

Faculty of Science

Seminar Series

DK 1, C17, Faculty Science
18 April 2017 (Tuesday)
2.00 - 2.30 pm

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Characterization of Objects by Electrosensing Fish based on the Polarization Tensor

On 11th April 2017, Professor Bill Lionheart from the School of Mathematics, The University of Manchester presented a mathematical formulation of the polarization tensor in weakly electric fish at Faculty of Science UTM. Following his talk, some evidences to suggest that the polarization tensor is used by the fish for characterizing objects will be presented in this seminar. The evidences are based on the previous experiments conducted by biologist where, in these experiments, the fish were asked to distinguish two pair of objects with the same size and volume. In order to investigate the role of the polarization tensor in the experiments, the polarization tensor for each pair of object was calculated and compared. It has been demonstrated that the fish took longer time to differentiate pair of objects if the polarization tensor for both objects were almost similar.