

Title (en)

METHOD FOR QUANTIFYING AND ANALYZING INTRINSIC PARALLELISM OF AN ALGORITHM

Title (de)

VERFAHREN ZUR QUANTIFIZIERUNG UND ANALYSE INTRINSISCHER PARALLELISMEN EINES ALGORITHMUS

Title (fr)

PROCÉDÉ DE QUANTIFICATION ET D'ANALYSE DU PARALLÉLISME INTRINSÈQUE D'UN ALGORITHME

Publication

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Application

EP 11804255 A 20110705

Priority

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Abstract (en)

[origin: WO2012006285A1] A method for quantifying and analyzing intrinsic parallelism of an algorithm is adapted to be implemented by a computer, and includes the steps of: configuring the computer to represent the algorithm by means of a plurality of operation sets; configuring the computer to obtain a Laplacian matrix according to the operation sets; configuring the computer to compute eigenvalues and eigenvectors of the Laplacian matrix; and configuring the computer to obtain a set of information related to intrinsic parallelism of the algorithm according to the eigenvalues and the eigenvectors of the Laplacian matrix.

IPC 8 full level

G06F 17/10 (2006.01)

CPC (source: EP KR)

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G06F 17/147 (2013.01 - EP KR)

Citation (search report)

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- [A] LEE G G ET AL: "Algorithm/architecture co-exploration of visual computing on emergent platforms: Overview and future prospects", IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS FOR VIDEO TECHNOLOGY, vol. 19, no. 11, November 2009 (2009-11-01), pages 1576 - 1587, XP011275966, ISSN: 1051-8215, DOI: 10.1109/TCSVT.2009.2031376
- [IP] LIN H-Y ET AL: "Quantifying intrinsic parallelism via eigen-decomposition of dataflow graphs for algorithm/architecture co-exploration", 2010 IEEE WORKSHOP ON SIGNAL PROCESSING SYSTEM (SIPS 2010), 6-8 OCTOBER 2010, SAN FRANCISCO, CA, USA, 6 October 2010 (2010-10-06), pages 317 - 322, XP031792428, ISBN: 978-1-4244-8932-9
- [T] LEE G G ET AL: "Quantifying intrinsic parallelism using linear algebra for algorithm/architecture coexploration", IEEE TRANSACTIONS ON PARALLEL AND DISTRIBUTED SYSTEMS, vol. 23, no. 5, May 2012 (2012-05-01), pages 944 - 957, XP011440406, ISSN: 1045-9219, DOI: 10.1109/TPDS.2011.230
- [T] "Multimedia Image and Video Processing, Second Edition", vol. 23, March 2012, CRC PRESS, ISSN: 1045-9219, article LEE G G ET AL: "Chapter 23 - Algorithm/Architecture Coexploration", pages: 573 - 608, XP055126066
- See references of WO 2012006285A1

Designated contracting state (EPC)

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