August 24-28, 2015, Dubrovnik, Croatia).
- R. Boluda-Ruiz and A. García-Zambrana, “Protocolo de Cooperación Adaptativo para Sistemas de Comunicaciones Ópticas Atmosféricas,” *XXIX Symposium Nacional de la Unión Científica Internacional de Radio (URSI)* September 3-5, 2014, Valencia, España).

D.2 Projects

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