

# 19<sup>th</sup> Global Ophthalmology Summit

February 26-27, 2018 | Berlin, Germany

## New smartphone app for strabismus screening

**Jorge Antonio Meireles-Teixeira**  
Federal University of Maranhão, Brazil

Amblyopia is the major cause of unilateral low visual acuity among children and the most important cause of it is strabismus. There are only few strabologists in any country, generating difficulties to early diagnosis of strabismus. That is the reason we decided to work on a smartphone software able to perform strabismus screening and easy to be operated by non-medical professionals. The software localizes the eyes of the subject and based on an algorithm similar to Krinsky method it can disclose the strabismus of the patient (Fig. 1). We first check it with 224 subjects (Fig. 2) among strabismus patients (24) and children and teenagers of public school (200) and it seemed to be reliable to detect the absence of strabismus (only two false negative results compared with strabologists exam), even if it had a greater false positive diagnosis (31). But these false positive results are not really important when talking about screening, once those patients will be referred to a specialist for a detailed examination.

## Recent Publications

1. Almeida J D S (2012) Computational methodology for automatic detection of strabismus in digital images through Hirschberg test. *Computers in Biology and Medicine* 42: 135–146.
2. Carlton J, Kaltenthaler E (2011) Amblyopia and quality of life: a systematic review. *Eye, London England*. 25(4): 403–413.
3. Sousa De Almeida, João Dallyson, Silva Aristófanés Corrêa, Teixeira Jorge Antonio Meireles, Paiva Anselmo Cardoso, Gattass Marcelo (2015) Computer-aided methodology for syndromic strabismus diagnosis. *Journal of Digital Imaging*. 27: 1-1.
4. Valente Thales Levi Azevedo, De Almeida João Dallyson Sousa, Silva Aristófanés Corrêa, Teixeira Jorge Antonio Meireles, Gattass Marcelo (2017) Automatic Diagnosis of Strabismus in Digital Videos through Cover Test. *Computer Methods and Programs in Biomedicine* 140: 295-305.
5. Weber K P et al. (2017) Strabismus Measurements with Novel Video Goggles. *Ophthalmology* 124(12):1849-1856.

## Biography

Teacher at UFMA - Federal University of Maranhão [Official] Studied at the Federal University of São Paulo (UNIFESP) Studied Ophthalmology Residency at Jundiaí Medical School Studied Medicine at UFMA - Federal University of Maranhão [Official] Studied at UFMA Went to Colégio Santa Tereza Lives in São Luís, Brazil From São Luís, Brazil

jorgemeireles1@gmail.com

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