

Contents

Chapter 1. Introduction	1
1.1. The Eulerian Problem	1
1.2. Related Conjectures for the Eulerian Problem	7
1.3. Notation and Essentials	9
Chapter 2. Eulerian Maps and Peano Graphs	15
2.1. Overview	15
2.2. Equivalent Definitions for Eulerian Maps	17
2.3. Reduction to Peano Graphs	20
2.4. Equivalence of Eulerianity and Edge-Wise Eulerianity	24
Chapter 3. Approximating by Eulerian Decompositions	29
3.1. Eulerian Decompositions	29
3.2. Obtaining an Edge-Wise Eulerian Map	34
3.3. Simplicial Maps	36
Chapter 4. Product-Structured Ground Spaces	39
4.1. Introduction	39
4.2. Spanning Trees and the Even-Cut Condition	40
4.3. Sparse Edge Sets	42
4.4. Tiles in Peano Graphs with Product-Structured Ground Spaces	44
4.5. Approximating Sequences of Eulerian Decompositions	50
Chapter 5. One-Dimensional Spaces	59
5.1. Overview	59
5.2. Admissible Vertex Sets and Combinatorial Alignment	60
5.3. Ensuring the Even-Cut Condition	66
5.4. Eulerian Decompositions of One-Dimensional Peano Continua	74
5.5. Outlook	78
Bibliography	81
Index of mathematical terms	85