



千葉大学大学院理学研究院附属

ハドロン宇宙国際研究センター

International Center for Hadron Astrophysics

# ICEHAP Online Seminar

**Date**      **June 02 Tuesday 10:00~12:00**

**Location**    **Online via Zoom (The meeting url will be informed by mail.)**

**By**        **Dr. Kotaro Niinuma (Yamaguchi University)**

**Title**

**『Observational study of high energy astrophysical phenomena with high spatial resolution in the era of multi-messenger astronomy』**

## Abstract

High-energy astrophysical phenomena in the universe is one of the best laboratory to study physical phenomena under the extreme conditions. Relativistic jet, which is ejected from the super massive black hole located at the center of extra-galaxy is one of such a phenomena. Also recent research revealed one of the relativistic jet object is the origin of high-energy astronomical neutrino. Therefore understanding the formation mechanism and specifying high-energy emission region in the relativistic jet are one of the most important issues in astrophysics. For understanding the physical mechanism of relativistic jet, “multi-messenger astronomy” including the structural information provided by radio observation with very long baseline interferometry (VLBI), which can achieve extremely high spatial resolution is crucial. In the seminar, I will introduce the observational results I achieved based on radio observations, and the future research plan of multi-messenger astronomy using flexible VLBI network I established in the process of my research.