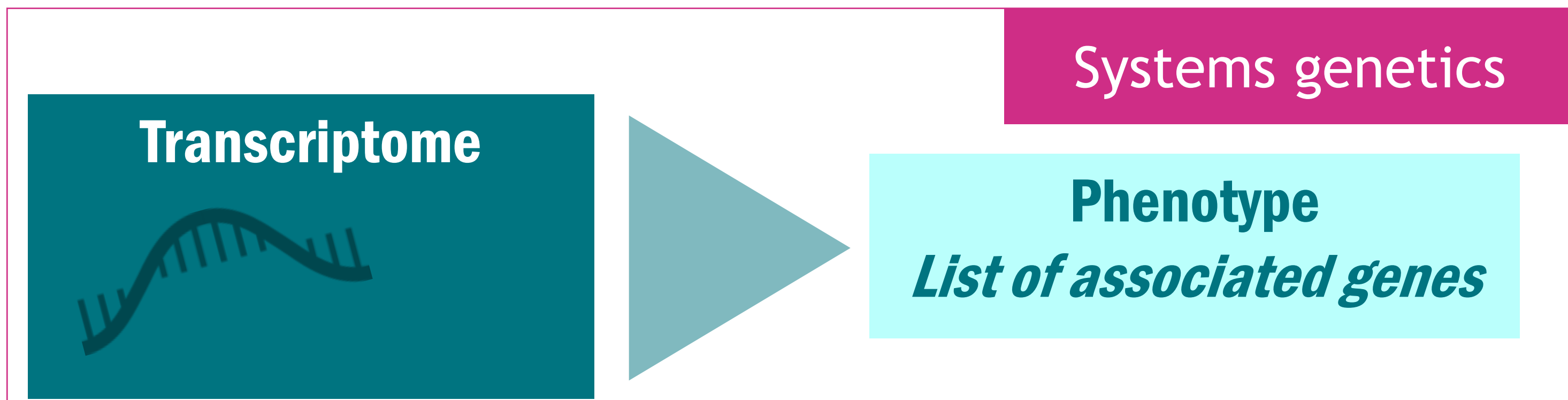


# GraphNEx

## Graph Neural Networks for Explainable Artificial Intelligence

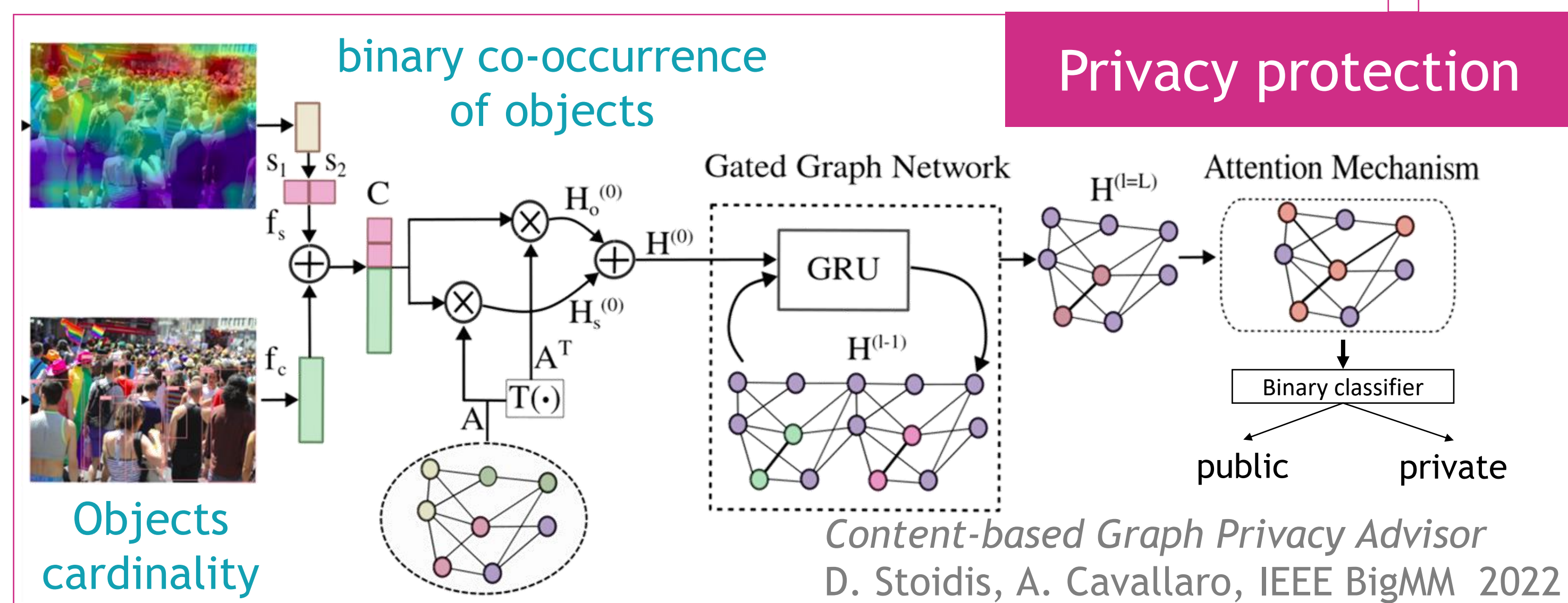
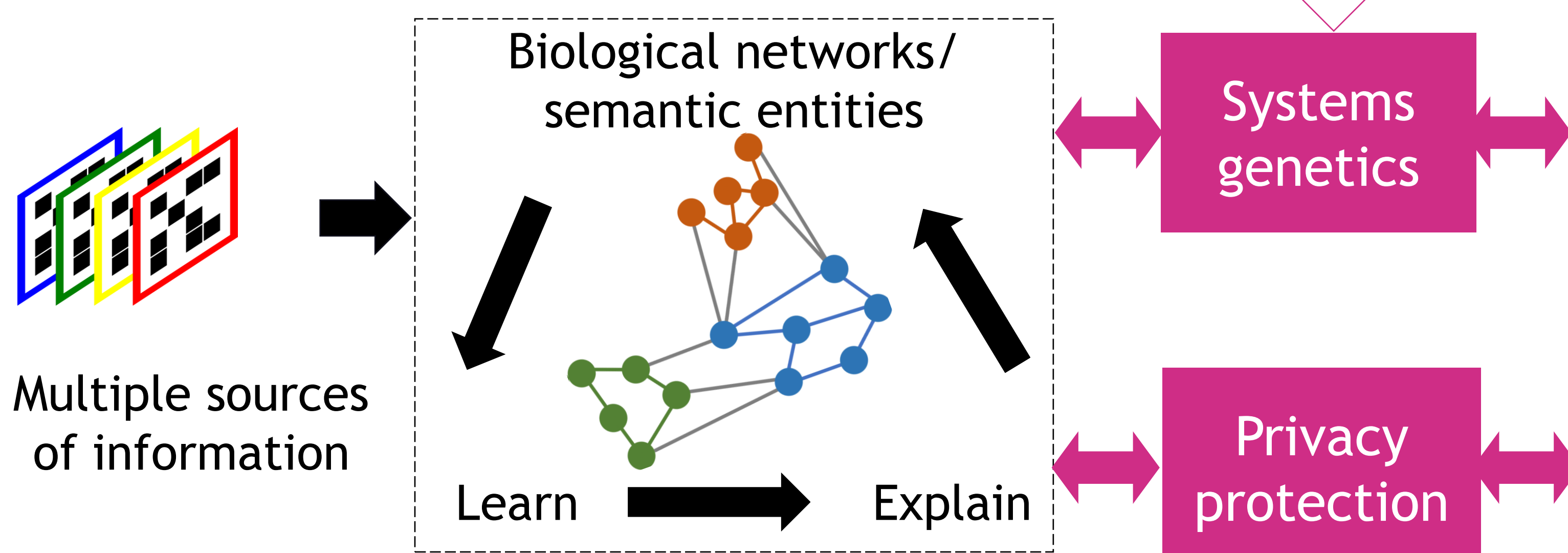
### Objectives

- To combine **semantic reasoning** over knowledge bases with simple modular learning
- To extrapolate **semantic concepts** and **meaningful relationships** from sub-graphs (concepts)
- To enforce **sparsity** and **domain-specific priors** between concepts for human interpretability



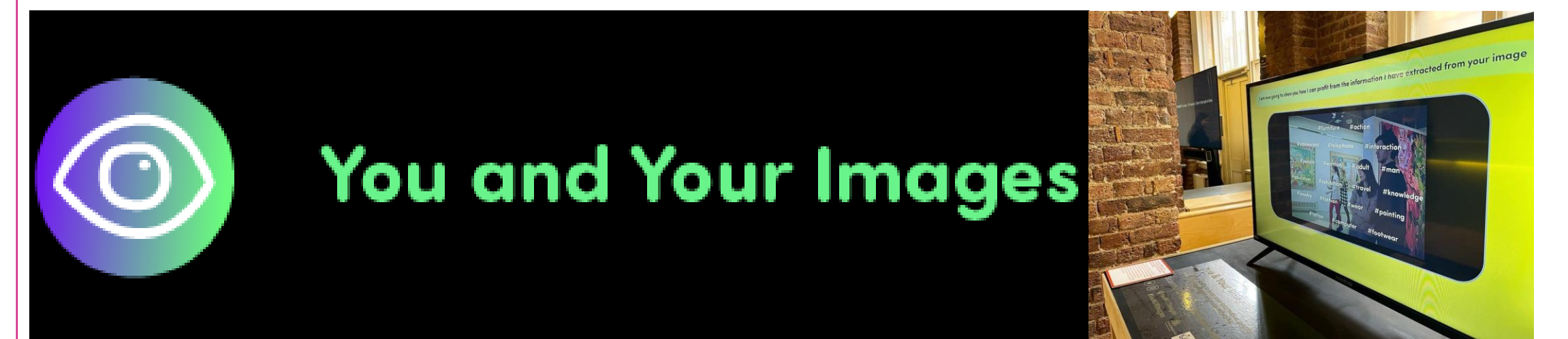
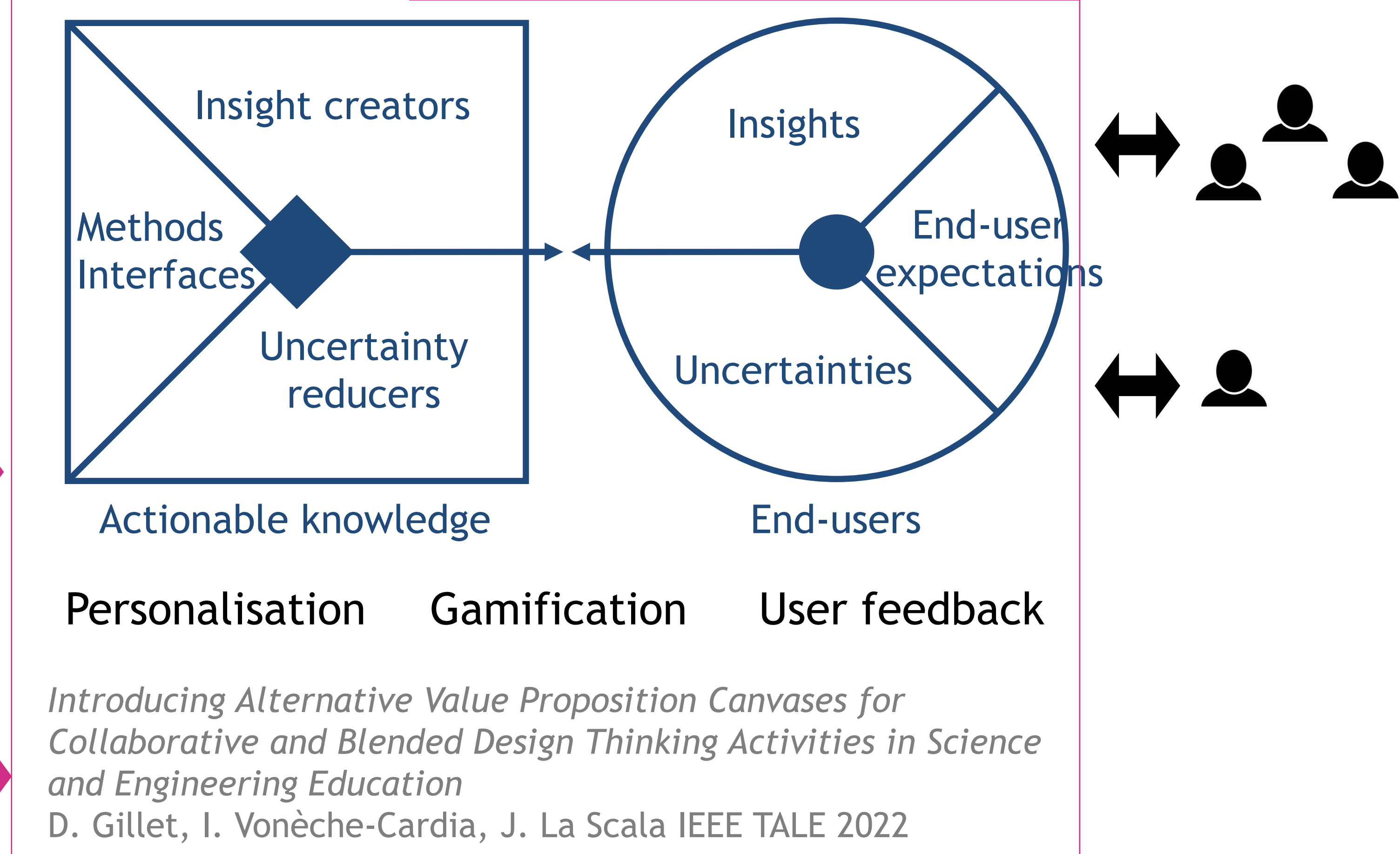
*Studying Limits of Explainability by Integrated Gradients for Gene Expression Models*  
M. Bontonou, A. Haget, M. Boulougouri, J. Arbona, B. Audit, P. Borgnat

to assist the discovery of clinically and biologically relevant concepts on large, multimodal genetic and genomic datasets



to safeguard personal information from unwanted non-essential inferences from multimedia data (images, video, audio) & support informed consent

### Interfaces for explainability

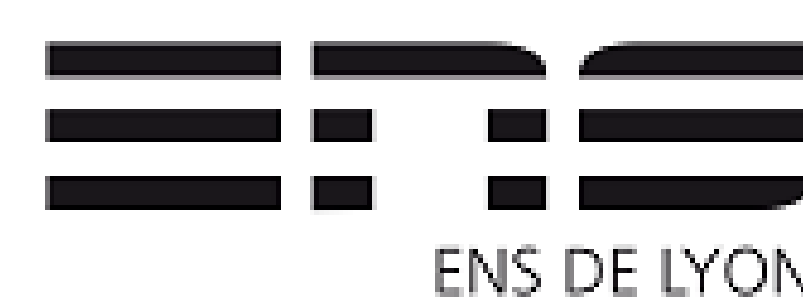


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L. Ferrarello, R. Fiadeiro, R. Mazzon, A. Cavallaro, DRS 2022

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