

FIG. 2: Degrees and weights in the global cargo ship network * (insets: subnetworks for container ships \Box , bulk dry carriers \circ , and oil tankers \triangle). (a) The degree distributions P(k) are right-skewed, but not power laws, neither for the GCSN nor its subnetworks. The degree k is defined here as the sum of in- and out-degree, thus k=1 is rather rare. (b) The link weight distributions P(w) reveal clear power law relationships for the GCSN and the three subnetworks, with exponents μ characteristic for the movement patterns of the different ship types. (c) The node strength distributions P(s) are also heavy-tailed, showing power law relationships. The stated exponents are calculated by linear regression with 95% confidence intervals (similar results are obtained with maximum likelihood estimates, see Electronic Supplementary Material). (d) The average strength of a node $\langle s(k) \rangle$ scales superlinearly with its degree, $\langle s(k) \rangle \propto k^{1.46\pm0.1}$, indicating that highly connected ports have, on average, links of higher weight.