

# Diego Asua

## Education

- 2019 MSc, Neuroscience  
University of Oxford, UK
- 2018 BSc, Biochemistry  
University of the Basque Country, Spain
- 2013 International Baccalaureate Diploma Programme, Spain

## Experience

- 2020-21 *Research associate*  
Neural interface Engineering Lab  
NYU Langone Health, USA
- 2019-20 *Research assistant*  
Sensorimotor control Lab  
Max Planck Institute of Neurobiology, Germany
- 2019 *MSc project student*  
Neural coding and perception Lab  
University of Oxford, UK
- 2016-18 *Intern*  
Molecular cognition Lab  
Basque Center for Biophysics, Spain

## Projects

- High-performance computing for data analysis pipelines, embedded programming in arduino, high-energy laser diffractive optics.
- Developing [Sashimi](#), back-end (FastAPI) and front-end for MongoDB database, terabyte-scale whole-brain activity analysis, I/O hardware & optics for microscopy.
- Training convolutional & spiking neural networks for predictive visual coding, exploring similarities with mammalian visual cortex.
- Feed-forward neural networks & in-silico molecular docking for prediction of protein-drug interaction.

## Skills

Python  
*scientific stack, QT, Pytorch*  
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Continuous integration  
*Git, GitHub actions*  
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Terminal  
*bash, SLURM*  
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Front-end  
*HTML, CSS*  
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Back-end  
*FastAPI*  
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Systems & embedded  
*C, C++*  
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## Science dissemination

### PUBLICATIONS, POSTERS AND CONFERENCE PAPERS

Gil, J., **Asua, D**, Shoham, S., Rinberg, D. *Combining natural and synthetic stimulation to unravel the rules governing sensory processing* (2021) @ 50th Conference of the Neuroscience Society.

**Asua, D**, Fristed E, Singer Y, King AJ, Zenke F, Harper NS. *Predictive binary neural network models of primary visual cortex* (2019) @ Oxford Neuroscience day

**Asua, D**, Bougamra, G, Calleja, M, Morales, M, Knafo, S. *Peptides acting as cognitive enhancers* (2018). [Link](#)

## Awards and achievements

2019	Student support funding from Brasenose College, Oxford
2018	Scholarship of the Spanish Association Against Cancer
2017	Scholarship of the Basque department of education
2013	Award for excellence in studies (Honours), Basque department of education

## Links

[Website](#)   [Github](#)   [Linkedin](#)