

Document details

< Back to results | < Previous 2 of 4 Next >

Export Download Print E-mail Save to PDF Add to List More... >

International Journal of Recent Technology and Engineering
Volume 8, Issue 1, May 2019, Pages 1667-1670

Performance analysis of LDPC channel coding in 4G systems (Article)

Khalifa, O.O., Bt. Muzamil, N.F.

Department of Electrical and Computer Engineering, International Islamic University Malaysia, Malaysia

Abstract

View references (12)

Due to the degradation in wireless communication system by the burst errors in of fades under multipath environment, the efficient and the quality of received signals are questionable. Therefore, the error corrections are crucial part needed to satisfy the users. This paper focuses on performance analysis of channel coding in 4G systems. There are many codes, but this paper highlights on Viterbi Algorithm and LDPC codes with BPSK modulation and Additive white Gaussian noise(AWGN). The comparative performance of Viterbi algorithm and LDPC is explored in this paper. This comparison will be beneficial for next mobile communication system generations. © BEIESP.

SciVal Topic Prominence

Topic: Turbo codes | Decoding | Turbo decoders

Prominence percentile: 76.604

Author keywords

Bit error rate Channel coding Error correction codes LDPC codes Viterbi algorithm

ISSN: 22773878

Source Type: Journal

Original language: English

Document Type: Article

Publisher: Blue Eyes Intelligence Engineering and Sciences Publication

References (12)

View in search results format >

All Export Print E-mail Save to PDF Create bibliography

- 1 (2018) *What is 4G?*
4G?, W, 4g.co.uk, Accessed 17 Dec. 2018
<https://www.4g.co.uk/what-is-4g/>

- 2 Shah, P.M., Vyavahare, P.D., Jain, A.
Modern error correcting codes for 4G and beyond: Turbo codes and LDPC codes
(2015) *2015 IEEE Radio and Antenna Days of the Indian Ocean, RADIO 2015*, art. no. 7323369. Cited 2 times.
ISBN: 978-999037339-4
doi: 10.1109/RADIO.2015.7323369
[View at Publisher](#)

Metrics



PlumX Metrics

Usage, Captures, Mentions, Social Media and Citations beyond Scopus.

Cited by 0 documents

Inform me when this document is cited in Scopus:

Set citation alert >

Set citation feed >

Related documents

Serial LDPC decoding on a SIMD DSP using horizontal scheduling

Gomes, M. , Silva, V. , Neves, C. (2006) *European Signal Processing Conference*

Reliability-based selective repeat hybrid ARQ protocol on low density parity check codes

Huang, F. , Yi, X. , Wang, T. (2006) *Proceedings - 16th International Conference on Artificial Reality and Telexistence - Workshops, ICAT 2006*

Improved Belief Propagation (BP) decoding for LDPC codes with a large number of short cycles

Chung, K. , Heo, J. (2006) *IEEE Vehicular Technology Conference*

[View all related documents based on references](#)

[Find more related documents in Scopus based on:](#)

[Authors >](#) [Keywords >](#)

- 3 Gallagher, R.G.
Low-Density Parity-Check Codes
(1962) *IRE Transactions on Information Theory*, 8 (1), pp. 21-28. Cited 4058 times.
doi: 10.1109/TIT.1962.1057683
[View at Publisher](#)
-
- 4 Tanner, R.M.
A Recursive Approach to Low Complexity Codes
(1981) *IEEE Transactions on Information Theory*, 27 (5), pp. 533-547. Cited 1890 times.
doi: 10.1109/TIT.1981.1056404
[View at Publisher](#)
-
- 5 MacKay, D.J.C., Neal, R.M.
Near Shannon limit performance of low density parity check codes
(1996) *Electronics Letters*, 32 (18), pp. 1645-1646. Cited 1670 times.
<http://scitation.aip.org/dbt/dbt.jsp?KEY=ELLEAK>
doi: 10.1049/el:19961141
[View at Publisher](#)
-
- 6 Muhammad Salman, K., Masood, M.
(2011) *Error Detection and Correction*
Retrieved from
<https://fypethernetlancard.wordpress.com/2011/07/30/error-detection-and-correction>
-
- 7 Yu, Y., Jia, Z., Tao, W., Dong, S.
LDPC codes optimization for differential encoded LDPC coded systems with multiple symbol differential detection
(2016) *2016 IEEE 5th Global Conference on Consumer Electronics, GCCE 2016*, art. no. 7800541.
ISBN: 978-150902333-2
doi: 10.1109/GCCE.2016.7800541
[View at Publisher](#)
-
- 8 Richardson, T., Urbanke, R.
The renaissance of Gallager's low-density parity-check codes
(2003) *IEEE Communications Magazine*, 41 (8), pp. 126-131. Cited 149 times.
doi: 10.1109/MCOM.2003.1222728
[View at Publisher](#)
-
- 9 Viraktamath, S., Talasadar, D., Attimarad, V., Radder, G.
Performance Analysis of Viterbi Decoder using different Digital Modulation Techniques in AWGN Channel
(2014) *Electronics and Communication Engineering (IOSR-JECE)*, 9, pp. 01-06. Cited 2 times.
-
- 10 He, J., Wang, Z., Liu, H.
An efficient 4-D 8PSK TCM decoder architecture
(2010) *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, 18 (5), art. no. 5067008, pp. 808-817. Cited 8 times.
doi: 10.1109/TVLSI.2009.2015325
[View at Publisher](#)
-

□ 11 Jin, J., Tsui, C.-Y.

Low-power limited-search parallel state Viterbi decoder implementation based on scarce state transition

(2007) *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, 15 (10), pp. 1172-1176. Cited 16 times.

doi: 10.1109/TVLSI.2007.903957

[View at Publisher](#)

□ 12 Boo, M., Arguello, F., Bruguera, J.D., Doallo, R., Zapata, E.L.

High-performance VLSI architecture for the viterbi algorithm

(1997) *IEEE Transactions on Communications*, 45 (2), pp. 168-176. Cited 40 times.

doi: 10.1109/26.554365

[View at Publisher](#)

© Copyright 2019 Elsevier B.V., All rights reserved.

[< Back to results](#) | [< Previous](#) 2 of 4 [Next >](#)

[^ Top of page](#)

About Scopus

[What is Scopus](#)
[Content coverage](#)
[Scopus blog](#)
[Scopus API](#)
[Privacy matters](#)

Language

[日本語に切り替える](#)
[切换到简体中文](#)
[切换到繁體中文](#)
[Русский язык](#)

Customer Service

[Help](#)
[Contact us](#)

ELSEVIER

[Terms and conditions ↗](#) [Privacy policy ↗](#)

Copyright © Elsevier B.V. ↗. All rights reserved. Scopus® is a registered trademark of Elsevier B.V.

We use cookies to help provide and enhance our service and tailor content. By continuing, you agree to the use of cookies.

 RELX