Re-Mapping the Numerical Brain.

Fact Sheet

Project Information

Re-MAPMATH

Grant agreement ID: 793071

Project website

DOI
10.3030/793071

Project closed

EC signature date
19 February 2018

Start date
1 June 2018

End date
1 July 2020

Funded under
EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions

Total cost
€ 168 277,20

EU contribution
€ 168 277,20

Coordinated by
UNIVERSITA DEGLI STUDI DI PADOVA
Italy

Objective

Little is known on how the math system overcomes selective damage to parts of its brain bases. Indeed, brain adaptation has been observed in other domains, such as language: the loss of key language-related areas very often leads to brain reconfiguration for an ultimate successful behavior. Functional redundancies and remapping become visible in brain tumor patients for whom the slow growth of a tumor allows for functional reorganization. Re-MAPMATH aims the tracking of plastic brain changes behind math functions before and after surgery in brain tumor patients. For this, we will use neuroimaging techniques that allow for an optimal spatiotemporal resolution, entailing an advanced approach in the field of math

cognition. The project main objectives are: (1) to precisely describe the brain bases for different math processes in the normal population, including functional activations and functional connectivity (2) to track how these default activations, functional and structural connectivity are modified by the growth of a tumor and (3) by the resection of the tumor, measuring three months after surgery. Finally (4), we aim the detection of commonalities across patients with the goal of describing redundancies and alternative pathways that allow a successful numerical behavior. In turn, uncovering these alternative neurofunctional systems can ultimately explain compensation in math disorders, as well as provide with useful information for the rehabilitation of essential math functions after surgery.

Fields of science (EuroSciVoc)

medical and health sciences > clinical medicine > **surgery**

medical and health sciences > clinical medicine > **physiotherapy**

Programme(s)

H2020-EU.1.3. - EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions MAIN PROGRAMME

H2020-EU.1.3.2. - Nurturing excellence by means of cross-border and cross-sector mobility

Topic(s)

MSCA-IF-2017 - Individual Fellowships

Call for proposal

H2020-MSCA-IF-2017

See other projects for this call

Funding Scheme

MSCA-IF-EF-ST - Standard EF

Coordinator

UNIVERSITA DEGLI STUDI DI PADOVA

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Region

Nord-Est > Veneto > Padova

Activity type

Higher or Secondary Education Establishments

Links

Contact the organisation Website
Participation in EU R&I programmes
HORIZON collaboration network

Last update: 17 August 2022

Permalink: https://cordis.europa.eu/project/id/793071