

1. Record Nr.	UNINA9910506397503321
Autore	Salimi Mahsoo
Titolo	Swarm systems in art and architecture : state of the art // Mahsoo Salimi
Pubbl/distr/stampa	Gateway East, Singapore : , : Springer, , [2021] ©2021
ISBN	981-16-4357-1
Descrizione fisica	1 online resource (138 pages)
Collana	Computational synthesis and creative systems
Disciplina	006.3824
Soggetti	Swarm intelligence
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Intro -- Foreword -- References -- Preface -- Motivation -- Organization of Book -- Contribution -- References -- Contents -- Acronyms -- 1 Introduction -- 1.1 Basic Definitions -- 1.1.1 Self-organization -- 1.1.2 Stigmergy -- 1.1.3 Flocking -- 1.1.4 Foraging -- 1.2 Swarm Characteristics -- 1.3 Swarm Algorithms -- References -- 2 Architecture -- 2.1 Agent Architecture (Internal Interaction) -- 2.2 System Dynamic (External Interaction) -- 2.3 Audience Interactions -- References -- 3 Model -- 3.1 Features -- 3.2 Principles -- 3.2.1 Stigmergy -- 3.2.2 Pheromones -- 3.2.3 Flocking -- 3.2.4 Foraging -- 3.2.5 Other Techniques -- 3.3 Commonly Used Algorithms -- 3.3.1 Boids -- 3.3.2 Ant System (AS) -- 3.3.3 Ant Colony Optimization (ACO) -- 3.3.4 Particle Swarm Optimization (PSO) -- 3.3.5 Stochastic Diffusion Search (SDS) -- 3.3.6 KANTS -- References -- 4 System Output -- 4.1 Visual Output -- 4.1.1 Digital Drawing -- 4.1.2 Image Rendering -- 4.1.3 Drawing and Painting -- 4.2 Moving Image Output -- 4.3 Audio Output -- 4.3.1 Music Composition -- 4.3.2 Music Improvisation -- 4.4 Audio-Visual Output -- 4.5 Structural Output -- 4.5.1 Robotic Sculpture -- 4.5.2 Robotic Construction -- 4.6 Modeling (Form Finding) Output -- 4.7 Other Forms (Software, VR, Simulations, etc.) -- References -- 5 Presentation Format -- 5.1 Soundscape/Sonic Ecosystem -- 5.2 Visual Maps -- 5.3 Installation -- 5.3.1 Visual Installation -- 5.3.2 Audio Installation -- 5.3.3 Multisensory Installation -- 5.3.4 Light Installation -- 5.4 Performance, Dance,

and Choreography -- 5.4.1 Performance -- 5.4.2 Dance -- 5.4.3
Choreography -- 5.5 Sculpture -- 5.5.1 Kinetic Sculpture -- 5.6
Pavilion -- 5.7 Ecosystem -- 5.7.1 Adaptive Ecologies -- 5.7.2 Liminal
Responsive Architecture (swarm-like) -- 5.8 Swarm Tectonic
and Swarm Urbanism -- References -- 6 Challenges and Potentials --
6.1 Challenges.
6.1.1 Theoretical Challenges -- 6.1.2 Technical Challenges -- 6.1.3
Experiential Challenges -- 6.1.4 Strategic Challenges -- 6.2 Potentials
-- 6.2.1 Emergence -- 6.2.2 Novelty -- References -- 7 Conclusion --
7.1 Acknowledgements -- 7.2 Additional Materials -- 7.3 Taxonomy --
References.
