

**BFSS <Room 413>**

**Wednesday, 24 April**

**[BFSS-OP] 8:50-9:00**

**Opening Remarks**

Chair: Rie H. Kang  
GPI

**[BFSS1] 9:00-10:20**

**Business and Finance in Photonics Industries**

Chairs: Ryohei Hanayama  
GPI  
Yasushi Masuda  
GPI

**BFSS1-01 9:00**

**Laser Surface Treatment for Sustainable Maintenance of Steel Structures**

Kazuhiisa Fujita<sup>1</sup>, Kazuhiisa Fujita<sup>2</sup>  
<sup>1</sup>The Graduate School for the Creation of New Photonics Industries, <sup>2</sup>TOYOKO Inc.

This paper reviews a groundbreaking laser technology and standardizations for social implementation, which offers a novel approach to surface treatment for steel structures such as bridges. Maintenance process involves removing old paint, rust, and salt deposits that lead to corrosion. A new laser surface treatment method employing high-power CW (continuous wave) lasers has been developed, offering an effective solution for salt removal.

**BFSS1-02 9:20**

**Exploring Corporate Entrepreneurship in the Photonics Industry: Assessing Internal Environments and Organizational Characteristics**

Masanori Ito, Rie H Kang  
The Graduate School for the Creation of New Photonics Industries

This study aims to assess the applicability a tool for evaluating the internal environment promoting entrepreneurship, within new business development department of photonics industry companies and determine if it reflects the specific environment of these target companies. The results of the psychometric assessment suggest the possibility of identifying characteristics specific to new business development departments and photonics industry companies.

**BFSS1-03 9:40**

**A Study of the Process of Co-creation Emerging in New Product Development: Considerations from Practical Cases in the Photonics Industry**

Kentarō Goto<sup>1</sup>, Yasushi Masuda<sup>2</sup>  
<sup>1</sup>Shizuoka University, <sup>2</sup>The Graduate School for the Creation of New Photonics Industries

The study aims to clarify the process of co-creation emerging in new product development. Therefore, we analyze the practical cases in the photonics industry and use Natural-Born Intelligence (NBI) and Small Self-Actualization (SSA) models as analytical concepts. We clarify the process of NBI co-creation emerging in collaborative research on new product development and indicate the applicability of the principle of superposition in a practical case.

**BFSS1-04 10:00**

**Beginning of social implementation of research results by researchers in the organization - Transformation of Thinking and Action -**

Yoshinori Matsui<sup>1,2</sup>, Yasushi Masuda<sup>1</sup>  
<sup>1</sup>The Graduate School for the Creation of New Photonics Industries, <sup>2</sup>Hamamatsu Photonics K.K.

This paper describes the process of change in the thinking and actions of researchers in organizations when they try to implement their research results in society, by using self-ethnography, which is a research method of the researcher looks deeper into the interaction between self and others by describing and recursively reflecting on his/her own research and action procedures.

----- Coffee Break 10:20-10:40 -----

**[BFSS2] 10:40-11:40**

**Business and Finance for Sustainable Society**

Chair: Rie H. Kang  
GPI

**BFSS2-01 10:40**

**A Study on the Creation of New Industries Using Optical Technology in Shinkin Banks**

Akifumi Ishii  
Hamamatsu Iwata Shinkin Bank

To examine what kind of financial solutions Shinkin banks can provide for the creation of new industries utilizing optical technology, this study conducted an interview survey of 10 people affiliated with universities and private companies related to optical technology, who will be the leaders in the creation of new industries.

**BFSS2-02 11:00**

**Visualization of Non-financial Information -A Case Study of a Japanese B to B Company-**

Norio Sakurai  
Tokyo International University

This research highlights Mitsui Chemical Co., Ltd., a traditional Japanese B to B company, as a case study and examines why the company's non-financial information disclosure is highly evaluated by institutional investors.

**BFSS2-03 11:20**

**Impact of Institutional Investors on Corporate Biodiversity Responses**

Junichi Hayashi  
Aoyama Gakuin University

Performing a logit analysis of data from Japanese companies to examine the impact of institutional investors on companies' biodiversity responses, we found that companies that engage in a dialogue with the institutional investors are more likely to disclose their biodiversity responses, that is, make disclosures under Task Force on Climate-Related Financial Framework, an information disclosure framework (TNFD).

----- Lunch 11:40-12:30 -----

**Thursday, 25 April**

**[BFSSp] 10:30-12:00**

**BFSS Poster Session <Exhibition Hall A>**

**[BFSS3] 12:30-14:00**

**Special Session 1: Discussions around Listed Companies, including Global Trends, in the Context of Sustainable Finance**

Chair: Yumiko Miwa  
Meiji University

**BFSS3-01 12:30** *Invited*

**A New Light Source: Photonic-crystal Surface-emitting Laser (PCSEL) - On the numerous possibilities for realizing a smart society -**

Susumu Noda  
Kyoto University

Recently, there is growing interest in realizing a smart society, represented by smart mobility and smart manufacturing, for which laser technology is key, along with the latest digital technologies such as digital twins and machine learning. In this presentation, I will introduce new light sources called photonic-crystal surface-emitting lasers (PCSELS), which are expected to contribute to realizing this smart society.

**BFSS3-02 12:50** *Invited*

**Panel Discussion: Discussions around Listed Companies, including Global Trends, in the Context of Sustainable Finance**

Yumiko Miwa<sup>1</sup>, Mari Yoshitaka<sup>2</sup>, Akira Kato<sup>3</sup>, Masaki Suwa<sup>4</sup>  
<sup>1</sup>Meiji University, <sup>2</sup>Mitsubishi UFJ Research and Consulting Co., Ltd., <sup>3</sup>Tokyo University of Science, <sup>4</sup>OMRON Corporation

----- Coffee Break 14:00-14:15 -----

**[BFSS4] 14:15-15:45**

**Special Session 2: Discussions around Unlisted Companies, focusing on University-launched Start-ups, in the Context of Sustainable Finance**

Chair: Nobuyuki Ogata  
Hosei University

**BFSS4-01 14:15** *Invited*

**Panel Discussion: Discussions around Unlisted Companies, focusing on University-launched Start-ups, in the Context of Sustainable Finance**

Nobuyuki Ogata<sup>1</sup>, Sachiyo Nomura<sup>2</sup>, Keisuke Goda<sup>3</sup>, Takahiro Ikeda<sup>4</sup>, Hirokazu Kitahara<sup>5</sup>  
<sup>1</sup>Hosei University, <sup>2</sup>Soka University, <sup>3</sup>The University of Tokyo, <sup>4</sup>Pi Photonics, Inc., <sup>5</sup>Archetype Ventures

**[BFSS-CL] 15:45-15:55**

**Closing Remarks**

Chair: Rie H. Kang  
GPI

**BFSS Poster**

4/25 10:30-12:00

**BFSSp-01**

**The aim of Business and Finance for Sustainable Society - towards the expansion of the photonics industry -**

Ryohei Hanayama, Rie H. Kang

*GPI*

This is a brief introduction to the brand-new conference on Business and Finance for Sustainable Society (BFSS) towards the expansion of the photonics industry.