



Conference proceedings | © 2016

# Advances in Swarm Intelligence

7th International Conference, ICSI 2016, Bali, Indonesia, June 25-30, 2016, Proceedings, Part I

**Editors:** [Ying Tan](#), [Yuhui Shi](#), [Ben Niu](#)

**Includes supplementary material:** [sn.pub/extras](#)

**Part of the book series:** [Lecture Notes in Computer Science](#) (LNCS, volume 9712)

**Part of the book sub series:** [Theoretical Computer Science and General Issues](#) (LNTCS)

**Conference series link(s):** [ICSI: International Conference on Swarm Intelligence](#)

**103k** Accesses | **183** Citations

Conference proceedings info: ICSI 2016.

## Sections

[Table of contents](#)

[Other volumes](#)

[About this book](#)

[Keywords](#)

[Editors and Affiliations](#)

[Bibliographic Information](#)

---

This is a preview of subscription content, [access via your institution.](#)

---

## Table of contents (65 papers)

---

Search within book

← Previous

Page

1

of 4

Next →

---

Front Matter

[PDF](#) ↓

Pages I-XXVII

---

## Trend and Models of Swarm Intelligence Research

---

Front Matter

[PDF](#) ↓

Pages 1-1

---

### [Swarm Intelligence in Architectural Design](#)

Sebastian Wiesenhuetter, Andreas Wilde, Joerg Rainer Noennig

Pages 3-13

---

### [Shaping Influence and Influencing Shaping: A Computational Red Teaming Trust-Based Swarm Intelligence Model](#)

Jiangjun Tang, Eleni Petraki, Hussein Abbass

Pages 14-23

---

[Research Hotspots and Trends in Swarm Intelligence: From 2000 to 2015](#)

Zili Li, Li Zeng, Hua Zhong, Jinhong Wu  
Pages 24-35

---

## Novel Swarm-Based Optimization Algorithms

---

Front Matter

[PDF](#) ↓

Pages 37-37

---

[Duelist Algorithm: An Algorithm Inspired by How Duelist Improve Their Capabilities in a Duel](#)

Totok Ruki Biyanto, Henokh Yernias Fibrianto, Gunawan Nugroho, Agus Muhamad Hatta, Erny Listijorini, Titik Budiati et al.  
Pages 39-47

---

[Framework for Robust Optimization Combining Surrogate Model, Memetic Algorithm, and Uncertainty Quantification](#)

Pramudita Satria Palar, Yohanes Bimo Dwianto, Lavi Rizki Zuhail, Takeshi Tsuchiya  
Pages 48-55

---

[Autonomous Search in Constraint Satisfaction via Black Hole: A Performance Evaluation Using Different Choice Functions](#)

Ricardo Soto, Broderick Crawford, Rodrigo Olivares, Stefanie Niklander, Eduardo Olguín  
Pages 56-65

---

[Scatter Search for Homology Modeling](#)

Mouses Stamboulia, Nashat Mansour  
Pages 66-73

---

## [Cuckoo Search Algorithm Inspired by Artificial Bee Colony and Its Application](#)

Yin Gao, Xiujuan Lei, Cai Dai  
Pages 74-85

---

## [An Ideal Fine-Grained GAC Algorithm for Table Constraints](#)

Limeng Qiao, Zhenhui Xu, Jin Dong, Yuan Shao, Xin Tong,  
Zhanshan Li  
Pages 86-94

---

## [Particle Filter Optimization: A Brief Introduction](#)

Bin Liu, Shi Cheng, Yuhui Shi  
Pages 95-104

---

## [Immunological Approach for Data Parameterization in Curve Fitting of Noisy Points with Smooth Local-Support Splines](#)

Andrés Iglesias, Akemi Gálvez, Andreina Avila  
Pages 105-115

---

## Swarming Behaviour

---

Front Matter

[PDF](#) 

Pages 117-117

---

## [Quantifying Swarming Behaviour](#)

John Harvey, Kathryn Merrick, Hussein Abbass  
Pages 119-130

---

## [A Simulation Study on Collective Motion of Fish Schools](#)

Fatih Cemal Can, Hayrettin Şen  
Pages 131-141

---

[Swarmscape: A Synergistic Approach  
Combining Swarm Simulations, Body  
Movement and Volumetric Projections to  
Generate Immersive Interactive  
Environments](#)

Nimish Bioria, Jia-Rey Chang  
Pages 142-153

---

[Fundamental Diagrams of Single-File  
Pedestrian Flow for Different Age Groups](#)

Shuchao Cao, Jun Zhang, Daniel Salden, Jian Ma  
Pages 154-161

---

## Some Swarm Intelligence Algorithms and Their Applications

---

Front Matter

[PDF](#) 

Pages 163-163

[← Previous](#)

Page

1

of 4

[Next →](#)

[Back to top ↑](#)

## Other Volumes

---

1. Advances in Swarm Intelligence
2. [Advances in Swarm Intelligence](#)

[Back to top ↑](#)

## About this book

---

This two-volume set LNCS 9712 and LNCS 9713 constitutes the refereed proceedings of the 7th International Conference on Swarm Intelligence, ICSI 2016, held in Bali, Indonesia, in June 2016. The 130 revised regular papers presented were carefully reviewed and selected from 231 submissions. The papers are organized in 22 cohesive sections covering major topics of swarm intelligence and related areas such as trend and models of swarm intelligence research; novel swarm-based optimization algorithms; swarming behaviour; some swarm intelligence algorithms and their applications; hybrid search optimization; particle swarm optimization; PSO applications; ant colony optimization; brain storm optimization; fireworks algorithms; multi-objective optimization; large-scale global optimization; biometrics; scheduling and planning; machine learning methods; clustering algorithm; classification; image classification and encryption; data mining; sensor networks and social networks; neural networks; swarm intelligence in management decision making and operations research; robot control; swarm robotics; intelligent energy and communications systems; and intelligent and interactive and tutoring systems.

[Back to top](#) ↑

## Keywords

---

**bio-inspired systems**      **data mining**

**genetic algorithm**      **machine learning**

particle swarm optimization    algorithms  
ant colony optimization    autonomous robot  
cellular networks    cloud computing  
complex network    constrained optimization  
evolutionary algorithm    fuzzy logic  
hybrid learning    multi-agent design  
neural networks    optimization  
pattern recognition    self-organizing map

[Back to top ↑](#)

## Editors and Affiliations

---

**Peking University, Beijing, China**

Ying Tan

**Xi'an Jiaotong-Liverpool University,  
Suzhou, China**

Yuhui Shi

**Shenzhen University, Shenzhen, China**

Ben Niu

[Back to top ↑](#)

## Bibliographic Information

---

<b>Book Title</b>	<b>Book Subtitle</b>	<b>Editors</b>
Advances in Swarm Intelligence	7th International Conference, ICSI 2016, Bali, Indonesia, June 25-30, 2016, Proceedings, Part I	Ying Tan, Yuhui Shi, Ben Niu

<b>Series Title</b>	<b>DOI</b>	<b>Publisher</b>
<a href="#">Lecture Notes in Computer Science</a>	<a href="https://doi.org/10.1007/978-3-319-41000-5">https://doi.org/10.1007/978-3-319-41000-5</a>	Springer Cham

<b>eBook Packages</b>	<b>Copyright Information</b>	<b>Softcover ISBN</b>
<a href="#">Computer Science, Computer Science (R0)</a>	Springer International Publishing Switzerland 2016	978-3-319-40999-3 Published: 15 June 2016

<b>eBook ISBN</b>	<b>Series ISSN</b>	<b>Series E-ISSN</b>
978-3-319-41000-5 Published: 05 September 2016	0302-9743	1611-3349

<b>Edition Number</b>	<b>Number of Pages</b>	<b>Number of Illustrations</b>
1	XXVII, 657	193 b/w illustrations

**Topics**  
[Algorithms,](#)  
[Artificial Intelligence,](#)  
[Numerical Analysis, Models of Computation, Data Mining and Knowledge Discovery, Computer Modelling,](#)



[Back to top ↑](#)

Not logged in - 103.144.221.180

Not affiliated

**SPRINGER NATURE**

© 2023 Springer Nature Switzerland AG. Part of [Springer Nature](#).