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Sommario/riassunto	This book constitutes the refereed proceedings of the 4th International Conference on Next Generation Arithmetic, CoNGA 2023, held in Singapore, during March 1-2, 2023. The 11 full papers in this book were carefully reviewed and selected from 16 submissions. They were organized in topical sections as follows: Lossless FFTs Using Posit Arithmetic, PLAUs: Posit Logarithmic Approximate Units to Implement Low-Cost Operations with Real Numbers.