

yacoub: a Python package for Simulating Generalized Fading Channels

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Abstract—We present a well tested Python-based library for simulating and computing generalized fading channels, named **yacoub**. We describe the applicability of **yacoub** using examples in recent communications system, namely: cooperative spectrum sensing, bit error rate computation in generalized fading, and free space optics. The development of **yacoub** open source and its code is available at <http://github.com/mirca/yacoub>.

I. INTRODUCTION

II. THE ACCEPTANCE-REJECTION SAMPLER IN LOG-SPACE

III. EXAMPLES

A. *Signal detection and estimation*

B. *Free Space Optics*

C. *BER in $\alpha - \mu$ Fading*

IV. CONCLUSIONS

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