



Linking Scientific Computing in Europe and the Eastern Mediterranean

HPC Roadshow

Training Opportunities



Content

- **LinkSCEEM aims to offer training opportunities to new and experienced users**
- **Training efforts focus on**
 - Online training opportunities
 - LinkSCEEM training events
 - Educational Access Program



Online training opportunities

- LinkSCEEM aims at providing permanently available online training content
- wealth of online content already available
- all content presented here is **freely** accessible



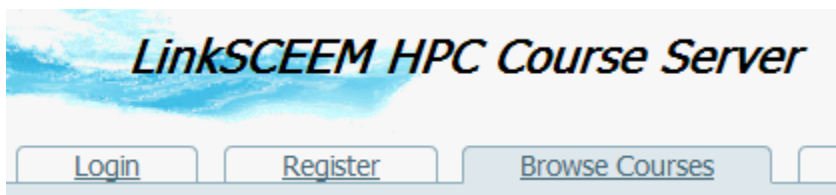
Online training opportunities

■ Overview of recommended online material

- LinkSCEEM training portal
(<http://www.linksceem.eu/ATutor/login.php>)
- LinkSCEEM lectures
(<http://www.linksceem.eu/ls2/user-resources/lectures.html>)
- PRACE training portal
(<http://www.training.prace-ri.eu/lectures/index.html>)
- XSEDE User Portal
(<https://portal.xsede.org/web/xup/online-training>)

LinkSCEEM training portal

- comprehensive online portal with HPC related training content
- hosted on the LinkSCEEM webpage
- Training material tailored for LinkSCEEM-2 users
- Content can be downloaded!!
- FAQ, forum, Question and Answer capabilities



[LinkSCEEM webpage](#)
[LinkSCEEM Training Portal](#)



LinkSCEEM lectures

- Presentations from all LinkSCEEM events
- LinkSCEEM has already organised 19 training events providing 42 days of training
- all content is available sorted by event or topic



[LinkSCEEM webpage](#)

[LinkSCEEM lectures](#)

PRACE training portal

- PRACE: Partnership for Advanced Computer in Europe
- LinkSCEEM's "big brother"
- online portal with training content

[Prace webpage](#)



XSEDE User Portal

- Hosted by NCSA: National Center for Supercomputing Applications
- wealth of online courses related to HPC

XSEDE User Portal



The screenshot shows the XSEDE User Portal website. The header features the text "XSEDE | USER PORTAL" in large white letters, with "Extreme Science and Engineering Discovery Environment" in smaller text below it. A search bar on the right contains the text "Search XSEDE..." and a magnifying glass icon. To the right of the search bar is a "SIGN IN" button with an envelope icon. Below the header is a navigation menu with the following items: "MY XSEDE", "RESOURCES", "DOCUMENTATION", "ALLOCATIONS", "TRAINING" (highlighted in blue), "USER FORUMS", "HELP", and "ABOUT". Under the "TRAINING" menu, there are three sub-items: "Overview", "Course Calendar", and "Online Training".



Supercomputing Training Portal

- Attempts to aggregate and filter material into distinct categories
- Recommends content within categories
- Provides an environment to browse content from categories while remaining within the website

The basics of interacting with a Supercomputer

Programming

Scripting

OpenMP

MPI (Message Passing Interface)

GPU Programming

Code Improvement and Debugging

Scientific Visualisation

Community Developed Applications

Supercomputing Training Portal

There is a huge amount of online content that can help you educate yourself in how to use a supercomputing environment. We have tried to organise (some of) that information into distinct sections to help guide you to topics that interest you most.

LinkSCEEM can also provide you with access to a supercomputer for training purposes so that you can try anything you see here out in a real supercomputer environment. For individual users we simply ask that you fill out our [online request form](#). If you wish to apply for access for a group of people (for example in connection to a University course or a development project for a group) we ask that you contact us directly at hpc-support@linksceem.eu.

Most of the links in the topics will open within this window so that you can preview the linked documents and websites directly. If you have any ideas for improvements to the website please use the comment form at the bottom of the page.



[Portal Website](#)

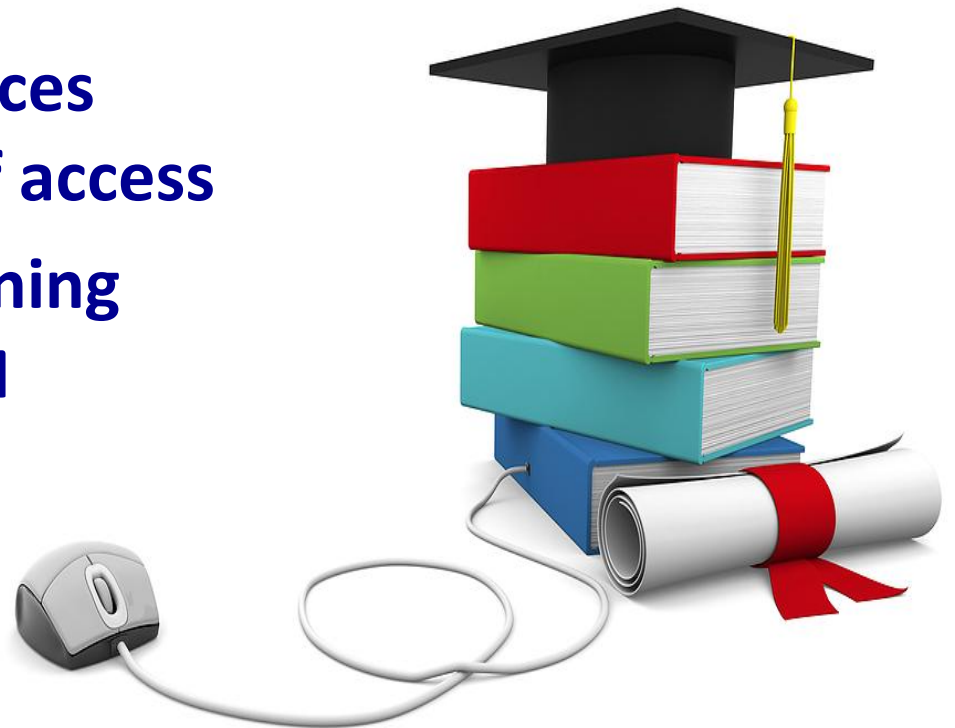


 LINKSCEEM



Educational Access Program

- Access to HPC resources for educational purpose
- LinkSCEEM offers resources dedicated to this type of access
- Euclid is used as the training cluster of the LinkSCEEM Project



Educational Access Program

- **Who can apply for educational access:**
 - University courses who would like to incorporate HPC into their lecture series for their students
 - Attendants of LinkSCEEM training events who wish to continue and expand their training
 - Anyone who would like to do the practical components of the training content provided by the project
 - People interested in evaluating and testing new software, languages or applications
 - People in the early stages of developing a software application



Educational Access Program

- **How to apply:**
 - Individual Users
 - Fill in and submit our [online request form](#)
 - A group of users
 - Contact us directly at hpc-support@linksceem.eu
- **Access procedure is very straightforward:**
 - Applicants will be contacted within a few days regarding the next steps they have to follow for the creation of their accounts
- **Anyone wishing to use our educational access program is encouraged to take advantage of our online HPC Course server at**
<http://linksceem.eu/ATutor>



LinkSCEEM training events

- **A mixture of events to reach new users and provide training in HPC related topics**
- **9 Annual Events**
 - Four 1-day user meetings
 - One 3-day general user meeting
 - One advanced 3-day cross-sectional workshop
 - One 3-day thematic workshop per field
 - Climate,
 - Cultural Heritage,
 - Synchrotron Radiation

User Meetings and Roadshow

- 4 of these occur each year
- Usually half day events
- Allow HPC users to:
 - Discuss their computational needs and any issues they may have
 - Present their work to others in invited talks
- **Currently 5-6 User Meetings are taking place as part of a ROADSHOW**
 - Present LinkSCEEM to potential users and describe requirements to gain HPC access

General User Meeting (summer)

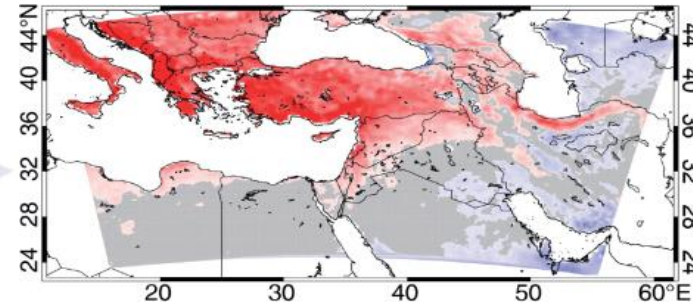
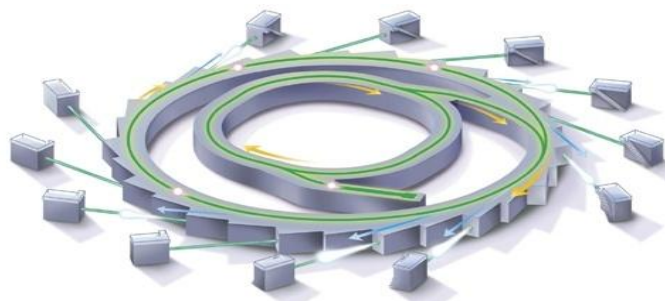
- Includes up-to date general, cross-disciplinary programming training for current/future users
- Big 3 day workshop with 3-4 instructors depending on the topics
- Around 70 participants from the region
- There are approximately 25 fellowships available covering air ticket, local transport and accommodation

Cross Disciplinary Workshop (winter)

- Includes up-to date general, cross-disciplinary programming training for current/future users at a more advanced level than the general user meeting
- There usually 3-4 instructors depending on the topics
- Around 50 participants from the region
- There are approximately 20 fellowships available covering air ticket, local transport and accommodation

Thematic workshops

- 3 three day workshops (Climate, Digital cultural heritage, Synchrotron radiation)
- Around 30 participants from the region
- There are approximately 15 fellowships per workshop available



Past events

Type of activity	Year 1	Year 2	Year 3	Total
User meeting (1 day)	2	6	1	9
General user meeting (3 day)	1	1		2
Cross sectional workshop (3 Days)	1	1		2
Thematic workshop Climate (3 Days)		1	1	2
Thematic workshop Cultural heritage (3 days)		1	1	2
Thematic workshop Synch. radiation (3 days)	1		1	2
TOTAL	5	10	4	19

Past events



Training material from past events is available on the Linksceem-2 website:
<http://www.linksceem.eu/ls2/user-resources/training.html>

Future events

- HPC Roadshow
 - **Crete** 4/2/2013, **Israel** 19/2/2013, **Jordan** 28/2/2013, **Egypt** 2 locations in March 2013, **Lebanon** TBD
- Climate Modeling training workshop
 - Cyprus, February 19-21 February 2013
- Cultural Heritage Thematic training workshop
 - Cyprus, May 2013
- Synchrotron Radiation training workshop
 - Jordan, Summer, 2013
- 3-day General user meeting
 - Alexandria, Egypt Summer 2013

For info on pass and future training events

<http://www.linksceem.eu/ls2/news-and-activities/events/events/events.html>



Event fellowships

- Fellowships are offered for all workshops
- **We aim to offer support that covers all cost**
- Application is usually a very quick online procedure

- **Fellowship will be offered to applicants:**
 - from the region
 - with relevant background
 - prioritising ‘young’ researchers



Thank you

