

# Contents

<b>Preface .....</b>	<b>vii</b>
<b>1. Introduction .....</b>	<b>1</b>
1.1 Overview .....	1
1.2 Background .....	3
1.3 Emerging Interest in Exploratory Search .....	7
1.4 Structure of the Lecture.....	8
<b>2. Defining Exploratory Search.....</b>	<b>9</b>
2.1 Problem Context .....	11
2.2 Search Process .....	13
2.3 Modeling Exploratory Search Behavior .....	16
2.3.1 Exploratory Browsing.....	16
2.3.2 Focused Searching .....	17
2.4 Differentiating Exploratory Search .....	21
2.5 Summary .....	23
<b>3. Related Work.....</b>	<b>25</b>
3.1 Curiosity, Exploratory Behavior, and Browsing.....	25
3.2 Information Foraging .....	27
3.3 Berrypicking .....	28
3.4 Sense-Making .....	31
3.5 Information-Seeking Processes and Behaviors .....	33
3.6 Cognitive Information Retrieval .....	37
3.7 Positioning Exploratory Search .....	38
3.8 Summary .....	39
<b>4. Features of Exploratory Search Systems.....</b>	<b>41</b>
4.1 Support Querying and Rapid Query Refinement .....	42
4.2 Offer Facets and Metadata-Based Result Filtering .....	44

4.3	Leverage Search Context.....	50
4.4	Offer Visualizations to Support Insight/Decision Making .....	52
4.5	Support Learning and Understanding.....	53
4.6	Facilitate Collaboration .....	55
4.7	Offer Histories, Workspaces, and Progress Updates.....	57
4.8	Support Task Management .....	58
4.9	Summary .....	59
<b>5.</b>	<b>Evaluation of Exploratory Search Systems .....</b>	<b>61</b>
5.1	Metrics .....	63
5.2	Methodologies.....	66
5.3	Summary .....	69
<b>6.</b>	<b>Future Directions and Concluding Remarks.....</b>	<b>71</b>
6.1	Future Directions.....	71
6.1.1	Novel Interaction Paradigms .....	71
6.1.2	Context Awareness .....	72
6.1.3	Task Adaptation .....	73
6.1.4	Decision-Making Support and What-If Analysis .....	73
6.1.5	Beyond the Personal Computer.....	73
6.1.6	Collaborative and Social Search .....	74
6.1.7	Learning About New Domains .....	74
6.1.8	New Evaluation Paradigms .....	75
6.2	Concluding Remarks .....	75
	<b>Acknowledgments.....</b>	<b>77</b>
	<b>References .....</b>	<b>79</b>
	<b>Author Biographies.....</b>	<b>97</b>