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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Links to Educational Materials on Network Science:

- Réka Albert, *Elements of Network Science and Applications*. Lecture Notes can be downloaded from https://www.ralbert.me/teaching.html.
- Albert-László Barabási, *Network Science*, online book available at http://networksciencebook.com.
- Aaron Clauset, *Network Analysis and Modeling*, Materials used for this course at the University of Colorado, Boulder, CO, can be accessed from: http://tuvalu.santafe.edu/~aaronc/courses/5352/#Schedule.
- David Easley and Jon Kleinberg, *Networks, Crowds and Markets: Reasoning About a Connected World*, Cambridge University Press, 2010. An online version of this book can be downloaded from https://www.cs.cornell.edu/home/kleinber/networks-book/networks-book.pdf.
- David Kempe, *Structure and Dynamics of Information in Networks*, lecture notes available at http://david-kempe.com/teaching/structure-dynamics.pdf.

- S. S. Ravi, Course materials used to teach a class on Network Science at the University at Albany – State University of New York during Fall 2015 can be accessed from https://www.albany.edu/~ravi/csi660_index.html.

- Stanford University, 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, *Frontiers of Network Science*. Materials for this course taught at the Rensselaer Polytechnic Institute (RPI), Troy, NY, during Fall 2018 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.