1. Record Nr. UNINA9910136807803321

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| Autore | Moriguchi Yusuke |
| Titolo | Development of executive function during childhood [[electronic resource] /] / Yusuke Moriguchi, Philip D. Zelazo and Nicolas Chevalier |
| Pubbl/distr/stampa | Frontiers Media SA, 2016<br>France : , : Frontiers Media SA, , 2014 |
| ISBN | 9782889198009 (ebook) |
| Descrizione fisica | 1 online resource (457 pages) : illustrations |
| Collana | Frontiers Research Topics |
| Soggetti | Executive functions (Neuropsychology)<br>Child development |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Nota di bibliografia | Includes bibliographical references. |
| Sommario/riassunto | Executive function refers to the goal-oriented regulation of one's own thoughts, actions, and emotions. Its importance is attested by its contribution to the development of other cognitive skills (e.g., theory of mind), social abilities (e.g., peer interactions), and academic achievement (e.g., mathematics), and by the consequences of deficits in executive function (which are observed in wide range of developmental disorders, such as attention-deficit hyperactivity disorder and autism). Over the last decade, there have been growing interest in the development of executive function, and an expanding body of research has shown that executive function develops rapidly during the preschool years, with adult-level performance being achieved during adolescence or later. This recent work, together with experimental research showing the effects of interventions targeting executive function, has yielded important insights into the neurocognitive processes underlying executive function. Given the complexity of the construct of executive function, however, and the multiplicity of underlying processes, there are often inconsistencies in the way that executive function is defined and studied. This inconsistency has hampered communication among researchers from various fields. This Research Topic is intended to bridge this gap and provide an |

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| | opportunity for researchers from different perspectives to discuss recent advances in understanding childhood executive function. Researchers using various methods, including, behavioral experiments, neuroimaging, eye-tracking, computer simulation, observational methods, and questionnaires, are encouraged to contribute original empirical research. In addition to original empirical articles, theoretical reviews and opinions/perspective articles on promising future directions are welcome. We hope that researchers from different areas, such as developmental psychology, educational psychology, experimental psychology, neuropsychology, neuroscience, psychiatry, computational science, etc., will be represented in the Research Topic. |

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| Record Nr. | UNINA9910947533803321 |
| Autore | Cuomo Daniele |
| Titolo | Architectures and Circuits for Distributed Quantum Computing / / by Daniele Cuomo |
| Pubbl/distr/stampa | Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2024 |
| ISBN | 9783031738081<br>303173808X |
| Edizione | [1st ed. 2024.] |
| Descrizione fisica | 1 online resource (119 pages) |
| Collana | Springer Theses, Recognizing Outstanding Ph.D. Research, , 2190-5061 |
| Disciplina | 006.3843<br>530.12 |
| Soggetti | Quantum computers<br>Electronic circuits<br>Logic design<br>Quantum Computing<br>Electronic Circuits and Systems<br>Logic Design |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Nota di contenuto | Introduction -- Computing with Quantum Circuits -- Entanglement-based Computation -- Essentials on Quantum Noise -- System Design |

Characterization and Evaluation.

Sommario/riassunto

This thesis treats networks providing quantum computation based on distributed paradigms. Compared to architectures relying on one processor, a network promises to be more scalable and less fault-prone. Developing a distributed system able to provide practical quantum computation comes with numerous challenges, each of which need to be faced with careful analysis in order to create a seamless integration of multiple engineered components. In accordance with hardware technologies, currently under development worldwide, telegates represent the fundamental inter-processor operations. Each telegate consists of several tasks: i) entanglement generation and distribution, ii) local operations, and iii) classical communications. Entanglement generation and distribution is an expensive resource, as it is time-consuming. The primary contribution of this thesis lies in the extensive analysis of some complex scenarios of general interest. We propose numerical models that help to identifythe interdependence between computation and communication. With the support of some of the best tools for reasoning -- i.e. network optimization, circuit manipulation, group theory and ZX-calculus -- we lay out new perspectives on the way a distributed quantum computing system should be developed.