



Bee-Inspired Protocol Engineering: From Nature to Networks (Natural Computing Series)

By Muddassar Farooq

Download now

Read Online ➔

Bee-Inspired Protocol Engineering: From Nature to Networks (Natural Computing Series) By Muddassar Farooq

Honey bee colonies demonstrate robust adaptive efficient agent-based communications and task allocations without centralized controls – desirable features in network design. This book introduces a multipath routing algorithm for packet-switched telecommunication networks based on techniques observed in bee colonies. The algorithm, BeeHive, is dynamic, simple, efficient, robust and flexible, and it represents an important step towards intelligent networks that optimally manage resources.

The author guides the reader in a survey of nature-inspired routing protocols and communication techniques observed in insect colonies. He then offers the design of a scalable framework for nature-inspired routing algorithms, and he examines a practical application using real networks of Linux routers. He also utilizes formal techniques to analytically model the performance of nature-inspired routing algorithms. In the last chapters of the book, he introduces an immune-inspired security framework for nature-inspired algorithms, and uses the wisdom of the hive for routing in ad hoc and sensor networks. Finally, the author provides a comprehensive bibliography to serve as a reference for nature-inspired solutions to networking problems.

This book bridges the gap between natural computing and computer networking. What sets this book apart from other texts on this subject is its natural engineering approach in which the challenges and objectives of a real-world system are identified before its solution, nature-inspired or otherwise, is discussed. This balanced exposition of the book makes it equally suitable for telecommunication network designers and theorists, and computer science researchers engaged with artificial intelligence, agents, and nature-inspired techniques.

 [**Download** Bee-Inspired Protocol Engineering: From Nature to ...pdf](#)

 [**Read Online** Bee-Inspired Protocol Engineering: From Nature t ...pdf](#)

Bee-Inspired Protocol Engineering: From Nature to Networks (Natural Computing Series)

By Muddassar Farooq

Bee-Inspired Protocol Engineering: From Nature to Networks (Natural Computing Series) By Muddassar Farooq

Honey bee colonies demonstrate robust adaptive efficient agent-based communications and task allocations without centralized controls – desirable features in network design. This book introduces a multipath routing algorithm for packet-switched telecommunication networks based on techniques observed in bee colonies. The algorithm, BeeHive, is dynamic, simple, efficient, robust and flexible, and it represents an important step towards intelligent networks that optimally manage resources.

The author guides the reader in a survey of nature-inspired routing protocols and communication techniques observed in insect colonies. He then offers the design of a scalable framework for nature-inspired routing algorithms, and he examines a practical application using real networks of Linux routers. He also utilizes formal techniques to analytically model the performance of nature-inspired routing algorithms. In the last chapters of the book, he introduces an immune-inspired security framework for nature-inspired algorithms, and uses the wisdom of the hive for routing in ad hoc and sensor networks. Finally, the author provides a comprehensive bibliography to serve as a reference for nature-inspired solutions to networking problems.

This book bridges the gap between natural computing and computer networking. What sets this book apart from other texts on this subject is its natural engineering approach in which the challenges and objectives of a real-world system are identified before its solution, nature-inspired or otherwise, is discussed. This balanced exposition of the book makes it equally suitable for telecommunication network designers and theorists, and computer science researchers engaged with artificial intelligence, agents, and nature-inspired techniques.

Bee-Inspired Protocol Engineering: From Nature to Networks (Natural Computing Series) By Muddassar Farooq Bibliography

- Sales Rank: #8331811 in Books
- Brand: Brand: Springer
- Published on: 2008-11-26
- Original language: English
- Number of items: 1
- Dimensions: 9.21" h x .75" w x 6.14" l, 1.65 pounds
- Binding: Hardcover
- 306 pages

 [Download Bee-Inspired Protocol Engineering: From Nature topdf](#)

 [Read Online Bee-Inspired Protocol Engineering: From Nature t ...pdf](#)

Download and Read Free Online Bee-Inspired Protocol Engineering: From Nature to Networks (Natural Computing Series) By Muddassar Farooq

Editorial Review

Users Review

From reader reviews:

Josephine Lowe:

As people who live in the actual modest era should be change about what going on or data even knowledge to make them keep up with the era which can be always change and move forward. Some of you maybe can update themselves by looking at books. It is a good choice for you personally but the problems coming to you is you don't know what one you should start with. This Bee-Inspired Protocol Engineering: From Nature to Networks (Natural Computing Series) is our recommendation so you keep up with the world. Why, since this book serves what you want and need in this era.

Ashley Wright:

The book untitled Bee-Inspired Protocol Engineering: From Nature to Networks (Natural Computing Series) is the reserve that recommended to you to read. You can see the quality of the reserve content that will be shown to you. The language that creator use to explained their way of doing something is easily to understand. The copy writer was did a lot of research when write the book, hence the information that they share to you is absolutely accurate. You also can get the e-book of Bee-Inspired Protocol Engineering: From Nature to Networks (Natural Computing Series) from the publisher to make you considerably more enjoy free time.

Helen Massey:

Your reading 6th sense will not betray a person, why because this Bee-Inspired Protocol Engineering: From Nature to Networks (Natural Computing Series) publication written by well-known writer whose to say well how to make book which might be understand by anyone who read the book. Written within good manner for you, still dripping wet every ideas and writing skill only for eliminate your current hunger then you still uncertainty Bee-Inspired Protocol Engineering: From Nature to Networks (Natural Computing Series) as good book not simply by the cover but also with the content. This is one reserve that can break don't evaluate book by its protect, so do you still needing an additional sixth sense to pick this kind of!? Oh come on your looking at sixth sense already alerted you so why you have to listening to a different sixth sense.

Mike Edwards:

That e-book can make you to feel relax. That book Bee-Inspired Protocol Engineering: From Nature to Networks (Natural Computing Series) was colorful and of course has pictures around. As we know that book Bee-Inspired Protocol Engineering: From Nature to Networks (Natural Computing Series) has many kinds or

variety. Start from kids until adolescents. For example Naruto or Private eye Conan you can read and feel that you are the character on there. So , not at all of book usually are make you bored, any it offers you feel happy, fun and relax. Try to choose the best book for you personally and try to like reading in which.

**Download and Read Online Bee-Inspired Protocol Engineering:
From Nature to Networks (Natural Computing Series) By
Muddassar Farooq #5FLX26QUPVB**

Read Bee-Inspired Protocol Engineering: From Nature to Networks (Natural Computing Series) By Muddassar Farooq for online ebook

Bee-Inspired Protocol Engineering: From Nature to Networks (Natural Computing Series) By Muddassar Farooq Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Bee-Inspired Protocol Engineering: From Nature to Networks (Natural Computing Series) By Muddassar Farooq books to read online.

Online Bee-Inspired Protocol Engineering: From Nature to Networks (Natural Computing Series) By Muddassar Farooq ebook PDF download

Bee-Inspired Protocol Engineering: From Nature to Networks (Natural Computing Series) By Muddassar Farooq Doc

Bee-Inspired Protocol Engineering: From Nature to Networks (Natural Computing Series) By Muddassar Farooq Mobipocket

Bee-Inspired Protocol Engineering: From Nature to Networks (Natural Computing Series) By Muddassar Farooq EPub