What it Takes to Talk - Exploring Developmental Cognitive Linguistics

This book puts cognition back at the heart of the language learning process and challenges the idea that language acquisition can be meaningfully understood as a purely linguistic phenomenon. For each domain placed under the spotlight - memory, attention, inhibition, categorisation, analogy and social cognition - the book examines how they shape the development of sounds, words and grammar. The unfolding cognitive and social world of the child interacts with, constrains, and predicts language use at its deepest levels. The conclusion is that language is special, not because it is an encapsulated module separate from the rest of cognition, but because of the forms it can take rather than the parts it is made of, and because it could be nature’s finest example of cognitive recycling and reuse.

The Embodied Brain: Computational Mechanisms of Integrated Sensorimotor Interactions with a Dynamic Environment

The Nicomachean Ethics

Benchmarking, Measuring, and Optimizing - Second BenchCouncil International Symposium, Bench 2019, Denver, CO, USA, November 14–16, 2019, Revised Selected Papers

This book constitutes the refereed proceedings of the Second International Symposium on Benchmarking, Measuring, and Optimization, Bench 2019, held in Denver, CO, USA, in November 2019. The 20 full papers and 11 short papers presented were carefully reviewed and selected from 79 submissions. The papers are organized in topical sections named: Best Paper Session; AI Challenges on Cambircon using AIBenc; AI Challenges on RISC-V using AIBench; AI Challenges on X86 using AIBench; AI Challenges on 3D Face Recognition using AIBench; Benchmark; AI and Edge; Big Data; Datacenter; Performance Analysis; Scientific Computing.

Expo '77

Biotechnology and Production of Anti-Cancer Compounds

This book discusses cancers and the resurgence of public interest in plant-based and herbal drugs. It also describes ways of obtaining anti-cancer drugs from plants and improving their production using biotechnological techniques. It presents methods such as cell culture, shoot and root culture, hairy root culture, purification of plant raw materials, genetic engineering, optimization of culture conditions as well as metabolic engineering with examples of successes like taxol, shikonin, ingenol mebutate and podophylotoxin. In addition, it describes the applications and limitations of large-scale production of anti-cancer compounds using

**Progresses in Artificial Intelligence and Neural Systems**

This book provides an overview of the current advances in artificial intelligence and neural nets. Artificial intelligence (AI) methods have shown great capabilities in modelling, prediction and recognition tasks supporting human–machine interaction. At the same time, the issue of emotion has gained increasing attention due to its relevance in achieving human-like interaction with machines. The real challenge is taking advantage of the emotional characterization of humans’ interactions to make computers interfacing with them emotionally and socially credible. The book assesses how and to what extent current sophisticated computational intelligence tools might support the multidisciplinary research on the characterization of appropriate system reactions to human emotions and expressions in interactive scenarios. Discussing the latest recent research trends, innovative approaches and future challenges in AI from interdisciplinary perspectives, it is a valuable resource for researchers and practitioners in academia and industry.

**Public Examinations Examined**

High-stakes public examinations exert a dominant influence in most education systems. They affect both teacher and student behavior, especially at the middle and upper levels of secondary education. The content of past examinations tends to dictate what is taught and how it is taught and, more important, what is learned and how it is learned. By changing aspects of these examinations, especially their content and format, education systems can have a strong positive impact on teacher behavior and student learning, help raise student achievement levels, and better prepare students for tertiary-level education and for employment. Examination agencies, many of which have followed the same procedures over decades, can learn from the successes and failures of other systems. This book addresses current issues related to the development, administration, scoring, and usage of these high-stakes public examinations, identifying key issues and problems related to examinations in many emerging market economies as well as in advanced economies. The book’s primary audience consists of public examination officials on national, regional, and state examination boards, but the book should also be of interest to senior education policy makers concerned with certification and learning achievement standards, to academics and researchers interested in educational assessment, to governmental and education agencies responsible for student selection, and to professionals at development organizations. “This extremely well-written and comprehensive book offers a timely review of the diversity of public examination practices worldwide; of the tensions between examinations and learning; and of the technical expertise involved in the creation of valid, reliable, and fair assessments. It reminds us that as "the diploma disease" takes hold with an ever-greater intensity at every stage of education worldwide, and the commercial business of testing flourishes, those concerned with educational quality and meaningful learning must be on guard to prevent the assessment tail wagging the educational dog." Angela W. Little, Professor Emerita, Institute of Education, University College London “This book is very well structured and written and draws on the authors’ remarkable global knowledge across countries
and histories. It will be a great asset both to administrators responsible for examinations and to academics and other professionals who seek to understand the nature and impact of examinations of different types and in different settings.†? Mark Bray, UNESCO Chair Professor of Comparative Education, University of Hong Kong; and former Director, UNESCO International Institute for Educational Planning “I am sure that Public Examinations Examined, which thoroughly analyzes the practice of public examinations in different countries and makes profound and well-grounded conclusions, will arouse very great interest and will serve to further improve public examinations.†? Victor Bolotov, Distinguished Professor, Higher School of Economics, National Research University, Moscow; member, Russian Academy of Education; and former Deputy Minister of Education, Russian Federation

**Data-Based Methods for Materials Design and Discovery - Basic Ideas and General Methods**

Machine learning methods are changing the way we design and discover new materials. This book provides an overview of approaches successfully used in addressing materials problems (alloys, ferroelectrics, dielectrics) with a focus on probabilistic methods, such as Gaussian processes, to accurately estimate density functions. The authors, who have extensive experience in this interdisciplinary field, discuss generalizations where more than one competing material property is involved or data with differing degrees of precision/costs or fidelity/expense needs to be considered.

**America's Lab Report - Investigations in High School Science**

Laboratory experiences as a part of most U.S. high school science curricula have been taken for granted for decades, but they have rarely been carefully examined. What do they contribute to science learning? What can they contribute to science learning? What is the current status of labs in our nation’s high schools as a context for learning science? This book looks at a range of questions about how laboratory experiences fit into U.S. high schools: What is effective laboratory teaching? What does research tell us about learning in high school science labs? How should student learning in laboratory experiences be assessed? Do all students have access to laboratory experiences? What changes need to be made to improve laboratory experiences for high school students? How can school organization contribute to effective laboratory teaching? With increased attention to the U.S. education system and student outcomes, no part of the high school curriculum should escape scrutiny. This timely book investigates factors that influence a high school laboratory experience, looking closely at what currently takes place and what the goals of those experiences are and should be. Science educators, school administrators, policy makers, and parents will all benefit from a better understanding of the need for laboratory experiences to be an integral part of the science curriculum and how that can be accomplished.