

Application BASTRI

Fiches Equipes

MATHNEURO (SR0852YR)

Mathématiques pour les Neurosciences
MATHNEURO (SR0722UR) □ MATHNEURO

Statut: Décision signée

Responsable : Mathieu Desroches

Mots-clés de "A - Thèmes de recherche en Sciences du numérique - 2024" : *Aucun mot-clé.*

Mots-clés de "B - Autres sciences et domaines d'application - 2024" : *Aucun mot-clé.*

Domaine : Santé, biologie et planète numériques
Thème : Neurosciences et médecine numériques

Période : 01/01/2019 -> 31/12/2027
Dates d'évaluation : 15/05/2022

Etablissement(s) de rattachement : CNRS, UCA
Laboratoire(s) partenaire(s) : LJAD (UMR7351)

CRI : Centre Inria d'Université Côte d'Azur
Localisation : Antenne Inria Montpellier - Université Montpellier
Code structure Inria : 041151-1

Numéro RNSR : 201622008G
N° de structure Inria: SR0852YR

Présentation

The research of the MathNeuro team focuses on the applications of multi-scale dynamics to neuroscience. This involves the modelling and analysis of systems with multiple time scales and space scales, as well as stochastic effects. We look both at single-cell models, microcircuits and large networks. In terms of neuroscience, we are mainly interested in questions related to synaptic plasticity and neuronal excitability, in particular in the context of pathological states such as epileptic seizures and neurodegenerative diseases such as Alzheimer's Disease.

Axes de recherche

- Network modelling: from stochastic to deterministic / from discrete to continuous
- Heteroclinic dynamics in neural networks and neural fields
- Complex oscillations with multiple temporal and spatial scales in neural activity
- Mean-field for neuronal networks
- Synaptic modelling

Relations industrielles et internationales

- UK: University of Bristol, University College London, University of Exeter
- Spain: Basque Center for Applied Mathematics (Bilbao), Polytechnic University of Catalunya (Barcelona), University of the Balearic Islands (Palma), University of Sevilla
- Netherlands: VU Amsterdam
- USA: University of California Berkeley, University of Pittsburgh, Salk Institute (San Diego), New York University
- Australia: University of Sydney
- New Zealand: University of Auckland
- Russia: Ioffe Institute (Saint Petersburg)

Contact

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En savoir plus

- Site de l'équipe
- Site sur inria.fr
- Derniers Rapports d'Activité : 2016 , 2017 , 2018 , 2019 , 2020 , 2021 , 2022 , 2023

Documents sur la structure

- Intranet
- Privés

Décisions

- **13263** (17/12/2018) : création
- **15197** (14/09/2022) : prolongation
- **16555** (31/10/2023) : prolongation

Localisation

- **Adresse postale :** Université Montpellier 860 Rue Saint Priest 34095 Montpellier cedex 5 France
- **Coordonnées GPS :** *Non renseignées*