

## **Giorgio Bracaglia**

DSS Printing Group, Primary Color Inc.,

Bachelor of Business Administration (B.B.A.), Organizational Business Management, Robert Wesleyan College, 2015

G7 Certification, Rochester Institute of Technology

[giorgiob@twc.com](mailto:giorgiob@twc.com)

*Giorgio has 46 years of image related services and technical research in providing quantifiable data to meet ISO standards. He was lead color specialist for Eddie Adams, Kit Luce, Claudio Abate and many more international artists. In 1999, Giorgio became the material director of the Holy Shroud Guild, and was responsible for web hosting, presentations, and archiving the historical documents of the Guild. He has made materials available for the scientific community, the Shroud Science group, international Sindonologists, and the media for television, reproduction, and study. In 2019, he published the book, Uncovering the paradox within the archives of the Holy Shroud Guild which is a historical account of over 60 years of the Shroud studies from the original correspondence of the Holy Shroud Guild. Led by two ecclesiastical greats, Father Otterbein and Father Rinaldi, the Guild made it possible for an American team of scientists to analyze and study the Holy Shroud of Turin.*

### **ABSTRACT**

#### **Photographic film and process techniques used by Giuseppe Enrie to capture the 1931 images of the Shroud: Part 2, Some considerations when using reproduction images.**

Enrie's photographs from the 1931 Exhibition of the Shroud confirmed the work done in 1898 by Secondo Pia showing that, indeed, the image on the Shroud was a true photographic negative. This presentation explains Enrie's technical details that will help to unravel the many misconceptions of the Enrie's black and white negative. Based on Aldo Guerreschi's RGB color space readings of the Shroud, a visual simulation model was created to demonstrate the approximate characteristic of the spectral sensitivity of Enrie's orthochromatic film. The simulation model also helps to explain how Enrie was able to expand the spectral sensitivity, and compares Enrie's orthochromatic to panchromatic film with a spectral sensitive of 660 nm and even greater. This presentation reviews why using reproduction images captured either analog or digital for Shroud research can be problematic. Even under the optimum conditions, digital and analog images will encounter deficiencies in spatial resolution, including dynamic range, compared to the human eye. The degradation transposed on either media can vary depending on many factors, and some of these factors are explored. The presentation concludes by explaining the pros and cons with the rake lighting scheme used by Enrie, and the rationale as to why the negative image on the black and white enlargement of the Shroud of Turin is mirrored compared to the positive image.