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**A new approach for characterization of Progressive Addition Lenses
using Experimental Ray Tracing.**

ABSTRACT - Masterthesis

The visual quality of a wearer of ophthalmic lenses depends on the response of the total optical system, which is composed of the corrective lens, the optical system of the eye (cornea, pupil, crystalline lens) and the neurological-retinal response, making the evaluation of the response of the total optical system complex. Because of this, defining an appropriate figure of merit of the corrective lens independent of the subjectivity of test engineer has been a difficult task, but the Modulation Transfer Function perfectly fits this requirement as an widely accepted measurement of the performance of the lens which takes into account geometric and diffraction metrics regarding the contrast performance of the device under test against spatial frequency. Direct and indirect methods can be used to obtain the Modulation Transfer Function of the optical system; in this work, it is calculated through the indirect method of calculating Fast Fourier Transform of the Point Spread Function.