Stochastic pattern formation in biochemical systems

Fact Sheet

Project Information

<table>
<thead>
<tr>
<th>STOPATT</th>
<th>Funded under</th>
</tr>
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<tbody>
<tr>
<td>Grant agreement ID: 888255</td>
<td>EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions</td>
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<table>
<thead>
<tr>
<th>DOI</th>
<th>Total cost</th>
<th>EU contribution</th>
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<tbody>
<tr>
<td>10.3030/888255</td>
<td>€ 186 167,04</td>
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<tr>
<th>Project terminated on 31 July 2022</th>
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<th>EC signature date</th>
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<tr>
<td>12 March 2020</td>
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<table>
<thead>
<tr>
<th>Start date</th>
<th>End date</th>
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<tbody>
<tr>
<td>1 April 2020</td>
<td>29 January 2023</td>
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Coordinated by
MONTANUNIVERSITAET
LEOBEN
Austria

This project is featured in...
Project description

Investigating stochastic pattern formation in biochemical systems

In biology, the reaction–diffusion–advection equation is used to model chemotaxis – oriented movements of cells in response to a chemical gradient – observed in bacteria, population migration, evolutionary adaptation to changing environments and the spatiotemporal dynamics of molecular species including morphogenesis. The EU-funded STOPATT project will use the equation for logistic population growth to study chemotaxis. The system under study will be perturbed by a stochastic noise term, modelling neglected fluctuations or random perturbations from outside. The stochastic term leads to new phenomena such as bifurcation, metastability or sudden shifts to other, possibly undesired, states.

Fields of science

natural sciences  >  mathematics

natural sciences  >  physical sciences  >  theoretical physics

Keywords

Stochastic Analysis  Stochastic Partial Differential Equations  Mathematical Biology

Pattern Formation  stochastic cross diffusion

Programme(s)

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

MONTANUNIVERSITAET LEOBEN

Net EU contribution
€ 186,167,04

Address
Franz josef strasse 18
8700 Leoben
Austria

Region
Südösterreich > Steiermark > Östliche Obersteiermark

Activity type
Higher or Secondary Education Establishments

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

Other funding