

# PROCEEDINGS OF SPIE

## ***Tribute to H. John Caulfield***

**Jorge Ojeda-Castaneda**  
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*Editors*

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# Conference Committee

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**Jorge Ojeda-Castaneda**, University de Guanajuato (Mexico)

**María J. Yzuel**, University Autònoma de Barcelona (Spain)

**R. Barry Johnson**, Alabama A&M University (United States)

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**R. Barry Johnson**, Alabama A&M University (United States)

2 Session 2

**María J. Yzuel**, University Autònoma de Barcelona (Spain)

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**María J. Yzuel**, University Autònoma de Barcelona (Spain)

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**Jorge Ojeda-Castaneda**, University de Guanajuato (Mexico)

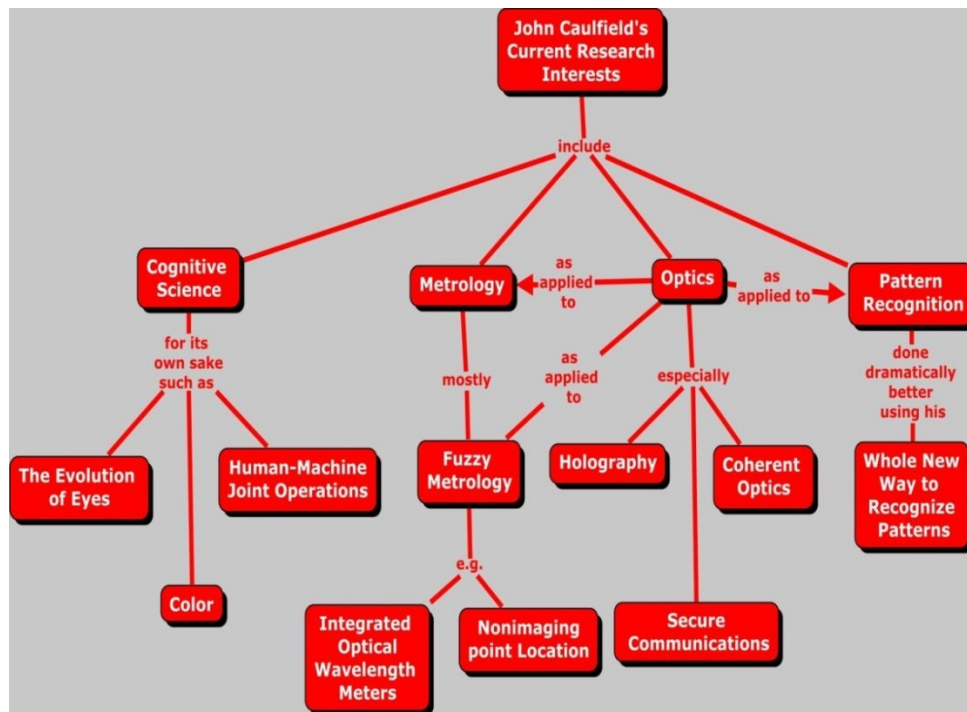
## Introduction

The SPIE Tribute Meetings were designed, organized, and very often chaired by Henry John Caulfield; under his often-stated belief that "People are the most important thing in science". The contributions to these tribute meetings were not intended to praise or to cite a person, but rather to present something that the honoree would be excited to listen to. With this goal in mind, John organized meetings to honor Adolf Lohmann, Emmett Leith, Yuri Denisyuk, Emil Wolf, and Joseph Goodman.

John was a passionate researcher with a charming personality. Around the world, he made many friends who remember him as a jovial person, open to new and nonconventional ideas. Typically, he described new projects with a high degree of excitement. And when listening to proposals of his peers, he described these new ideas with the words "wonderful!" and "great!"



John was a truly curious person with a wide range of scientific interests: holography, optical metrology, optical pattern recognition, optical logic, new imaging and non-imaging methods, hyperspectral imaging, spectral discrimination methods, and the process of invention, as well as to the uses and understanding of photorefractives. In these topics, he was a prolific writer and indeed a true promoter.



He was fascinated with his own creative process: which led him to study consciousness and artificial intelligence. It is not possible to sum up his interests or his work in a few sentences, but he always took joy in stretching his learning into new areas, and he did contribute too many areas outside optics.

We wanted to organize this tribute meeting to John when he was still alive. For reasons that we all know well, this was not the case. We express our gratitude to the SPIE for agreeing to hold this conference as a posthumous tribute meeting. We have a rather unique and well balanced set of contributions. Many distinguished and well-seasoned scientists were present, as well as some rising stars. We do hope that the reader will find the enclosed contributions as enjoyable; as we did listening to the various presentations.

We were especially delighted with the presence of John's family. Their honoring presence generated a suitable environment for explaining how the current contributions were either inspired by John's work or that the contributions in a way followed John's research style.

In closing, we express our most sincere gratitude to each contributor for making it possible to honor Henry John Caulfield in a manner he would have truly enjoyed.

**Jorge Ojeda-Castaneda**  
**María J. Yzuel**  
**R. Barry Johnson**