these properties include the small world effect, scale-free topologies, modularity, robustness, evolvability, degeneracy, and redundancy.

Within ALife, almost all topics benefit from the study of complex networks, since the connectivity of systems is strongly related to their function. For example, cortical networks, genetic regulatory networks, metabolic pathways, artificial chemistries, and ecological webs describe phenomena in terms of nodes and links with a non-trivial topology.

For this reason, we decided to organize a special session on complex networks at the ALife XII conference in Odense, Denmark, which was held on August 20^{th} and 21^{st}, 2010. The intention of the session was to foster cross-fertilization between the ALife and complex networks communities. Following the success of the session, a call for papers for this special issue was launched.

We received fifteen submissions, out of which eight papers were selected with the valuable aid of multiple thorough reviews.

A generic unifying framework for diverse complex real-world networks has not yet been developed, and in part this is due to a limited number of available examples of these networks. As pointed out by Liu et al. [12] this can be addressed by development of re-wiring algorithms capable of generating networks with specific characteristics. Such characteristics may, for example, combine scale-free properties and community structures encountered in the real-world. The re-wiring algorithm presented in this work is inspired by observations of social interactions, capturing an appropriately tuned local-global coupling. The approach is verified by computational experiments, resulting in generation of networks that resemble their real-world counterparts in terms of important topological details.

Brede presents another model of network generation [6], where the rates of random addition of nodes and optimal rewiring are explored to generate complex