Resource Summary Report

Generated by RRID on Apr 17, 2025

Rensselaer Mathematical Sciences Faculty Member

RRID:SCR_008561
Type: Tool

Proper Citation

Rensselaer Mathematical Sciences Faculty Member (RRID:SCR_008561)

Resource Information

URL: http://www.bioinfo.rpi.edu/zukerm/

Proper Citation: Rensselaer Mathematical Sciences Faculty Member (RRID:SCR_008561)

Description: THIS RESOURCE IS NO LONGER IN SERVICE. Documented on November 20, 2019. Development and implementation of algorithms to predict nucleic acid folding and hybridization by free energy minimization using empirically derived thermodynamic parameters. Modeling and algorithm development have been closely coupled with the derivation of nearest neighbor and related energy rules. Current work is focused on the computation of partition functions for systems containing two molecules in solution that can fold as well as hybridize with each other. Ensemble free energies, mole fractions of different monomer and dimer species and base pair probabilities are computed over a range of temperatures. These computations lead to the prediction of UV absorbance (optical density) and heat capacity (Cp) melting profiles that can be directly compared with experimental data. A related project is the development of an algorithm named FASTH that searches RNA or DNA sequence databases for optimal hybridization sites for nucleic acid query sequences. Unlike traditional search algorithms, such as BLASTN and FASTA, FASTH uses hybridization free energy as the criterion for selection

Synonyms: Rensselaer Mathematical Sciences Faculty Member

Resource Type: portal, organization portal, department portal, data or information resource

Funding:

Availability: THIS RESOURCE IS NO LONGER IN SERVICE

Resource Name: Rensselaer Mathematical Sciences Faculty Member

Resource ID: SCR_008561

Alternate IDs: nif-0000-31440

Record Creation Time: 20220129T080248+0000

Record Last Update: 20250417T065332+0000

Ratings and Alerts

No rating or validation information has been found for Rensselaer Mathematical Sciences Faculty Member.

No alerts have been found for Rensselaer Mathematical Sciences Faculty Member.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We have not found any literature mentions for this resource.