

# Material for CINES Landing Page

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**Vision:** CINES (pronounced “science”) is a self-sustaining cyberinfrastructure that will be a community resource for network science. CINES is an extensible platform for producers and consumers of network science data, information, and software. Domain scientists can use CINES to obtain interesting insights to advance their fields. Major components of CINES include a messaging infrastructure to route job requests and other data/information; infrastructure services for system monitoring, security, continuous testing, and resource management (for submitting jobs), among others; common (app) services such as a digital library and visualization; various applications that will include web apps, individual codes, desktop apps, and software libraries; a workflow engine to compose common services and apps; a user interface (UI) for interactive use through a browser; and an API to service third party software requests.

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- (h) Organization: Kitware, Inc., Clifton Park, NY  
Contact: Aashish Chaudhary
- (i) Organization: Network Repository ([www.networkrepository.com](http://www.networkrepository.com))  
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### Scientific Advisory Board:

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### Links to Educational Materials on Network Science:

- Réka Albert, Pennsylvania State University, State College, PA. Lecture notes for the course *Elements of Network Science and Applications* can be downloaded from <https://www.ralbert.me/teaching.html>.
- Albert-László Barabási, Northeastern University, Boston, MA. Online book entitled *Network Science* is available at <http://networksciencebook.com>.
- Aaron Clauset, University of Colorado, Boulder, CO. Materials used for the course *Network Analysis and Modeling*, can be accessed from <http://tuvalu.santafe.edu/~aaronc/courses/5352/#Schedule>.
- David Easley and Jon Kleinberg, Cornell University, Ithaca, NY. An online version of the book *Networks, Crowds and Markets: Reasoning About a Connected World*, Cambridge University Press, 2010, can be downloaded from <https://www.cs.cornell.edu/home/kleinber/networks-book/networks-book.pdf>.
- David Kempe, University of Southern California, Los Angeles, CA. Lecture notes for the course *Structure and Dynamics of Information in Networks* are available from <http://david-kempe.com/teaching/structure-dynamics.pdf>.

- Natarajan Meghanathan, Jackson State University, Jackson, MS. Materials for the Fall 2019 offering of the course *Network Science* can be accessed from <http://www.jsums.edu/nmeghanathan/csc641-fall2019/>.
- S. S. Ravi, University at Albany – State University of New York (UAlbany), Albany, NY. Course materials for the class *Network Science* taught during Fall 2015 can be accessed from [https://www.albany.edu/~ravi/csi660\\_index.html](https://www.albany.edu/~ravi/csi660_index.html).
- Stanford University, Stanford, CA. Materials for the course *Social and Information Network Analysis* taught during Autumn 2015 can be accessed from <http://snap.stanford.edu/class/cs224w-2015/handouts.html>.
- Boleslaw Szymanski, Rensselaer Polytechnic Institute (RPI), Troy, NY. Materials for the Fall 2018 offering of the course *Frontiers of Network Science* can be accessed from <http://cs.rpi.edu/~szymansk/fns.18/>.

### Publications Related to CINES:

- S. E. Abdelhamid, R. Alo, S. M. Arifuzzaman, P. Beckman, M. H. Bhuiyan, K. Bisset, E. A. Fox, G. C. Fox, K. Hall, S. M. S. Hasan, A. Joshi, M. Khan, C. J. Kuhlman, S. Lee, J. P. Leidig, H. Makkapati, M. V. Marathe, H. S. Mortveit, J. Qiu, S. S. Ravi, Z. Shams, O. Sirisaengtaksin, R. Subbiah, S. Swarup, N. Trebon, A. Vullikanti and Z. Zhao, “CINET: A CyberInfrastructure for Network Science”, *Proc. 8th IEEE International Conference on eScience* (eScience 2012), Chicago, IL. Oct. 2012, pp. 1–8.
- S. E. Abdelhamid, M. Alam, R. Alo, S. M. Arifuzzaman, P. Beckman, T. Bhattacharjee, M. H. Bhuiyan, K. Bisset, S. Eubank, A. Esterline, E. A. Fox, G. C. Fox, S. M. S. Hasan, H. Hayatnagarkar, M. Khan, C. J. Kuhlman, M. V. Marathe, N. Meghanathan, H. S. Mortveit, J. Qiu, S. S. Ravi, Z. Shams, O. Sirisaengtaksin, S. Swarup, A. Vullikanti and T. Wu, CINET 2.0: A CyberInfrastructure for Network Science, *Proc. 10th IEEE Intl. Conference on eScience* (eScience 2014), Sao Paulo, Brazil, Oct. 2014, pp. 324–331.
- C. Dumas, D. LaManna, T. M. Harrison, S. S. Ravi, L. Hagen, C. Kotfila and F. Chen, “E-petitioning as Collective Political Action in We the People”, *Proc. iConference 2015*, Newport Beach, CA, March 2015 (20 pages).
- C. Dumas, D. LaManna, T. M. Harrison, S. S. Ravi, L. Hagen, C. Kotfila and F. Chen, “Examining Political Mobilization of Online Communities through E-petitioning Behavior in We the People”, *Big Data and Society* (an online journal), Vol. 2, No. 2, July–December 2015, pp. 1–20.