

Faculty of Science, SAITAMA Univ.

HiSEP Special Seminar



第6回理学部HiSEP特別セミナーの講師は埼玉大学大学院で博士号を取得し、エジプト・ヘルワン大学で宇宙・素粒子物理学を専攻し、現在はエジプト日本科学技術大学（E-JUST）にて物理学分野でのプロジェクトを実施中の方です。欧州原子核研究機構(CERN)でのLHC実験成果の中からHIGGS粒子の発見について解説していただきます。学部・学科を問わず、物理学・エジプト国に関心・興味ある方、英語スキルアップを目指して、ご参加をお待ちしています。

ABSTRACT

The Large Hadron Collider (LHC) is the largest and highest-energy particle collider in the world. It was built by the European Organization for Nuclear Research (CERN) in collaboration with over more than 10,000 scientists from 100 countries. The LHC is designed to collide two counter rotating beams of protons or heavy ions. Proton-proton collisions are foreseen at energy of 7 TeV per beam. That huge energy smashes protons moving at nearly the speed of light into each other and so recreate conditions a fraction of a second after the big bang. On July 4, 2012, scientists at CERN announced the discovery of a subatomic particle that seems like an excitingly close match to the elusive Higgs Boson, thought to be responsible for giving all the stuff in the universe its mass. In my lecture, I will discuss in general the aim of the LHC's detectors with special focus on one of the large particle physics detectors built on the LHC called the Compact Muon Solenoid (CMS) experiment. In addition; I will present a review of Higgs's discovery and the validation of the "Standard Model" that underlies all of modern physics and open the door to new discoveries.

『Big Bang Machine at CERN: Discovery of Higgs』

by **Ayman M. Mahrous, Ph.D.**

**Institute of Basic and Applied Science, E-JUST
New Borg El-Arab City, 21934 Alexandria, Egypt**



الجامعة المصرية اليابانية للعلوم و التكنولوجيا
エジプト日本科学技術大学
EGYPT-JAPAN UNIVERSITY OF SCIENCE AND TECHNOLOGY



Date & Time: 13:30-14:50PM of July 30, 2020

This is an **ONLINE-SEMINAR** with ZOOM service, for all students in the Faculty of Science and also ones are interested in the natural science.

Contact "hisep.saitama@gmail.com" to get a connection URL.

Organized by HiSEP. Faculty of Science, SAITAMA Univ.
Contact: TEL +81-48-858-9302, HiSEP support room