# DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
# NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA
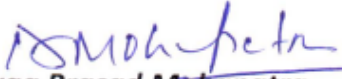
## Conference Return Seminar

Speaker     : Rabi Shaw (518CS6017)
Topic     : An Effective Similarity Measure for Improving Performance of User based Collaborative Filtering
Conference     : The 2021 IEEE 19t$^h$ International Conference on Smart Technologies (EUROCON)
Venue     : MS Team (Online)
Date & Time     : 22$^{nd}$ July 2021 at 04.30 P.M.
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**Abstract**: Collaborating filtering (CF) has become one of the most powerful approaches in the recommender system. Neighborhood-based CF uses a similarity measure to identity neighbors of an active user, and these neighbors play an essential role in the personalized recommendation. Recently introduced new heuristic similarity measure (NHSM) based CF is found to be performing well compared to the CF approaches, which use traditional measures like Pearson correlation coefficient (PCC), proximity impact popularity (PIP), etc. However, NHSM is not appropriately normalized, and it may mislead in finding neighbors in specific scenarios.

In this paper, we propose an improved NHSM similarity measure to excel in the recommendation by overcoming the shortfall of NHSM. We propose to utilize hyperbolic trigonometric function for the normalization of each component of NHSM. Relative difference (RD) is exploited to address the misleading problem of NSHM. Experimental results demonstrate that our improved NHSM (*i*-NHSM) based CF outperforms NHSM based CF.

All are cordially welcome.

*Sumanta Pyne* 14/7/2021
**Prof. Sumanta Pyne**
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*DSMohapatra*
**Prof. Durga Prasad Mohapatra** 15/07/2021
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