IPPS Lecture & Seminar

No. 49

Researches in XLIM Research Institute

Lecturer: **Prof. Philippe Leveque**
(CNRS, XLIM Research Institute, France)

Date & Time: **May 10, 2019（Fri.）13:30-15:00**

Venue: **Kurokami South C7 Bldg.**
(共用棟黒髪3) 5th Floor, Room 516

Abstract:

Blood-brain barrier (BBB) permeation and neuron degeneration were assessed in the rat brain following exposure to mobile communication radiofrequency (RF) signals (GSM-1800 and UMTS-1950). We found that the strongest, delayed effect was induced by GSM-1800 at 13 W/kg. Considering that 13 W/kg BASAR in the rat head is equivalent to 4 times as much in the human head, deleterious effects may occur following repeated human brain exposure above 50 W/kg.

Tumor-specific electromagnetic field frequencies have physiological and potential anti-tumor effects in cells, animals, and humans. Our aim was to investigate whether these fields have similar effects on physiological parameters in murine tumor models.

Atmospheric pressure plasmas are used for air flow control, decontamination, sterilization and biomedical applications. We propose a delivery device that generates ns-pulsed discharges in the direct vicinity of mm- to cm-sized biological samples. The discharge develops along the surface of a dielectric medium, in a dielectric barrier discharge (DBD) configuration.

Some other interesting projects running in XLIM will be introduced in the lecture.

お問合せ：勝木　淳　katsuki@cs.kumamoto-u.ac.jp

Institute of Pulsed Power Science, Kumamoto University