

Contents

Aspect and Entity Extraction for Opinion Mining	1
<i>Lei Zhang, Bing Liu</i>	
Mining Periodicity from Dynamic and Incomplete Spatiotemporal Data	41
<i>Zhenhui Li, Jiawei Han</i>	
Spatio-temporal Data Mining for Climate Data: Advances, Challenges, and Opportunities	83
<i>James H. Faghmous, Vipin Kumar</i>	
Mining Discriminative Subgraph Patterns from Structural Data	117
<i>Ning Jin, Wei Wang</i>	
Path Knowledge Discovery: Multilevel Text Mining as a Methodology for Phenomics	153
<i>Chen Liu, Wesley W. Chu, Fred Sabb, D. Stott Parker, Robert Bilder</i>	
InfoSearch: A Social Search Engine	193
<i>Prantik Bhattacharyya, Shyhtsun Felix Wu</i>	
Social Media in Disaster Relief: Usage Patterns, Data Mining Tools, and Current Research Directions	225
<i>Peter M. Landwehr, Kathleen M. Carley</i>	
A Generalized Approach for Social Network Integration and Analysis with Privacy Preservation	259
<i>Chris Yang, Bhavani Thuraisingham</i>	

A Clustering Approach to Constrained Binary Matrix Factorization	281
<i>Peng Jiang, Jiming Peng, Michael Heath, Rui Yang</i>	
Author Index	305