

## Department of Systems Engineering and Engineering Management

### Seminar Series

# **Multi-View Intelligent Data Fusion in Collaborative Filtering Recommender Systems**

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Date	16 March 2018 (Friday)
Time	10:30am - 11:30am
Venue	P7510 7/F, Yeung Kin Man Academic Building

### **Abstract**

Recommender System techniques provide users with tailored information to meet their needs and preferences, overcoming the nowadays humongous information overload in the Internet. Most research to date in areas such as e-commerce, tourism, leisure, etc., have classically focused on recommending “best” items largely based on a single source of user data (such as preferences on previously seen items). However, the explosion of user-related information and the degree to which such information are nowadays connected to each other, implied more recently that recommendation services should rely on meaningfully combining such multiple (and disparate) “views” of user data intelligently.

The aim of this talk is to identify main challenges that arise in related multi-view recommender system approaches literature. In most of these works, fusion strategies to combine information across different dimensions of user or item information (preferences, user profile, social relationships, text reviews, etc.) are usually static and non-adaptive, relying on simplistic fusion approaches like averaging or product operations. Through some simple and intuitive examples,

my goal is to motivate the need for incorporating more “intelligent” and data-adaptive aggregation strategies in recommendation process, justifying why adopting fusion principles from multi-criteria decision making and fuzzy aggregation operators can be a possible solution for this challenge in diverse contexts.

### **About the Speaker**

**Iván Palomares Carrascosa** is a Lecturer in Data Science and Artificial Intelligence with the School of Computer Science, Electrical and Electronic Engineering, and Engineering Maths (SCEEM), University of Bristol. He is the academic lead of the “Decision Support and Recommender Systems” research theme, within Bristol’s Intelligent Systems Lab. Iván received his MSc and PhD degrees (with nationwide distinctions) from the Universities of Granada and Jaén (Spain). Iván’s research interests include AI techniques to support complex decision making under uncertainty, consensus building, recommender systems, human-machine decision support, fuzzy preference aggregation and data fusion. Applications of his research include management, group and multi-view recommender systems, disaster management, cybersecurity and energy planning. He has co-authored 15 publications in international journals and over 30 contributions to conferences, along with his recently published co-edited Springer book “Data Analytics and Decision Support for Cybersecurity” and his first own authored book “Large Group Decision Making” to be available soon (mid-2018). He has currently started supervising two PhD students on the area of Recommender Systems.

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***All are Welcome!***