

コヒーレント光科学セミナーのご案内

下記の要領でセミナーを開催いたします。

Raj Kumar 氏は Raman Research Fellowship により情報通信研究機構に滞在中のところ、ご希望により本学を訪問されることになりました。

今回はシュリーレンによる透明物体の屈折率分布や密度分布の観察についてお話し頂きます。

研究室の研究者、学生の皆様もお誘い合わせのうえ、奮ってご参加下さい。

Coherent Optical Science Seminar on Information Optics

Date: Wednesday, 6 March 2019

Time: 15:10-16:10

Place: Room #803, East 6 Building, UEC

Speaker: Raj Kumar, CSIR – Central Scientific Instruments
Organisation, Chandigarh, India

Title: Phase visualization using Schlieren techniques

Abstract:

Schlieren imaging system is an indispensable tool for observation of invisible in-homogeneities in transparent media. These in-homogeneities (Schlieren) remain invisible to human eye and conventional imaging equipments. Deflection of light beam from its original path due to interaction with in-homogeneities provides information about the spatial gradients of refractive index or density in the test field, integrated along the optical path. These techniques are widely used for performing various types of test studies on transparent objects such as depicting deviations in light beams induced by density, temperature or refractive index gradients in optical shop testing, combustion research, laminar and turbulent fluid flow, plasma diagnostics, acoustic studies, shock and detonation waves, and other steep refractive index gradients associated with heat

and mass transfer, or pressure changes and presence of scratches, cracks, bubbles etc, but not confined to these.
Here we will discuss about basics of Schlieren systems and transforming a normal Schlieren system to a high contrast Schlieren diffraction interferometer.

Contact: Yoko Miyamoto

(Department of Engineering Science / Institute for Advanced Science,
yoko.miyamoto@uec.ac.jp)