Universität Basel

Research Project

EFFECT/ Effective Equations for Fermionic Systems

Third-party funded project

Project title EFFECT/ Effective Equations for Fermionic Systems
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Organisation / Research unit
Departement Mathematik und Informatik / Mathematical Physics (Saffirio)
Department
Departement Mathematik und Informatik
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Status Completed
Fermionic systems play a significant role in describing molecules and condensed matter. Their time evolution is determined by the Schrödinger equation which, however, is very challenging to analyse for large systems with many particles. Funded by the Marie Skłodowska-Curie Actions programme, the EFFECT project aims to enhance understanding of the non-equilibrium dynamics of large fermionic systems and their interaction with quantised electromagnetic fields. The project plans to develop new mathematical tools toăapproximateăsuch large systems byăsimplerăeffective evolution equations for fermionic systems at zero and finite temperatures.

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