

Publications for Somwrita Sarkar

2017

Sarkar, S., Phibbs, P., Simpson, R., Wasnik, S. (2017). The scaling of income distribution in Australia: Possible relationships between urban allometry, city size, and economic inequality. *Environment and Planning B: Planning and Design*, In Press, 1-20. [More Information]

2016

Robinson, P., Zhao, X., Aquino, K., Griffiths, J., Sarkar, S., Pandejee, G. (2016). Eigenmodes of brain activity: Neural field theory predictions and comparison with experiment. *NeuroImage*, 142, 79-98. [More Information]

Sarkar, S., Chawla, S., Robinson, P., Fortunato, S. (2016). Eigenvector dynamics under perturbation of modular networks. *Physical Review E*, 93(6), 1-7. [More Information]

Dong, A., Sarkar, S., Moullec, M., Jankovic, M. (2016). Eigenvector Rotation as an Estimation of Architectural Change. *ASME 2016 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference (IDETC/CIE 2016)*, Charlotte: American Society of Mechanical Engineers (ASME). [More Information]

2015

Sarkar, S., Dong, A. (2015). A Spectral Analysis Software to Detect Modules in a DSM. *Journal of Modern Project Management*, 3(2), 17-23.

Dorabjee, R., Bown, O., Sarkar, S., Tomitsch, M. (2015). Back to the Future: Identifying Interface Trends from the Past, Present and Future in Immersive Applications. *The 27th Australian Conference on Computer-Human Interaction (OzCHI 2015)*, New York: Association for Computing Machinery (ACM). [More Information]

Dong, A., Sarkar, S. (2015). Forecasting technological progress potential based on the complexity of product knowledge. *Technological Forecasting and Social Change*, 90(Part B), 599-610. [More Information]

Sarkar, S. (2015). Spectral (Re)construction of Urban Street Networks: Generative Design Using Global Information from Structure. In John S. Gero and Sean Hanna (Eds.), *Design Computing and Cognition '14*, (pp. 41-55). Cham: Springer. [More Information]

2014

Dong, A., Sarkar, S., Yang, M., Honda, T. (2014). A linguistic approach to assess the dynamics of design team preference in concept selection. *Research in Engineering Design*, 25(1), 75-

92. [More Information]

Sarkar, S., Dong, A. (2014). A spectral analysis software to detect modules in a DSM. *16th International DSM Conference*, Paris, France: Carl Hanser Verlag.

Sarkar, S., Robinson, P. (2014). Clustering and Modularity in Self-Organized Networks. In Mikhail Prokopenko (Eds.), *Guided Self-Organization: Inception*, (pp. 455-468). Berlin, Germany: Springer-Verlag. [More Information]

Robinson, P., Sarkar, S., Pandejee, G., Henderson, J. (2014). Determination of effective brain connectivity from functional connectivity with application to resting state connectivities. *Physical Review E*, 90(1), 1-6. [More Information]

Dong, A., Sarkar, S. (2014). Generalized Design Knowledge and the Higher-Order Singular Value Decomposition. In John S. Gero (Eds.), *Design Computing and Cognition '12*, (pp. 415-432). Dordrecht, Netherlands: Springer Science+Business Media. [More Information]

Sarkar, S., Chawla, S., Weng, H. (2014). Resilience of human brain functional networks under thresholding. *Brain KDD workshop, Knowledge Discovery and Data Mining Conference 2014*, New York, USA: 20th Annual Knowledge Discovery and Data Mining Conference 2014.

Sarkar, S., Dong, A., Henderson, J., Robinson, P. (2014). Spectral Characterization of Hierarchical Modularity in Product Architectures. *Journal of Mechanical Design*, 136(1), 1-12. [More Information]

2013

Sarkar, S., Henderson, J., Robinson, P. (2013). Spectral Characterization of Hierarchical Network Modularity and Limits of Modularity Detection. *PLoS One*, 8(1), 1-11. [More Information]

Sarkar, S. (2013). Street network analysis for understanding typology in cities: Case study on Sydney CBD and suburbs. *6th State of Australian Cities National Conference (SOAC 2013)*, Sydney: State of Australian Cities Research Network.

Dong, A., Sarkar, S., Nichols, C., Kvan, T. (2013). The capability approach as a framework for the assessment of policies toward civic engagement in design. *Design Studies*, 34(3), 326-344. [More Information]

2012

Dong, A., Sarkar, S. (2012). Endogenous Progress Potential. *ASME 2012 International Design Engineering Technical Conference & Computers and Information in Engineering Conference (IDETC/CIE 2012)*, USA: American Society of Mechanical Engineers (ASME). [More Information]

Information]

optimization as a computational design tool: a situated agent approach. *CAADRIA 2007 12th International Conference on Computer-Aided Architectural Design Research in Asia*, Nanjing, China: School of Architecture, Nanjing University.

2011

Sarkar, S., Dong, A. (2011). Characterizing Modularity, Hierarchy and Module Interfacing in Complex Design Systems. *ASME 2011 International Design Engineering Technical Conference & Computers and Information in Engineering Conference (IDETC/CIE 2011)*, Washington DC USA: American Society of Mechanical Engineers (ASME). <http://dx.doi.org/10.1115/DETC2011-47992> [More Information]

Sarkar, S., Dong, A. (2011). Community detection in graphs using singular value decomposition. *Physical Review E*, 83(4), 046114-1-046114-16. <http://dx.doi.org/10.1103/PhysRevE.83.046114> [More Information]

Dong, A., Sarkar, S. (2011). Unfixing design fixation: from cause to computer simulation. *The Journal of Creative Behavior*, 45(2), 147-159. <http://dx.doi.org/10.1002/j.2162-6057.2011.tb01093.x> [More Information]

2010

Sarkar, S., Dong, A., Gero, J. (2010). Learning symbolic formulations in design: Syntax, semantics, and knowledge reification. *Artificial Intelligence for Engineering Design, Analysis and Manufacturing*, 24, 63-85. <http://dx.doi.org/10.1017/S0890060409990175> [More Information]

Kan, J., Gero, J., Sarkar, S. (2010). Using a generic method to study software design cognition. *Studying Professional Software Design: An NSF-Sponsored International Workshop*.

2009

Sarkar, S., Dong, A., Gero, J. (2009). A Problem Decomposition Method for Conceptual Design. In Amaresh Chakrabarti (Eds.), *Research into Design: Supporting Multiple Facets of Product Development*, (pp. 59-66). Singapore: Research Publishing Services.

Sarkar, S., Dong, A., Gero, J. (2009). A Problem Decomposition Method for Conceptual Design. *International Conference on Research into Design (ICoRD'09)*, Singapore: Research Publishing Services.

Sarkar, S., Dong, A., Gero, J. (2009). Design Optimization Problem Reformulation Using Singular Value Decomposition. *Journal of Mechanical Design*, 131(8), 081006-1-081006-10. <http://dx.doi.org/10.1115/1.3179148> [More Information]

2008

Sarkar, S., Dong, A., Gero, J. (2008). A Learning and Inference Mechanism for Design Optimization Problem (Re)-Formulation Using Singular Value Decomposition. *ASME 2008 Design Engineering Technical Conferences and Computers and Information in Engineering Conference*, New York City: American Society of Mechanical Engineers (ASME).

Sarkar, S., Dong, A., Gero, J. (2008). Learning Symbolic Formulations in Design Optimization. *Third International Conference on Design Computing and Cognition*, USA: Springer Science+Business Media. <http://dx.doi.org/10.1007/978-1-4020-8728-8> [More Information]

2007

Sarkar, S., Gero, J., Saunders, R. (2007). Re-thinking