

---

EURO-COST

---

- SOURCE: (1) INESC-ID / Instituto Superior Técnico, University of Lisbon, Portugal
- (2) Faculty of Electronics, Telecommunications and Informatics  
Gdansk University of Technology, Poland

## **An Approach to Mean Path Loss Model Estimation for Off-Body Channels**

Abstract—This paper presents an approach to estimation of the mean path loss model parameters in off-body Body Area Networks channels. In this approach, the path loss exponent is constrained to a value obtained for the line-of-sight (LoS) propagation in the co-polarised channel, considering a generalised static scenario. The comparison of the goodness of fit between the proposed approach and other approaches, for a set of measurements obtained in an indoor environment, indicates that a significantly better model is obtained for the LoS case, somewhat improved model for the quasi-LoS, while the goodness of fit is almost unchanged for the non-LoS case.

### **Contact:**

Kenan Turbic<sup>1</sup>, Luis M. Correia<sup>1</sup>

<sup>1</sup>INESC-ID

Instituto Superior Técnico

University of Lisbon

Rua Alves Redol, N. 9, 1Esq.

1000-029 Lisbon, PORTUGAL

Phone: +351 213 100 434

Fax: +351 21 310 04 72

Email: kenan.turbic@inov.pt, luis.m.correia@tecnico.ulisboa.pt

Slawomir J. Ambroziak<sup>2</sup>

<sup>2</sup>Gdansk University of Technology

Fac. of Electronics, Telecommunications  
and Informatics

ul. Gabriela Narutowicza 11/12

80-233 Gdansk, POLAND

Phone: + 48 58 347 15 77

Fax: + 48 58 347 22 32

Email: sj\_ambroziak@eti.pg.gda.pl