

EGI Applications Database (TNA3.4)

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Greek Research & Technology Network (GRNET)

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The EGI Applications Database (AppDB) is a full-fledged, community driven web portal, meant to act as a

- point-of-reference for scientific applications and tools available within the EGI infrastructure
- registry of persons involved in the development of said software

Its main aims are to

- promote the significance of EGI in e-Science
- facilitate the reuse of applications and expertise that is available in NGIs
- help create a vibrant user community, with information flowing inwards directly from involved individuals – developers and end-users alike

- Descendant of the EGEE Applications Registry portal, developed and provided by INFN and IASA [4, 3], still active for historical reasons
- Since the EGI era, the portal came under sole Greek responsibility and is now hosted by IASA, in Athens [1]
- Currently the database counts 250 applications & tools and twice as many people registered, across 7 disciplines and 14 countries.
- Most entries from Italian researchers; expected to change as AppDB becomes more widely known and accepted
- Integrated with the RESPECT program [5]: 19 tools accounted for, so far

Interface: data view on the right, navigation pane on the left

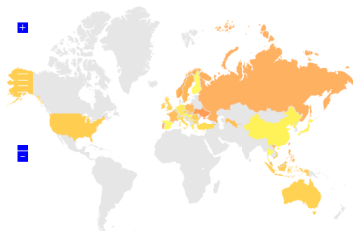
- Applications and Tools
 - index of applications and tools, registration form for new entries
 - advanced/quick filters on top of page (discipline, keywords, etc.)
- Use Cases
 - a placeholder containing a link to the EGI Wiki portal
 - access to information about successful porting of applications in future releases
- People
 - index of people profiles
 - advanced/quick filters on top of page (role, country, etc.)
- Statistics: access to statistics graphs about applications or people versus various parameters, such as disciplines, countries, etc.
- Science Gateways: access to existing or to be developed information portals within the identified scientific communities

Latest News

- 2010.08.26
Last week to register for the EGI Technical Forum 2010 at the reduced rate
- 2010.08.26
First issue of EGI newsletter, Inspired, published
- 2010.07.13
Registration open for the EGI Technical Forum 2010

Welcome to the EGI Applications Database


This is the central point for gathering and providing information on the scientific applications deployed in EGI, exploiting the project's international Grid infrastructure. Awareness of size and strength of local users community and identification of driving disciplines helps EGI to understand the user requirements, identify new potential communities and expand the exploitation of the infrastructure.



Guest Access

Anonymous, read-only access to applications and people data

- Applications
 - Name, logo, description, discipline, abstract, status, country, VOs, etc.
 - List of associated researchers and publications
 - List of URLs such as website, documentation, etc.
- People
 - Name, role, institute, country, contact information data
 - List of associated applications and publications
- Data export to CSV/XML
- Quick filters and advanced filtering available
- Quick grid view / detailed list view



[Home](#)

Applications & Tools

- Applications:
 - [All \(249\)](#)
 - [All \(20\)](#)
 - [RESPECT \(19\)](#)

[Use Cases](#)

[People](#)






[Statistics](#)

[Science Gateways](#)

[Links](#)

[Contact](#)


[News](#)


Filter
 Discipline Country Region Consortium

249 matches


1 2 3 4 5 6 7 8 9 10 11




B_nF
 Bio_nfluidics




C.I.E.E.V.
 Clustering of infrasound events on Mt. Etna volcano




CACTUS
 Chaos And Complexity Theoretical University Study




CALnet
 Combinatorial Association Logic Networks Inference




CAM
 Community Atmosphere Model




CAMx-UOA
 Numerical simulations of meteorology and atmospheric pollution




CASTEP
 CASTEP




CD-HIT-Grid
 Protein clustering on the Grid with CD-HIT




ClustalW
 ClustalW




CLUSTALW
 ClustalW




CLUSTER
 Chaotic map clustering




CMS
 Software for the CMS experiment




CMS
 CMS




COLLGUN
 Finite Element Electromagnetic Analysis of TWT Electron Guns in Grid Environment




COLUMBUS
 COLUMBUS




COMD
 Constrained Molecular Dynamics




COMPACTION
 Simulation of the compaction of granular materials




COMP_FILTER
 Grid-based Analysis of Simulated Light Curves to Test Planetary Transit Detect...




CORSIKA
 Cosmic Ray Simulations for KASCADE




CORSIKA
 CORSIKA




CPM
 Conformal Prediction Methods



CR3x+1
 Parallel Search of 3x+1 Class Records



CSCGF
 Computer Simulation of Complex Gas Flows in Micro-sized Channels and Domains



CSTMiner_in_JST
 CSTMiner_in_JST

1 2 3 4 5 6 7 8 9 10 11

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Athens, Greece

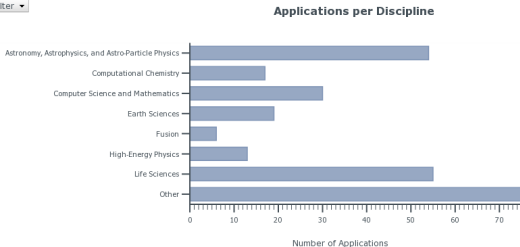
v.0.99.1-2

Statistics

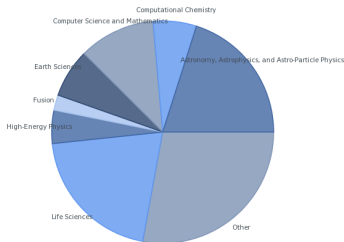
- Application and people statistics
- Per (sub)discipline, country, region, VO, etc.
- Bar/Pie chart views
- Image export to PDF/JPG/PNG/SVG
- Data export to CSV/XML

Filter ▾

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Filter ▾



Authenticated Access

- Currently only available in development version
- Single Sing-On (EGI SSO)
- Registered users, among other, can
 - edit their profile
 - bookmark applications
 - register a new application
 - edit existing application data
 - associate people to their applications
- Editing privileges based on user's role; additional permissions granted on a fine-grained control policy
- User inbox for system notifications and instant messaging

Application Details - 1D_H2

Information

Publications



ID: 179
Name: 1D_H2
Description: MPI code for a 1D hydrogen mole
Discipline: Astronomy, Astrophysics,
Subdiscipline: N/A

Upload Image...

URLs: Website: <http://www.pi2s2.it/applications/ap>

The laser-matter interaction is not easy to treat using a purely theoretical and analytical approach. Conversely, in the last two decades, the numerical approach has made great improvements in providing a solution to the Time-Dependent Schrodinger Equation (TDSE) to even relatively complex systems such as small molecules. In particular, our interest is focused on the study of the dynamics of one-dimensional H₂ molecule, with both fixed and moving nuclei, in the presence of an intense laser field linearly polarized and aligned to the molecular axis. The target of this investigation is the study of the radiation emitted by the system and the dependence of single and double ionization signals from the physical parameters of the laser pump. The results obtained show that the profile of the ionization signals changes drastically going from fixed to moving nuclei. In particular double ionization signal is strongly increased in the case of moving nuclei, probably because the dynamics of nuclei reaches a region of enhanced ionization. To achieve our aim, we have developed a parallel MPI 2D split-operator + Runge-Kutta-Fehlberg code in which the two electrons are considered quantum particles and the nuclei classical, either fixed or moving, particles. Furthermore, particular attention has been devoted to the evaluation of the single and double ionization signals by introducing specific spatial regions with moving boundaries which necessitates a dynamic allocation of physical parameters to each processor. We have also developed the parallel code for dealing with the full-quantum

Country: Italy

VOs: cometa

Status: In production

Added on 2010-04-29 20:54:33

Scientific Contacts



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Save

Application Details - 1D_H2

Information

Publications

Title

Type

Conference Proceedings

Volume

Pages

Year

Publisher

ISBN

H2 Molecule Driven by a Laser Field	Full Paper	Grid Open Days at the University of Palermo, Palermo (Italy) the Symposium GRID Open Days at the University of Palermo	133 - 139	2008	Castiglia Giuseppe, Morales F., Castiglia Giuseppe, Persico Francesco, Corso Pietro Paolo, Fiordilino Emidio, Daniele Rosalba	978-88-95892-00-9
Bremsstrahlung from a repulsive potential: attosecond pulse generation	Full Paper	Grid Open Days at the University of Palermo, Palermo (Italy)	133 - 139	2008	Castiglia Giuseppe, Morales F., Castiglia Giuseppe, Persico Francesco, Corso Pietro Paolo, Fiordilino Emidio, Daniele Rosalba	978-88-95892-00-9
Evidence of Nuclear Motion in H ₂ -like Molecules by Means of High Harmonic Generation	Full Paper	Grid Open Days at the University of Palermo, Palermo (Italy)	133 - 139	2008	Castiglia Giuseppe, Morales F., Castiglia Giuseppe, Persico Francesco, Corso Pietro Paolo, Fiordilino Emidio, Daniele Rosalba	978-88-95892-00-9
Control of Electron Motion in a Molecular Ion: Dynamical Creation of a Permanent Electric Dipole	Full Paper	Grid Open Days at the University of Palermo, Palermo (Italy)	133 - 139	2008	Castiglia Giuseppe, Morales F., Castiglia Giuseppe, Persico Francesco, Corso Pietro Paolo, Fiordilino Emidio, Daniele Rosalba	978-88-95892-00-9
Hydrogene molecule in intense laser fields	Full Paper	Grid Open Days at the University of Palermo, Palermo (Italy)	133 - 139	2008	Castiglia Giuseppe, Morales F., Castiglia Giuseppe, Persico Francesco, Corso Pietro Paolo, Fiordilino Emidio, Daniele Rosalba	978-88-95892-00-9
X-ray Emission from Protostellar Jets	Full Paper	Grid Open Days at the University of Palermo, Palermo (Italy)	133 - 139	2008	Castiglia Giuseppe, Morales F., Castiglia Giuseppe, Persico Francesco, Corso Pietro Paolo, Fiordilino Emidio, Daniele Rosalba	978-88-95892-00-9
Parallel numerical simulation of a H ₂ molecule in intense laser fields	Full Paper	Grid Open Days at the University of Palermo, Palermo (Italy)	133 - 139	2008	Castiglia Giuseppe, Morales F., Castiglia Giuseppe, Persico Francesco, Corso Pietro Paolo, Fiordilino Emidio, Daniele Rosalba	978-88-95892-00-9
Harmonic Spectra in H ₂ ⁺ in the Presence of a Laser Field	Full Paper	Grid Open Days at the University of Palermo, Palermo (Italy) the Symposium GRID Open Days at the University of Palermo	285 - 287	2007	Persico Francesco, Persico Francesco, Corso Pietro Paolo, Fiordilino Emidio, Daniele Rosalba, Morales F., Castiglia Giuseppe	978-88-95892-00-9
The Study of the Nuclear Motion in D ₂ ⁺ Molecular Ion By Using the Harmonic Spectra	Full Paper	International Conference on Computational Methods in Science and Engineering 2007 (ICCMSE 2007)		2007	Persico Francesco, Morales F., Castiglia Giuseppe, Persico Francesco, Corso Pietro Paolo, Fiordilino Emidio, Daniele Rosalba	

Edit publication data

Title

URL

Conference

Proceedings

Volume

Year

Publisher

Authors

H2 Molecule Driven by a Laser Field

<http://indico.ct.infn.it/materialDisplay.py?materialId=12&confId=24>

Grid Open Days at the University of Palermo, Palermo (Italy)

the Symposium GRID Open Days at the University of Palermo

2008

Castiglia Giuseppe (ID: 11)

Castiglia Giuseppe (ID: 11)

Corso Pietro Paolo (ID: 11)

Daniele Rosalba (ID: 272)

Pages: From 133 To 139

Type: Full Paper

ISBN: 978-88-95892-00-9


Save

Person Details - William Karageorgos

Information

Publications

Permissions



Upload image...

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Related Applications

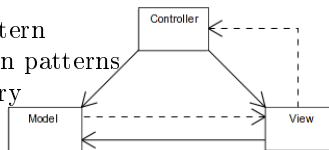


AppDB
 EGI Application
 Database

Save

Some Technical Information

- Zend Framework
 - PHP basis for the MVC architectural pattern
 - Supports Table/Row Data Gateway design patterns
 - Integrates with the dōjō toolkit and jQuery
- dōjō toolkit
 - High-end UI experience through advanced widgets
- jQuery
 - “Application” look-and-feel through full use of AJAX
 - Use of JSON for data interchange
- MySQL data back-end
 - InnoDB storage engine (triggers, referential integrity)
 - Extended use of optimized Views (Table/Row Data Gateway DP)



- Upcoming version
 - Bind AppDB with the EGI SSO system
 - Enable write mode for users with SSO account (authenticated access)
- Future versions
 - Integrate with other scientific or social gateways/portals
 - Enhance information flow through bulleting board, email subscription, RSS feeds
 - IE 8 browser support
 - User feedback will play an important role

Communication with the AppDB support staff:

- Through the AppDB Support Unit established in the Grid Global User Support (GGUS) system [2]
- Through the NGI based mailing list appdb-support@hellasgrid.gr

1. EGI Applications Database.
<http://appdb.egi.eu/>.
2. Global Grid User Support.
<https://gus.fzk.de/>.
3. EGEE Application Support.
http://grid.ct.infn.it/egEE_applications.
4. EGEE Regional Applications Registry.
<http://appdb.eu-egEE.org>.
5. The RESPECT program.
<http://technical.eu-egEE.org/index.php?id=290>.