

The background of the slide is a complex, abstract composition. It features a central white banner with a subtle geometric pattern of thin lines and small plus signs. To the left of the banner is a rectangular inset showing a dense cluster of orange and red dots, resembling a galaxy or a data visualization. The main background is a dark, reddish-brown color with a network of thin, light-colored lines forming a complex web. Scattered throughout this network are numerous small, green and blue dots. The overall aesthetic is scientific and technological.

# **Session 6. Looking Forward**

# Looking Forward

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- ❑ Lots of research issues on pattern discovery are still waiting to be solved
- ❑ Application exploration: **Invisible Pattern Mining** (i.e., built into various search, ranking, mining and other functional units)
  - ❑ Discriminative-pattern-based classification
  - ❑ Indexing and retrieval (e.g., graph indexing and similarity search)
  - ❑ Text mining: Phrase mining and topic modeling
  - ❑ Software bug mining and mining software specifications
  - ❑ Spatiotemporal and trajectory data mining
  - ❑ Image and multimedia data mining
  - ❑ Biological and chemical data analysis: DNA, graphs
  - ❑ Subspace clustering (to be covered in Clustering in Data Mining)
  - ❑ Web logs → Click stream patterns → Recommendation