## === 量子科学研究センターセミナーのご案内 2024/04/23 ===

University of Colorado Boulder(米国・コロラド大学ボルダー校)の Greg Rieker 先生が、横浜開催の国際会議 ALPS2024/OPIC2024 国際会議に参加される機会に、本学を訪問されます。

つきましては下記の通り、量子科学研究センター主催の研究セミナーを開催いたします。 Rieker 先生は本学教員と長年の親交があり、光周波数コムやそれを用いた環境センシング技術の研究を ご専門とされています。本セミナーでは最新の研究成果をご紹介いただきます。

研究室の研究員、学生の皆様もお誘いあわせのうえ、奮ってご参加ください。

## [講演情報]

Title: Practical Dual Comb Spectroscopy to Improve Energy Systems: Navigating the Interfaces Between Science, Engineering, and Industry

Speaker: Prof. Greg Rieker (University of Colorado Boulder)

日時: 2024年4月23日(火) 16:15~

場所: 東 6 号館 803 室

主催:量子科学研究センター http://www.ias.uec.ac.jp/



## Abstract:

Our laboratory has spent a decade adapting Nobel prize winning frequency comb laser technology to address emerging challenges at the forefront of climate, energy, and environment. Frequency combs emit hundreds of thousands of distinct wavelengths of light in exquisitely short, repeatable pulses. They enable measurements of light-matter interaction at high accuracy, precision, and stability across large regions of the infrared spectrum. However, they have traditionally been used in laboratory environments. I will describe the journey of this technology from a laboratory novelty to a variety of applications, including detecting methane emissions across hundreds of square miles of oil and gas infrastructure, designing hypersonic propulsion systems, and exploring exoplanet atmospheres.

## Bio:

Greg Rieker is an Associate Professor and Vogel Family Faculty Fellow in Mechanical Engineering at the University of Colorado Boulder. He leads the Precision Laser Diagnostics Laboratory, which aims to understand and improve energy and atmospheric systems through laser-based sensing. Greg earned a BS from the Missouri University of Science and Technology, and MS and PhD degrees from Stanford University. He has affiliations with the National Renewable Energy Laboratory and the National Institute of Standards and Technology. Greg received the NSF CAREER award, the Peter Werle and Hiroshi Tsuji

Early Career Scientist Awards, and the Colorado Governor's Award for High-impact Research. He is a senior member of the National Academy of Inventors, and co-founder and CTO of LongPath Technologies, Inc.

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