Resource Summary Report

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Kepler

RRID:SCR_005252
Type: Tool

Proper Citation

Kepler (RRID:SCR_005252)

Resource Information

URL: https://kepler-project.org/

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Description: Kepler is a software application for analyzing and modeling scientific data. Using Kepler"s graphical interface and components, scientists with little background in computer science can create executable models, called scientific workflows, for flexibly accessing scientific data (streaming sensor data, medical and satellite images, simulation output, observational data, etc.) and executing complex analyses on this data. Kepler is developed by a cross-project collaboration led by the Kepler/CORE team. The software builds upon the mature Ptolemy II framework, developed at the University of California, Berkeley. Ptolemy II is a software framework designed for modeling, design, and simulation of concurrent, real-time, embedded systems. The Kepler Project is dedicated to furthering and supporting the capabilities, use, and awareness of the free and open source, scientific workflow application, Kepler. Kepler is designed to help scien??tists, analysts, and computer programmers create, execute, and share models and analyses across a broad range of scientific and engineering disciplines. Kepler can operate on data stored in a variety of formats, locally and over the internet, and is an effective environment for integrating disparate software components, such as merging R scripts with compiled C code, or facilitating remote, distributed execution of models. Using Kepler"s graphical user interface, users simply select and then connect pertinent analytical components and data sources to create a scientific workflowan executable representation of the steps required to generate results. The Kepler software helps users share and reuse data, workflows, and compo??nents developed by the scientific community to address common needs. Kepler is a java-based application that is maintained for the Windows, OSX, and Linux operating systems. The Kepler Project supports the official code-base for Kepler development, as well as provides materials and mechanisms for learning how to use Kepler, sharing experiences with other workflow developers, reporting bugs, suggesting enhancements, etc. The Kepler Project Leadership Team works to assure the long-term technical and financial viability of

Kepler by making strategic decisions on behalf of the Kepler user community, as well as providing an official and durable point-of-contact to articulate and represent the interests of the Kepler Project and the Kepler software application. Details about how to get more involved with the Kepler Project can be found in the developer section of this website.

Abbreviations: Kepler

Synonyms: Kepler Project

Resource Type: software resource, software application, data processing software, workflow software

Keywords: software, workflow

Funding: NSF 0722079

Resource Name: Kepler

Resource ID: SCR_005252

Alternate IDs: nlx_144278

Record Creation Time: 20220129T080229+0000

Record Last Update: 20250517T055704+0000

Ratings and Alerts

No rating or validation information has been found for Kepler.

No alerts have been found for Kepler.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 39 mentions in open access literature.

Listed below are recent publications. The full list is available at dkNET.

Mirzaei NM, et al. (2024) MODELING EARLY-ONSET CANCER KINETICS TO STUDY CHANGES IN UNDERLYING RISK, DETECTION, AND IMPACT OF POPULATION SCREENING. medRxiv : the preprint server for health sciences.

Cory-Wright R, et al. (2024) Evolving scientific discovery by unifying data and background

knowledge with AI Hilbert. Nature communications, 15(1), 5922.

Levison HF, et al. (2024) A contact binary satellite of the asteroid (152830) Dinkinesh. Nature, 629(8014), 1015.

Campo Bagatin A, et al. (2024) Recent collisional history of (65803) Didymos. Nature communications, 15(1), 3714.

Volvach A, et al. (2024) Electromagnetic and gravitational radiation of blazar OJ 287. iScience, 27(4), 109427.

Carpinella I, et al. (2024) Walk Longer! Using Wearable Inertial Sensors to Uncover Which Gait Aspects Should Be Treated to Increase Walking Endurance in People with Multiple Sclerosis. Sensors (Basel, Switzerland), 24(22).

Lam JH, et al. (2024) Scalable computation of anisotropic vibrations for large macromolecular assemblies. Nature communications, 15(1), 3479.

Pastukh A, et al. (2024) Exploring Interference Issues in the Case of n25 Band Implementation for 5G/LTE Direct-to-Device NTN Services. Sensors (Basel, Switzerland), 24(4).

Santamaria Amato L, et al. (2023) Testing the speed of "spooky action at a distance" in a tabletop experiment. Scientific reports, 13(1), 8201.

Daly RT, et al. (2023) Successful kinetic impact into an asteroid for planetary defence. Nature, 616(7957), 443.

Cornelio C, et al. (2023) Combining data and theory for derivable scientific discovery with AI-Descartes. Nature communications, 14(1), 1777.

Poruthoor AJ, et al. (2023) Understanding the Free Energy Landscape of Phase Separation in Lipid Bilayers using Molecular Dynamics. bioRxiv : the preprint server for biology.

Du P, et al. (2022) Searching for ultra-light bosons and constraining black hole spin distributions with stellar tidal disruption events. Nature communications, 13(1), 4626.

Rusková R, et al. (2022) Knot Factories with Helical Geometry Enhance Knotting and Induce Handedness to Knots. Polymers, 14(19).

Fang Y, et al. (2022) Probing the orbital angular momentum of intense vortex pulses with strong-field ionization. Light, science & applications, 11(1), 34.

Barajas R, et al. (2021) Facilitating cancer systems epidemiology research. PloS one, 16(12), e0255328.

Thorne S, et al. (2021) Modeling the role of gravitation in metabolic processes. Communicative & integrative biology, 14(1), 115.

Fagerholm ED, et al. (2021) Neural Systems Under Change of Scale. Frontiers in computational neuroscience, 15, 643148.

Mathulwe LL, et al. (2021) Characterisation of Metarhizium majus (Hypocreales: Clavicipitaceae) isolated from the Western Cape Province, South Africa. PloS one, 16(2), e0240955.

Murphy H, et al. (2020) Skin and Disease in Early Modern Medicine: Jan Jessen's De cute, et cutaneis affectibus (1601). Bulletin of the history of medicine, 94(2), 179.