2009 Research Days Abstract Form – Department of Ophthalmology – UNIFESP/EPM

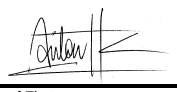
2. SCIENTIFIC SECTION PREFERENCE (REQUIRED):

BE

Review the Scientific section Descriptions. Select and enter the two-letter Code for the one (1) Section best sullied to review your abstract.

3. PRESENTATION PREFERENCE (REQUIRED): Check one (1).
(a) **Paper**

4. The signature of the First (Presenting) Author, (REQUIRED) acting as the authorized agent for all authors, hereby certifies.
That any research reported was conducted in compliance with the Declaration of Heisinki and the 'UNIFESP Ethical Committee"



Signature of First

Scientific Section Descriptions:

(BE) **OCULAR BIOENGINEERING**
(CO) CORNEA AND EXTERNAL DISEASE
(CA) CATARACT
(EF) ELECTROPHYSIOLOGY
(EP) EPIDEMIOLOGY
(EX) EXPERIMENTAL SURGERY
(GL) GLAUCOMA
(LA) LABORATORY
(LS) LACRIMAL SYSTEM
(LV) LOW VISION
(NO) NEURO-OPHTHALMOLOGY
(OR) ORBIT
(PL) OCULAR PLASTIC SURGERY
(PH) PHARMACOLOGY
(RE) RETINA AND VITREOUS
(RS) REFRACTIVE SURGERY
(RX) REFRACTION-CONTACT LENSES
(ST) STRABISMUS
(TR) TRAUMA
(TU) TUMORS AND PATHOLOGY
(UV) UVEITIS
(US) OCULAR ULTRASOUND

Deadline: Oct 12, 2009

FORMAT:
Abstract should contain:
Title
Author, Co-authors (maximum 6), Purpose, Methods, Results, Conclusion.

Poster guidelines:
ARVO Abstract Book (1.10 x 1.70m)

35. FIRST (PRESENTING) AUTHOR (REQUIRED):
Must be author listed first in body of abstract.

( ) R1 ( ) R2 ( ) R3 ( ) PIBIC
( ) PG0 (X) **PG1** ( ) Fellow ( ) Technician

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Nº CEP: **1102/06**

VISION MEASUREMENT WITH PSYCHOPHYSICAL TESTS:
STUDY, DEVELOPMENT AND STANDARDIZATION
OF NEW METHOD AND DIGITAL EQUIPMENT

Authors: Airton Leite Kronbauer;
Paulo Schor;
Luis Alberto Vieira de Carvalho.

Purpose: To standardize and construct a new digital equipment incorporating cognitive and computer technologies, which presents na ease of use and allows for more subtle evaluation of vision perception.
Methods: A computational device that generates visual stimulus was constructed. The visual stimulus is dynamic. The bright intensity is changeable being modified by the psychophysical response of the examined individual. The modifications of frequency, intensity and amplitude are computed by software in candelas. The psychophysical results considered are compared with standardized data of ocular measurements (SI- International System of Units). For practical validation, 42 measurements were carried out in the standard ETDRS and 84 measurements using the new method in 2 different psychophysical manners. The basis of the new method was standardized by a photometer; obtaining the level of correlation of Pearson (R2=0,999; p <0,001) between the measures of the hardware in luximeters and the system of control of the software was 99,9 %.
Results: The variation of the measurements in the same eye of the same volunteer was narrower in the new method than in logMAR ETDRS method. The variation of the measurements between different examiners regarding average of the group of examined volunteers was narrower in the new method than in logMAR ETDRS method. The mathematical correlation between vision measurement for the method ETDRS logMAR and the new method was 84,144 % calculated by exponential correlation of Pearson and t test (p<0,001).
Conclusions: The researchers seek for create a new and precise technique to measure visual quality. The project platform hasn't been totally standardized yet. New tests have been made to correlate the PSF and visual measurement in candelas.