



How action preparation shapes what we perceive: Spatiotemporal visual processing in the context of goal-directed eye and hand movements

Fact Sheet

Project Information

PremotorPerception

Grant agreement ID: 898520

[Project website](#)

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[10.3030/898520](https://doi.org/10.3030/898520)

Project closed

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17 April 2020

Start date	End date
1 March 2021	29 February 2024

Funded under
EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions

Total cost
€ 246 669,12

EU contribution
€ 246 669,12

Coordinated by
HUMBOLDT-UNIVERSITAET ZU
BERLIN
 Germany

Project description

A closer look at goal-directed eye and hand movements

Humans continuously make saccadic eye movements to see their surroundings with the high precision of the fovea. Each saccade shifts the image on the retinas, such that the visual system needs to integrate blurry peripheral views of objects with their

high-resolution equivalents once brought into the fovea. Understanding how this seamless integration is achieved is critical for theories of human perception. The EU-funded project PremotorPerception combines psychophysical protocols that enable a continuous assessment of visual sensitivity throughout the visual field with transcranial magnetic brain stimulation to investigate the role of specific brain areas underlying these modulations. We assess dynamic modulations of visual processing before saccades and goal-directed hand movements that enable continuous perception as the eyes move.

Fields of science (EuroSciVoc)

[social sciences](#) > [psychology](#) > [cognitive psychology](#)



Keywords

[presaccadic and covert attention](#)

[oculomotor preparation](#)

[hand movement programming](#)

[reverse correlation](#)

[transcranial magnetic stimulation \(TMS\)](#)

[orientation gain](#)

[tuning](#)

[spatial frequency processing](#)

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-2019 - Individual Fellowships](#)

Call for proposal

[H2020-MSCA-IF-2019](#)

[See other projects for this call](#)

Funding Scheme

[MSCA-IF - Marie Skłodowska-Curie Individual Fellowships \(IF\)](#)

Coordinator



HUMBOLDT-UNIVERSITAET ZU BERLIN

Net EU contribution

€ 246 669,12

Total cost

€ 246 669,12

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 **Germany** 

Region

Berlin > Berlin > Berlin

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Partners (1)



PARTNER 

NEW YORK UNIVERSITY

 **United States**

Net EU contribution

€ 0,00

Address

70 WASHINGTON SQUARE SOUTH
10003 1526 New York 

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#) 

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[HORIZON collaboration network](#) 

Total cost

No data

Last update: 2 October 2024

Permalink: <https://cordis.europa.eu/project/id/898520>

European Union, 2025