

Antonios N. Dadaliaris

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RESEARCH INTERESTS:

My research activity focuses primarily on the Floorplanning & Placement of Integrated Circuits and secondarily to the broader field of IC Physical Design.

More specifically:

- VLSI Placement Algorithms
- Visualization and Analysis of Placed ICs
- Physical Design EDA/CAD Tools

EDUCATION:

Ph.D., Computer & Communications Engineering Department, University of Thessaly.....**2012**
M.Sc., Computer & Communications Engineering Department, University of Thessaly.....**2008**
B.Sc., Computer & Communications Engineering Department, University of Thessaly.....**2005**

ADMINISTRATIVE EXPERIENCE:

2019 – today

Director, Electronics and Digital Systems Laboratory (ElDiS), Computer Science & Telecommunications Department, University of Thessaly

2022– today

Scientific Director, Internship Program for Undergraduate Students, Computer Science & Telecommunications Department, University of Thessaly

PUBLICATIONS (JOURNALS):

- Dadaliaris, A., Kranas, G., Oikonomou, P., Floros, G. and Dossis, M., 2022. Exploiting net connectivity in legalization and detailed placement scenarios. *Information*, 13(5), p.212.
- Oikonomou, P., Dadaliaris, A.N., Kolomvatsos, K., Loukopoulos, T., Kakarountas, A. and Stamoulis, G.I., 2018. Improved Parallel Legalization Schemes for Standard Cell Placement with Obstacles. *Technologies*, 7(1), p.3.
- Koziri, M., Papadopoulos, P.K., Tziritas, N., Dadaliaris, A.N., Loukopoulos, T. and Stamoulis, G.I., 2017. On planning the adoption of new video standards in social media networks: a general framework and its application to HEVC. *Social Network Analysis and Mining*, 7, pp.1-16.
- Dadaliaris, A.N., Oikonomou, P., Koziri, M.G., Nerantzaki, E., Loukopoulos, T. and Stamoulis, G.I., 2017. A connectivity-based legalization scheme for standard cell placement. *Circuits and Systems*, 8(8), pp.191-201.
- Dadaliaris, A.N., Oikonomou, P., Koziri, M.G., Nerantzaki, E., Hatzaras, Y., Garyfallou, D., Loukopoulos, T. and Stamoulis, G.I., 2017. Heuristics to augment the performance of Tetris legalization: Making a fast but inferior method competitive. *Journal of Low Power Electronics*, 13(2), pp.220-230.
- Zygouris, N.C., Vlachos, F., Dadaliaris, A.N., Oikonomou, P., Stamoulis, G.I., Vavougiou, D., Nerantzaki, E. and Striftou, A., 2017. A neuropsychological approach of developmental dyscalculia and a screening test via a web application. *International Journal of Engineering Pedagogy (iJEP)*, 7(4), pp.51-65.

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PUBLICATIONS (CONFERENCE PAPERS):

- Arvanitakis, I., Kranas, G.K., Dossis, M., Kakarountas, A. and Dadaliaris, A.N., 2023, November. Assessing Swapping Policies as a Detailed Placement Approach. In 2023 8th South-East Europe Design Automation, Computer Engineering, Computer Networks and Social Media Conference (SEEDA-CECNSM) (pp. 1-6). IEEE.
- Kranas, G.K., Dadaliaris, A.N., Oikonomou, P. and Dossis, M., 2022, September. Scavenging PyPi for VLSI Packages. In 2022 7th South-East Europe Design Automation, Computer Engineering, Computer Networks and Social Media Conference (SEEDA-CECNSM) (pp. 1-6). IEEE.
- Bountas, D., Evmorfopoulos, N., Dimitriou, G., Dadaliaris, A., Floros, G. and Stamoulis, G., 2021, November. Statistical Estimation of Leakage Power Bounds in CMOS VLSI Circuits. In Proceedings of the 25th Pan-Hellenic Conference on Informatics (pp. 312-317).
- Dadaliaris, A., Tragoudaras, A., Kranas, G., Dossis, M. and Dimitriou, G., 2021, November. Juxtaposing Vivado Design Flows in Batch Mode. In Proceedings of the 25th Pan-Hellenic Conference on Informatics (pp. 134-137).
- Angelou, A., Dadaliaris, A., Dossis, M. and Dimitriou, G., 2021, November. Branchless Code Generation for Modern Processor Architectures. In Proceedings of the 25th Pan-Hellenic Conference on Informatics (pp. 300-305).
- Kranas, G.K., Dadaliaris, A.N., Oikonomou, P., Floros, G. and Dossis, M., 2021, September. Redesign, Extensibility & Evaluation of a Placement Utilities Toolset. In 2021 6th South-East Europe Design Automation, Computer Engineering, Computer Networks and Social Media Conference (SEEDA-CECNSM) (pp. 1-5). IEEE.
- Dadaliaris, A.N., Kranas, G.K., Oikonomou, P. and Dossis, M., 2021, September. Variations on a Connectivity-based Legalizer for Standard Cell Design. In 2021 6th South-East Europe Design Automation, Computer Engineering, Computer Networks and Social Media Conference (SEEDA-CECNSM) (pp. 1-5). IEEE.
- Zygouris, N.C., Botsoglou, K., Dadaliaris, A.N., Dimitriou, G., Trontsios, D., Stamoulis, G.I. and Vavougiou, D., 2021. Screening Executive Functions of Preschool Children via a Web Application. In Educating Engineers for Future Industrial Revolutions: Proceedings of the 23rd International Conference on Interactive Collaborative Learning (ICL2020), Volume 1 23 (pp. 141-150). Springer International Publishing.
- Dimitriadis, V., Oikonomou, P., Papadopoulos, P.K., Panagou, N., Dadaliaris, A.N. and Loukopoulos, T., 2020, October. GeoMakeIt!: A Platform for Developing Location Based Games. In 2020 15th International Workshop on Semantic and Social Media Adaptation and Personalization (SMA) (pp. 1-6). IEEE.
- Kranas, G.K., Kouskouras, T.G., Dimitriadis, V., Dossis, M., Oikonomou, P. and Dadaliaris, A.N., 2020, September. A novel genetic algorithm for i/o pad planning retaining former cell positions. In 2020 5th South-East Europe Design Automation, Computer Engineering, Computer Networks and Social Media Conference (SEEDA-CECNSM) (pp. 1-5). IEEE.
- Zygouris, N.C., Vlachos, F., Dadaliaris, A.N., Karagos, E., Oikonomou, P., Striftou, A., Vavougiou, D. and Stamoulis, G.I., 2020. New tasks for a dyslexia screening web application. In The Challenges of the Digital Transformation in Education: Proceedings of the 21st International Conference on Interactive Collaborative Learning (ICL2018)-Volume 1 (pp. 263-271). Springer International Publishing.
- Kranas, G., Tsalamagkakis, G.C., Oikonomou, P. and Dadaliaris, A.N., 2018, September. Pypu: Python-based placement utilities toolset. In 2018 South-Eastern European Design Automation, Computer Engineering, Computer Networks and Society Media Conference (SEEDA_CECNSM) (pp. 1-4). IEEE.
- Oikonomou, P., Koziri, M.G., Tziritas, N., Dadaliaris, A.N., Loukopoulos, T., Stamoulis, G.I. and Khan, S.U., 2018, July. Scheduling video transcoding jobs in the cloud. In 2018 IEEE International Conference on Internet of Things (iThings) and IEEE Green Computing and Communications (GreenCom) and IEEE Cyber, Physical and Social Computing (CPSCom) and IEEE Smart Data (SmartData) (pp. 442-449). IEEE.
- Oikonomou, P., Dadaliaris, A.N., Loukopoulos, T., Kakarountas, A. and Stamoulis, G.I., 2018, May. A Tetris-based legalization heuristic for standard cell placement with obstacles. In 2018 7th International Conference on Modern Circuits and Systems Technologies (MOCAST) (pp. 1-4). IEEE.
- Mantos, K., Koungalis, N., Demesiotis, G., Oikonomou, P., Dadaliaris, A.N. and Stamoulis, G.I., 2017, September. WEVIAN: A Web-based Placement Visualizer/Analyzer. In Proceedings of the 21st Pan-Hellenic Conference on Informatics (pp. 1-6).

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PUBLICATIONS (CONFERENCE PAPERS):

- Dadaliaris, A.N., Oikonomou, P., Koziri, M.G., Hatzaras, Y. and Stamoulis, G.I., 2017, September. SCIZER: A scalable placement visualizer/analyzer. In 2017 South Eastern European Design Automation, Computer Engineering, Computer Networks and Social Media Conference (SEEDA-CECNSM) (pp. 1-4). IEEE.
- Oikonomou, P., Koziri, M.G., Dadaliaris, A.N., Loukopoulos, T. and Stamoulis, G.I., 2017, May. Domocus: Lock free parallel legalization in standard cell placement. In 2017 6th International Conference on Modern Circuits and Systems Technologies (MOCASST) (pp. 1-4). IEEE.
- Zygouris, N.C., Stamoulis, G.I., Vlachos, F., Vavougiou, D., Dadaliaris, A.N., Nerantzaki, E., Oikonomou, P. and Striftou, A., 2017, April. Screening for Disorders of Mathematics via a web application. In 2017 IEEE Global Engineering Education Conference (EDUCON) (pp. 502-507). IEEE.
- Zygouris, N.C., Striftou, A., Dadaliaris, A.N., Stamoulis, G.I., Xenakis, A.C. and Vavougiou, D., 2017, April. The use of LEGO mindstorms in elementary schools. In 2017 IEEE Global Engineering Education Conference (EDUCON) (pp. 514-516). IEEE.
- Zygouris, N.C., Vlachos, F., Dadaliaris, A.N., Oikonomou, P., Stamoulis, G.I., Vavougiou, D., Nerantzaki, E. and Striftou, A., 2017. The implementation of a web application for screening children with dyslexia. In Interactive Collaborative Learning: Proceedings of the 19th ICL Conference-Volume 2 (pp. 415-423). Springer International Publishing.
- Koziri, M., Papadopoulou, P.K., Tziritas, N., Dadaliaris, A.N., Loukopoulos, T., Khan, S.U. and Xu, C.Z., 2016, December. Adaptive tile parallelization for fast video encoding in HEVC. In 2016 IEEE International Conference on Internet of Things (iThings) and IEEE Green Computing and Communications (GreenCom) and IEEE Cyber, Physical and Social Computing (CPSCom) and IEEE Smart Data (SmartData) (pp. 738-743). IEEE.
- Dadaliaris, A.N., Nerantzaki, E., Koziri, M.G., Oikonomou, P., Loukopoulos, T. and Stamoulis, G.I., 2016, November. Performance evaluation of Tetris-based legalization heuristics. In Proceedings of the 20th Pan-Hellenic Conference on Informatics (pp. 1-6).
- Koziri, M., Papadopoulou, P., Tziritas, N., Dadaliaris, A.N., Loukopoulos, T. and Stamoulis, G.I., 2016, October. A framework for scheduling the encoding of multiple smart user videos. In 2016 11th International Workshop on Semantic and Social Media Adaptation and Personalization (SMAP) (pp. 29-34). IEEE.
- Dadaliaris, A.N., Nerantzaki, E., Oikonomou, P., Hatzaras, Y., Troumpoulou, A.O., Arvanitakis, I. and Stamoulis, G.I., 2016, September. Enhanced Tetris legalization. In Proceedings of the SouthEast European Design Automation, Computer Engineering, Computer Networks and Social Media Conference (pp. 32-35).
- Oikonomou, P., Koziri, M.G., Dadaliaris, A.N., Hatzaras, Y., Nerantzaki, E. and Stamoulis, G.I., 2016, September. Heuristics for Iterative Detailed Standard Cell Placement. In Proceedings of the SouthEast European Design Automation, Computer Engineering, Computer Networks and Social Media Conference (pp. 19-24).
- Koziri, M., Papadopoulou, P., Tziritas, N., Dadaliaris, A.N., Loukopoulos, T. and Khan, S.U., 2016, September. Slice-based parallelization in HEVC encoding: realizing the potential through efficient load balancing. In 2016 IEEE 18th International Workshop on Multimedia Signal Processing (MMSp) (pp. 1-6). IEEE.
- Oikonomou, P., Loukopoulos, T., Dadaliaris, A.N., Koziri, M.G. and Stamoulis, G.I., 2015, October. On formulating and tackling integrated circuit placement as a scheduling problem. In Proceedings of the 19th Panhellenic Conference on Informatics (pp. 86-91).
- Zygouris, N.C., Vlachos, F., Dadaliaris, A.N., Stamoulis, G.I., Vavougiou, D., Nerantzaki, E. and Striftou, A., 2015, September. Learning difficulties screening web application. In 2015 International Conference on Interactive Collaborative Learning (ICL) (pp. 650-654). IEEE.
- Koziri, M.G., Dadaliaris, A.N., Stamoulis, G.I. and Katsavounidis, I.X., 2007, July. A novel low-power motion estimation design for H. 264. In 2007 IEEE International Conf. on Application-specific Systems, Architectures and Processors (ASAP) (pp. 247-252). IEEE.
- Ioannidis, S.K., Ntioudis, D., Antoniadis, C., Dadaliaris, A.N., Tsompanopoulou, P., Evmorfopoulos, N.E. and Stamoulis, G.I., 2000. Optimization of an Integrated Circuit Placement Algorithm in a Parallel Environment. In International Conference on Computer Science, Computer Engineering, and Social Media (CSCESM2014), Thessaloniki, Greece. 0 (Vol. 500, No. 1000, p. 1500).