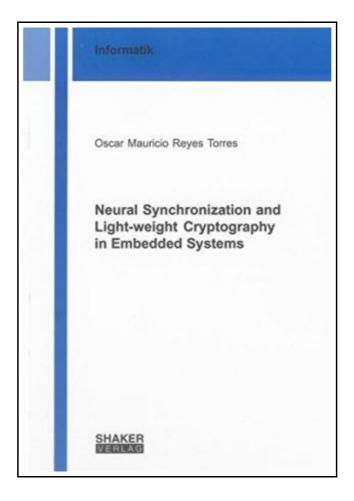
# Neural Synchronization and Light-weight Cryptography in Embedded Systems



Filesize: 7.22 MB

### **Reviews**

The most effective pdf i ever read. it absolutely was writtern extremely flawlessly and useful. I am very easily will get a pleasure of reading through a published book.

(Prof. Vidal Ledner)

# NEURAL SYNCHRONIZATION AND LIGHT-WEIGHT CRYPTOGRAPHY IN EMBEDDED SYSTEMS



Shaker Verlag Aug 2012, 2012. Buch. Book Condition: Neu. Neuware - Synchronization is a phenomenon that is widely studied in different fields. In the case of artificial neural networks, two feed-forward networks can eventually synchronize by exchanging their outputs and applying a suitable learning rule. The dynamics of this process has been studied for the so-called permutation parity machine. This is a binary variant of the wellknown tree parity machine in which the weights are small integers that are not adjusted, but completely replaced during each learning step. In the permutation parity machine, a new set of weights is pseudorandomly drawn from a pool of binary data after the outputs have been exchanged. Synchronization is a result of competing stochastic forces given by a sequence of increasing and decreasing overlaps. This sequence constitutes a random process endowed with the Markov property. More concretely, the mutual learning process can be described by a first-order Markov chain where synchronization amounts to the stationarity of the chain. Nowadays, cryptography plays an ever more important role in information security given the countless scenarios in which information exchange requires different levels of privacy, secrecy or reliability. To this end, cryptographic algorithms based on neural synchronization can be used, since mutual learning leads to synchronization much faster than learning by examples. In this work, a key exchange protocol based on permutation parity machines has been studied. It has been proved that even though the weights used during each learning step are not strongly correlated, synchronization still occurs. Moreover, the lack of correlation among the weights during the synchronization process makes the key exchange protocol robust not only against common attacks, e.g. simple or geometric attacks, but also against attacks based on non-standard schemes, such as majority, genetic or probabilistic attacks. Permutation parity machines make use of...

Read Neural Synchronization and Light-weight Cryptography in Embedded Systems

Download PDF Neural Synchronization and Light-weight Cryptography in Embedded Systems

## You May Also Like



#### Programming in D

Ali Cehreli Dez 2015, 2015. Buch. Book Condition: Neu. 264x182x53 mm. This item is printed on demand - Print on Demand Neuware - The main aim of this book is to teach D to readers...

Read Document »



#### No Cupcakes for Jason: No Cupcakes for Jason (Paperback)

AUTHORHOUSE, United States, 2005. Paperback. Book Condition: New. 223 x 213 mm. Language: English . Brand New Book \*\*\*\*\* Print on Demand \*\*\*\*\*. No Cupcakes for Jason is the delightful children s story of five-year old...

Read Document »



Kindergarten Culture in the Family and Kindergarten; A Complete Sketch of Froebel's System of Early Education, Adapted to American Institutions. for the Use of Mothers and Teachers (Paperback)

Rarebooksclub.com, United States, 2012. Paperback. Book Condition: New. 246 x 189 mm. Language: English . Brand New Book \*\*\*\*\* Print on Demand \*\*\*\*\*. This historic book may have numerous typos and missing text. Purchasers can download...

Read Document »



#### Have You Locked the Castle Gate?

Addison-Wesley Professional. Softcover. Book Condition: Neu. Gebraucht - Sehr gut Unbenutzt. Schnelle Lieferung, Kartonverpackung. Abzugsfähige Rechnung. Bei Mehrfachbestellung werden die Versandkosten anteilig erstattet. - Is your computer safe Could an intruder sneak in and steal...

Read Document »



#### Adobe Indesign CS/Cs2 Breakthroughs

Peachpit Press, 2005. Softcover. Book Condition: Neu. Gebraucht - Sehr gut Unbenutzt. Schnelle Lieferung, Kartonverpackung. Abzugsfähige Rechnung. Bei Mehrfachbestellung werden die Versandkosten anteilig erstattet. - Adobe InDesign is taking the publishing world by storm and...

Read Document »



#### Slavonic Rhapsody in D Major, B.86.1: Study Score (Paperback)

Petrucci Library Press, United States, 2015. Paperback. Book Condition: New. 297 x 210 mm. Language: English . Brand New Book \*\*\*\*\* Print on Demand \*\*\*\*\*. The first of the three Slovanske rapsodie was composed from February

Read PDF »



# The genuine book marketing case analysis of the the lam light. Yin Qihua Science Press 21.00(Chinese Edition)

paperback. Book Condition: New. Ship out in 2 business day, And Fast shipping, Free Tracking number will be provided after the shipment. Paperback. Pub Date :2007-01-01 Pages: 244 Publisher: Science Press Welcome Our service and quality

Read PDF »



#### Slavonic Rhapsody in A-Flat Major, B.86.3: Study Score (Paperback)

Petrucci Library Press, United States, 2015. Paperback. Book Condition: New. 297 x 210 mm. Language: English . Brand New Book \*\*\*\*\* Print on Demand \*\*\*\*\*. Dvorak s final Slovanske rapsodie was composed from around September 20

Read PDF »



#### Peppa Pig: School Bus Trip - Read it Yourself with Ladybird

Penguin Books Ltd. Paperback. Book Condition: new. BRAND NEW, Peppa Pig: School Bus Trip - Read it Yourself with Ladybird, Peppa and her friends are going on a school bus trip. What adventures will they

Read PDF »



### Dom's Dragon - Read it Yourself with Ladybird: Level 2

Penguin Books Ltd. Paperback. Book Condition: new. BRAND NEW, Dom's Dragon - Read it Yourself with Ladybird: Level 2, Mandy Ross, One day, Dom finds a little red egg and soon he is the owner

Read PDF »