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Nota di contenuto	Accessibility of Non-Verbal Communication: Making Spatial Information Accessible to People with Disabilities -- Accessibility of Non-Verbal Communication: Making Spatial Information Accessible to People with Disabilities: Introduction to the Special Thematic Session -- Accessible Multimodal Tool Support for Brainstorming Meetings -- Pointing Gesture Based User Interaction of Tool Supported Brainstorming

Meetings -- Communication Device for People with Cerebral Palsy Assisted with Head Movements -- Enabling Real-time 3D Display of Lifelike Fingerspelling in a Web App -- Cognitive Disabilities and Accessibility – Pushing the Boundaries of Inclusion Using Digital Technologies and Accessible eLearning Environments -- Cognitive Disabilities and Accessibility - Pushing the Boundaries of Inclusion Using Digital Technologies and Accessible eLearning Environments: Introduction to the Special Thematic Session -- Adaptive User Interfaces for People with Cognitive Disabilities within the Easy Reading Framework -- Automatic Assistance to Cognitive Disabled Web Users via Reinforcement Learning on the Browser -- Developing of Kid Can Write as Assistive Technology for Students with Learning Disabilities -- Improving Fitness Levels of Individuals with Autism Spectrum Disorder: A Preliminary Evaluation of Real-Time Interactive Heart Rate Visualization to Motivate Engagement in Physical Activity -- Introduction of Compensatory Technology in Vocational Rehabilitation: A Practice Study about the Value of Technology and the Values that Shape these Practices -- Investigating Usability and Engagement in a Money Management Application for Users with Intellectual Disability -- Towards Modeling of Interpersonal Proximity Using Head-Mounted Camera for Children with ASD -- \ADAPEI-TRANSPORT": A GPS Based Mobile App for Learning Paths and Improving Autonomy for Young Adults Having Intellectual Disabilities to Take Public Transport -- ICT To Support Inclusive Education – Universal Learning Design (ULD) -- ICT to Support Inclusive Education: Introduction to the Special Thematic Session -- Information Technology in the Musical and Speech Development of Mentally Retarded Children in an Orphanage -- Promoting Creative Computer-Based Music Education and Composition for Individuals with Autism Spectrum Disorders: The Terpsichore Software Music Interface -- WebMoti -- Development of a Learning-Support System for Science Using Collaboration and Body Movement for Hearing-Impaired Children: Learning Support for Plant Germination and Growth Conditions -- Promoting Inclusive Open Education: A Holistic Approach Towards a Novel Accessible OER Recommender System -- Hearing Systems and Accessories for People with Hearing Loss -- Hearing Systems and Accessories for People with Hearing Loss: Introduction to the Special Thematic Session -- A Study Examining a Real-Time Sign Language-to-Text Interpretation System Using Crowdsourcing -- Readability of Punctuation in Automatic Subtitles -- Analysis of the Gaze Behavior of Deaf and Hard-of-Hearing Students During a Captioned Lecture -- Survey for People with Visual Impairment or Hearing Loss on Using Museums in Japan -- Mobile Health and Mobile Rehabilitation for People with Disabilities: Current State, Challenges and Opportunities -- Mobile Health and Mobile Rehabilitation for People with Disabilities: Current State, Challenges and Opportunities. Introduction to the Special Thematic Session -- A Mobile Diary App to Support Rehabilitation at Home for Elderly with COPD: A Preliminary Feasibility Study -- A User Study About Designing a Mobile App for Motivating Multiple Sclerosis Patients for Self-Rehabilitation -- Accelerometer-Based Machine Learning Categorization of Body Position in Adult Populations -- Survey of Rehabilitation Clinicians in the United States: Barriers and Critical Use-Cases for mRehab Adoption -- SwapMyMood: User-Centered Design and Development of a Mobile App to Support Executive Function -- Survey ofUser Needs: Mobile Apps for mHealth and People with Disabilities -- Innovation and Implementation in the Area of Independent Mobility through Digital Technologies -- Implementation and Innovation in the Area of Independent Mobility through Digital

Technologies: Introduction to the Special Thematic Session -- AccessibleMaps: Addressing Gaps in Maps for People with Visual and Mobility Impairments -- AccessKB: Linked Open Data for Accessible Travel -- Analysis of Indoor Maps Accounting the Needs of People with Impairments -- Considering Time-Critical Barriers in Indoor Routing for People with Disabilities -- 3D Audio Navigation - Feasibility and Requirements for Older Adults -- How to Improve Interaction with a Text Input System -- Text Input with Foot Gestures Using the Myo Armband -- Application of Gesture Interface to Transcription for People with Motor Dysfunction -- Tecla Sound: Combining Single Switch and Speech Access -- Increasing the Efficiency of Text Input in the 8pen Method -- SlideKey: Impact of In-depth Previews for a Predictive Text Entry Method -- Literacy Toy for Enhancement Phonological Awareness: A Longitudinal Study -- Human Movement Analysis for the Design and Evaluation of Interactive Systems and Assistive Devices -- Human Movement Analysis for the Design and Evaluation of Interactive systems and Assistive Devices: Introduction to the Special Thematic Session -- Alzheimer's Garden: Understanding Social Behaviors of Patients with Dementia to Improve Their Quality of Life -- Predicting Wheelchair Stability while Crossing a Curb Using RGB-Depth Vision -- Gait Patterns Monitoring Using Instrumented Forearm Crutches -- Personalized Arm Gesture Recognition Using the HMM-Based Signature Verification Engine -- Digital Design of Aids for Activities of Daily Living -- A Multimodal Communication Aid for Persons with Cerebral Palsy Using Head Movement and Speech Recognition -- Experimental Evaluation of Three Interaction Channels for Accessible Digital MusicalInstruments -- iFeedingBot: A Vision-Based Feeding Robotic Arm Prototype Based on Open Source Solution -- Development of Smart-Phone Interfaces for Tongue Controlled Assistive Devices -- Application of Multi Materials Additive Manufacturing Technique In The Design And Manufacturing of Hand Orthoses -- Service and Care Provision in Assistive Environments -- Designing Nostalgic Tangible User Interface Application for Elderly People -- Assessment of Economic Value of Assistive Technologies through Quality-Adjusted Work-Life Years (QAWLY).

Sommario/riassunto

The two-volume set LNCS 12376 and 12377 constitutes the refereed proceedings of the 17th International Conference on Computers Helping People with Special Needs, ICCHP 2020, held in Lecco, Italy, in September 2020. The conference was held virtually due to the COVID-19 pandemic. The 104 papers presented were carefully reviewed and selected from 206 submissions. Included also are 13 introductions. The papers are organized in the following topical sections: Part I: user centred design and user participation in inclusive R&D; artificial intelligence, accessible and assistive technologies; XR accessibility – learning from the past, addressing real user needs and the technical architecture for inclusive immersive environments; serious and fun games; large-scale web accessibility observatories; accessible and inclusive digital publishing; AT and accessibility for blind and low vision users; Art Karshmer lectures in access to mathematics, science and engineering; tactile graphics and models for blind people and recognition of shapes by touch; and environmental sensing technologies for visual impairment Part II: accessibility of non-verbal communication: making spatial information accessible to people with disabilities; cognitive disabilities and accessibility – pushing the boundaries of inclusion using digital technologies and accessible eLearning environments; ICT to support inclusive education – universal learning design (ULD); hearing systems and accessories for people with hearing loss; mobile health and mobile rehabilitation for people with disabilities: current state, challenges and opportunities; innovation and

implementation in the area of independent mobility through digital technologies; how to improve interaction with a text input system; human movement analysis for the design and evaluation of interactive systems and assistive devices; and service and care provision in assistive environments 11 chapters are available open access under a Creative Commons Attribution 4.0 International License via link. springer.com.