

Chapter 9

Conclusion

Continuous technology scaling will soon enable multicore designs with thousands of communicating IP blocks on a single chip. Successful design of systems at this scale will depend critically on truly scalable communication architectures. The promising solution to date is given by the structured communication via the NoC approach.

In this book, we have discussed a few fundamental issues related to the modeling, analysis and optimization of NoC communication architectures, and presented novel design methodologies for low-power NoC design. Formal models are instrumental not only to understand and analyze the behavior of NoCs but also to design optimal systems. The techniques presented herein, as well as the literature review, aim at providing a deep understanding of this field and prepare readers for further research.