Contents

Giant Components 9 2.1 Introduction 9 2.2 Results 9 2.3 Summary and Discussion 15 References 16 3 Deriving an Underlying Mechanism for Discontinuous Percolation Transitions 17 3.1 Introduction 17 3.2 Model 18 3.3 Methods and Results 19 3.4 Summary 25 References 26 4 Continuous Phase Transitions in Supercritical Explosive Percolation 4.1 Introduction 29 4.2 The BFW Model and the Discontinuous Transition	1	Introduction					
1.2 Percolation in Networks 2 1.3 Explosive Percolation: A Continuous or Discontinuous Transition? 3 References 5 2 Discontinuous Explosive Percolation with Multiple Giant Components 9 2.1 Introduction 9 2.2 Results 9 2.3 Summary and Discussion 15 References 16 3 Deriving an Underlying Mechanism for Discontinuous Percolation Transitions 17 3.1 Introduction 17 3.2 Model 18 3.3 Methods and Results 19 3.4 Summary 25 References 26 4 Continuous Phase Transitions in Supercritical Explosive Percolation 29 4.1 Introduction 29 4.2 The BFW Model and the Discontinuous Transition		1.1	Network Science: An Emerging Discipline	1			
1.3 Explosive Percolation: A Continuous or Discontinuous 3 References 5 2 Discontinuous Explosive Percolation with Multiple 9 Giant Components 9 2.1 Introduction 9 2.2 Results 9 2.3 Summary and Discussion 15 References 16 3 Deriving an Underlying Mechanism for Discontinuous Percolation Transitions 17 3.1 Introduction 17 3.2 Model 18 3.3 Methods and Results 19 3.4 Summary 25 References 26 4 Continuous Phase Transitions in Supercritical Explosive Percolation 29 4.1 Introduction 29 4.2 The BFW Model and the Discontinuous Transition 29		1.2	Percolation in Networks	2			
Transition? 3 References 5 2 Discontinuous Explosive Percolation with Multiple 9 Giant Components 9 2.1 Introduction 9 2.2 Results 9 2.3 Summary and Discussion 15 References 16 3 Deriving an Underlying Mechanism for Discontinuous Percolation Transitions 17 3.1 Introduction 17 3.2 Model 18 3.3 Methods and Results 19 3.4 Summary 25 References 26 4 Continuous Phase Transitions in Supercritical Explosive Percolation 29 4.1 Introduction 29 4.2 The BFW Model and the Discontinuous Transition 29		1.3					
References 5 2 Discontinuous Explosive Percolation with Multiple 9 Giant Components 9 2.1 Introduction 9 2.2 Results 9 2.3 Summary and Discussion 15 References 16 3 Deriving an Underlying Mechanism for Discontinuous Percolation Transitions 17 3.1 Introduction 17 3.2 Model 18 3.3 Methods and Results 19 3.4 Summary 25 References 26 4 Continuous Phase Transitions in Supercritical Explosive Percolation 29 4.1 Introduction 29 4.2 The BFW Model and the Discontinuous Transition				3			
Giant Components 9 2.1 Introduction 9 2.2 Results 9 2.3 Summary and Discussion 15 References 16 3 Deriving an Underlying Mechanism for Discontinuous Percolation Transitions 17 3.1 Introduction 17 3.2 Model 18 3.3 Methods and Results 19 3.4 Summary 25 References 26 4 Continuous Phase Transitions in Supercritical Explosive Percolation 4.1 Introduction 29 4.2 The BFW Model and the Discontinuous Transition		Refe		5			
2.1 Introduction 9 2.2 Results 9 2.3 Summary and Discussion 15 References 16 3 Deriving an Underlying Mechanism for Discontinuous Percolation Transitions 17 3.1 Introduction 17 3.2 Model 18 3.3 Methods and Results 19 3.4 Summary 25 References 26 4 Continuous Phase Transitions in Supercritical Explosive Percolation 4.1 Introduction 29 4.2 The BFW Model and the Discontinuous Transition	2	Discontinuous Explosive Percolation with Multiple					
2.2 Results 9 2.3 Summary and Discussion 15 References 16 3 Deriving an Underlying Mechanism for Discontinuous Percolation Transitions 17 3.1 Introduction 17 3.2 Model 18 3.3 Methods and Results 19 3.4 Summary 25 References 26 4 Continuous Phase Transitions in Supercritical Explosive Percolation 29 4.1 Introduction 29 4.2 The BFW Model and the Discontinuous Transition		Gia	nt Components	9			
2.3 Summary and Discussion 15 References 16 3 Deriving an Underlying Mechanism for Discontinuous Percolation Transitions 17 3.1 Introduction 17 3.2 Model 18 3.3 Methods and Results 19 3.4 Summary 25 References 26 4 Continuous Phase Transitions in Supercritical Explosive Percolation 29 4.1 Introduction 29 4.2 The BFW Model and the Discontinuous Transition		2.1	Introduction	9			
References 16 3 Deriving an Underlying Mechanism for Discontinuous Percolation Transitions 17 3.1 Introduction 17 3.2 Model 18 3.3 Methods and Results 19 3.4 Summary 25 References 26 4 Continuous Phase Transitions in Supercritical Explosive Percolation 29 4.1 Introduction 29 4.2 The BFW Model and the Discontinuous Transition		2.2	Results	9			
3 Deriving an Underlying Mechanism for Discontinuous Percolation Transitions 17 3.1 Introduction 17 3.2 Model 18 3.3 Methods and Results 19 3.4 Summary 25 References 26 4 Continuous Phase Transitions in Supercritical Explosive Percolation 29 4.1 Introduction 29 4.2 The BFW Model and the Discontinuous Transition		2.3	Summary and Discussion	15			
Percolation Transitions 17 3.1 Introduction 17 3.2 Model 18 3.3 Methods and Results 19 3.4 Summary 25 References 26 4 Continuous Phase Transitions in Supercritical Explosive Percolation Explosive Percolation 29 4.1 Introduction 29 4.2 The BFW Model and the Discontinuous Transition		Refe	erences	16			
Percolation Transitions 17 3.1 Introduction 17 3.2 Model 18 3.3 Methods and Results 19 3.4 Summary 25 References 26 4 Continuous Phase Transitions in Supercritical Explosive Percolation 4.1 Introduction 29 4.2 The BFW Model and the Discontinuous Transition	3	Deriving an Underlying Mechanism for Discontinuous					
3.2 Model 18 3.3 Methods and Results 19 3.4 Summary 25 References 26 4 Continuous Phase Transitions in Supercritical Explosive Percolation 29 4.1 Introduction 29 4.2 The BFW Model and the Discontinuous Transition				17			
3.3 Methods and Results 19 3.4 Summary 25 References 26 4 Continuous Phase Transitions in Supercritical Explosive Percolation Explosive Percolation 29 4.1 Introduction 29 4.2 The BFW Model and the Discontinuous Transition		3.1	Introduction	17			
3.4 Summary 25 References 26 4 Continuous Phase Transitions in Supercritical Explosive Percolation 29 4.1 Introduction 29 4.2 The BFW Model and the Discontinuous Transition 29		3.2		18			
References		3.3	Methods and Results	19			
References		3.4	Summary	25			
Explosive Percolation		Refe	•	26			
4.1 Introduction	4	Continuous Phase Transitions in Supercritical					
4.2 The BFW Model and the Discontinuous Transition		Exp	losive Percolation	29			
4.2 The BFW Model and the Discontinuous Transition		4.1	Introduction	29			
		4.2					
			of the Largest Component	31			
4.3 Growth Cessation of the Largest Component		4.3		34			
4.4 Continuous Transition of the Second Largest Component 36		4.4		36			
4.5 Summary and Discussion		4.5					
·		Refe	erences	43			
		Kere	rences	4			

XII Contents

5	Unstable Supercritical Discontinuous Percolation						
	Transitions						
	5.1	Introduction	47				
	5.2	Percolation Models with Global Continuity	48				
	5.3	Percolation Models with Discontinuities	50				
	5.4	Bohman-Frieze-Wormald Model	51				
	5.5	Phase Diagram of the BFW Model	55				
	5.6	Summary and Discussions	56				
	Refe	erences	58				
Aj	ppend	lix A	61				
In	dex .		63				