

HORIZON
2020

Integrated Photonic Neural Networks with Arbitrary Capabilities

Fact Sheet

Project Information

NeuroPhotonics

Grant agreement ID: 101032147

[Project website](#)

DOI

[10.3030/101032147](https://doi.org/10.3030/101032147)

Project closed

EC signature date

15 March 2021

Start date

1 October 2021

End date

30 September 2023

Funded under

EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions

Total cost

€ 157 355,52

EU contribution

€ 157 355,52

Coordinated by

KOC UNIVERSITY



Türkiye

Project description

Sophisticated on-chip photonic devices based on neural networks

Complex and multi-functional integrated photonic systems are critical enablers for modern communication systems. With thousands of degrees of freedom, blank-slate algorithms allow further increases in the complexity of photonic systems, but their use is computationally prohibitive for the modelling of relatively large photonic devices with arbitrarily complex functionality. Funded by the Marie Skłodowska-Curie Actions programme, the NeuroPhotonics project will develop universal photonic neural

network architecture and an optimisation framework to demonstrate on-chip photonic devices with previously elusive arbitrary functionalities.

Fields of science (EuroSciVoc)

[social sciences](#) > [economics and business](#) > [business and management](#) > **[innovation management](#)**

[engineering and technology](#) > [electrical engineering, electronic engineering, information engineering](#) > [electronic engineering](#) > **[computer hardware](#)**

[natural sciences](#) > [computer and information sciences](#) > [artificial intelligence](#) > **[computational intelligence](#)**



Keywords

[silicon photonics](#)

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-2020 - Individual Fellowships](#)

Call for proposal

[H2020-MSCA-IF-2020](#)

[See other projects for this call](#)

Funding Scheme

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

Coordinator



KOC UNIVERSITY

Net EU contribution

€ 157 355,52

Total cost

€ 157 355,52

Address

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 **Türkiye** 

Region

İstanbul > İstanbul > İstanbul

Activity type

Higher or Secondary Education Establishments

Links

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

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

[HORIZON collaboration network](#) 

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Permalink: <https://cordis.europa.eu/project/id/101032147>

European Union, 2025