

特別講演会

主催： 東北大学流体科学研究所

協賛： 日本機械学会東北支部， 静電気学会東北支部

日時： 令和6年6月28日（金） 15:00 ～ 17:00

場所： 流体科学研究所 1号館 2階会議室 および オンライン開催 (Google Meet)

<https://meet.google.com/xnc-vhkr-qjr>

15:00～16:00

講師： James S. Cotton (Professor, Department of Mechanical Engineering, McMaster University, Canada)

講演タイトル： Climate Change and Our Buildings – How do we de-carbonize them?

講演内容： Most of us who live in the Northern Hemisphere have a fundamental problem: we want to reduce our carbon emissions, but we also need to heat our homes. The good news is there is a way to do both by creating thermal networks. A thermal network is a system of insulated, underground pipes that directly distribute heat to homes and other buildings using heat generated from clean sources – from waste heat from pizza ovens to nuclear reactors. Rather than using their own furnaces, boilers, fireplaces or electric baseboard heaters to heat buildings, consumers would receive heat directly from a utility. In this conversation I will explain how.

16:00～16:40

講師： 浦島邦子 (名古屋大学 未来社会創造機構 客員教授)

講演タイトル： 持続可能な未来社会構築のための農業の現状とプラズマ技術

講演内容： プラズマ技術は環境改善や、半導体製造など、産業界で広く実用化されている。2000年代に入り、医療やCO2排出量の削減、窒素循環の回復と農業生産性の向上を目的とした研究開発が盛んとなっている。本講演では、プラズマ技術を用いた持続可能な農業生産社会の実現に向けた現状と取り組みを紹介する。

*この特別講演会は、流体科学研究所公募共同研究の活動の一環として企画しています。

連絡先：

東北大学 流体科学研究所

佐藤 岳彦 (Tel: 022-217-5320)

E-mail: takehiko.sato.d7@tohoku.ac.jp

Special Lecture

Organizer: Institute of Fluid Science, Tohoku University

Sponsor: Tohoku Branch of the Japan Society of Mechanical Engineers, Tohoku Branch of the Institute of Electrostatics Japan

Date and Time: June 28, 2024 (Fri.) 15:00 ~ 17:00

Venue: Meeting Room (2F, IFS bldg. 1) and Online (Google Meet) (Hybrid)

<https://meet.google.com/xnc-vhkr-qjr>

15:00~16:00

Lecturer: James S. Cotton (Professor, Department of Mechanical Engineering, McMaster University, Canada)

Title: Climate Change and Our Buildings – How do we de-carbonize them?

Abstract: Most of us who live in the Northern Hemisphere have a fundamental problem: we want to reduce our carbon emissions, but we also need to heat our homes. The good news is there is a way to do both by creating thermal networks. A thermal network is a system of insulated, underground pipes that directly distribute heat to homes and other buildings using heat generated from clean sources – from waste heat from pizza ovens to nuclear reactors. Rather than using their own furnaces, boilers, fireplaces or electric baseboard heaters to heat buildings, consumers would receive heat directly from a utility. In this conversation I will explain how.

16:00~16:40

Lecturer: Kuniko Urashima (Visiting Professor, Nagoya University, Institute of Innovation for Future Society)

Title: Current status of agriculture and plasma technology for building a sustainable future society

Abstract: Plasma technology has been widely put to practical use in industry, for example in environmental improvement and in semi-conductor manufacturing etc. Since the beginning of the 2000s, research and development has been active for medical treatment, CO2 emissions reduction, restoration of nitrogen cycles and improvement of agricultural productivity. In this presentation, the current status and efforts to realize a sustainable agricultural production society using plasma technology will be introduced.

*This special lecture is organized as a part of the activities of the IFS collaborative research project.

Contact:

Takehiko Sato

Professor

Institute of Fluid Science, Tohoku University

E-mail: takehiko.sato.d7@tohoku.ac.jp