

## عنوان مقاله:

SOPC-Based Particle Swarm Optimization

## محل انتشار:

دوازدهمین کنفرانس سالانه انجمن کامپیوتر ایران (سال: 1385)

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## نویسندگان:

Amin Farmahini-Farahani - School of Electrical and Computer Engineering, University of Tehran, Tehran, Iran

Sied Mehdi Fakhraie - School of Electrical and Computer Engineering, University of Tehran, Tehran, Iran

## خلاصه مقاله:

The complexity of the modern chips is rising and fundamental changes in systems design are necessary. System-on-a-Chip (SOC) concept is bringing a major revolution in the design of integrated circuits, due to the flexibility it provides and complexity it caters to. Particle Swarm Optimization (PSO) is a new powerful function optimizer that is used successfully to solve problems in numerous fields. A major downside of PSO and many evolutionary algorithms is that they have essential difficulties in their huge computation time due to sequential execution in software implementation. By implementing a modified particle swarm optimizer in hardware, many of the computations can be performed simultaneously, significantly reducing computation time compared to software. In this paper, a SOPC-based PSO framework is proposed. The obtained results indicate a speedup of up to 40 times in the elapsed computation time

## کلمات کلیدی:

Hardware Implementation, Particle Swarm Optimization, System-on-a-Chip

## لینک ثابت مقاله در پایگاه سیویلیکا:

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