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@ARTICLE{springerlink:10.1007/s10766-005-7301-0,  
  author = {Azevedo, Rodolfo and Rigo, Sandro and Bartholomeu,  
    Marcus and Araujo,  
      Guido and Araujo, Cristiano and Barros, Edna},  
  title = {The ArchC Architecture Description Language and Tools},  
  journal = {International Journal of Parallel Programming},  
  year = {2005},  
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  note = {10.1007/s10766-005-7301-0},  
  abstract = {This paper presents an architecture description  
language (ADL) called  
  ArchC, which is an open-source SystemC-based language that  
is specialized  
  for processor architecture description. Its main goal is to  
provide  
  enough information, at the right level of abstraction, in  
order to  
  allow users to explore and verify new architectures, by  
automatically  
  generating software tools like simulators and co-  
verification interfaces.  
  ArchC's key features are a storage-based co-verification  
mechanism  
  that automatically checks the consistency of a refined  
ArchC model  
  against a reference (functional) description, memory  
hierarchy modeling  
  capability, the possibility of integration with other  
SystemC IPs  
  and the automatic generation of high-level SystemC  
simulators and  
  assemblers. We have used ArchC to synthesize both  
functional and  
  cycle-based simulators for the MIPS and Intel 8051  
processors, as  
  well as functional models of architectures like SPARC V8,  
TMS320C62x,  
  XScale and PowerPC.},  
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