

Online Supplement to “Bounding Distributions for the
Weight of a Minimum Spanning Tree in Stochastic
Networks”

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Figures

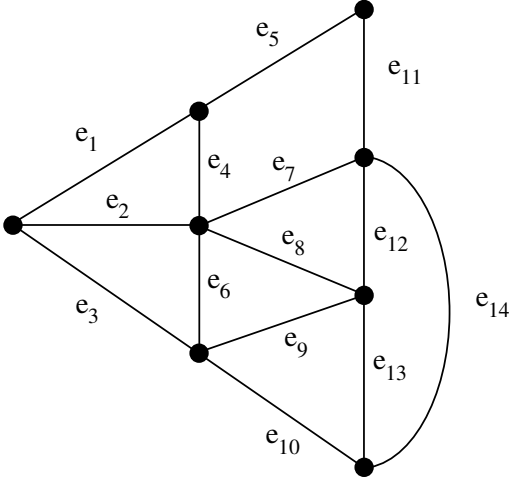


Figure 6. Network *Alex1*.

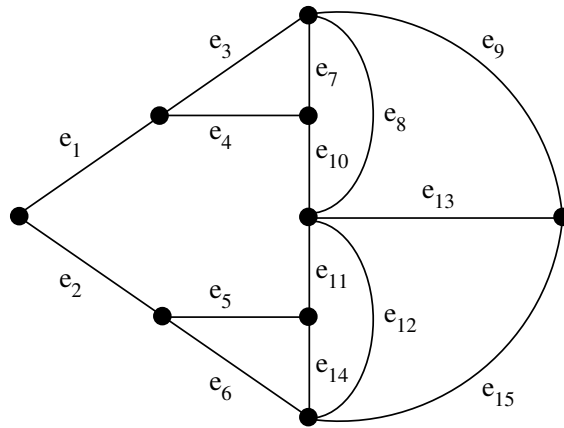


Figure 7. Network *Alex2*.

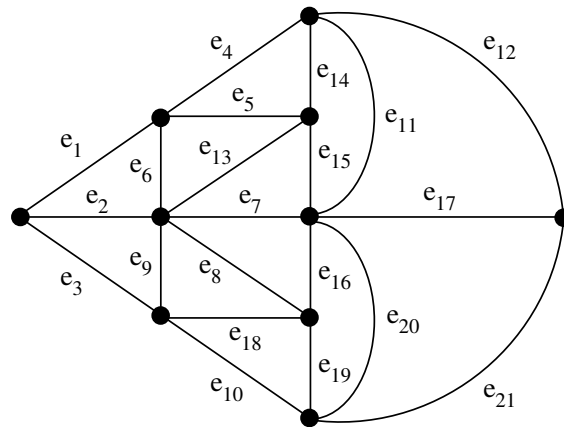


Figure 8. Network *Alex3*.

Tables

<i>Edge</i>	<i>Weight</i>	<i>Probability S</i>	<i>Probability E</i>
e_1	{70, 94}	{0.95, 0.05}	{0.5, 0.5}
e_2	{25, 52}	{0.8, 0.2}	{0.5, 0.5}
e_3	{42, 61}	{0.7, 0.3}	{0.5, 0.5}
e_4	{15, 43}	{0.8, 0.2}	{0.5, 0.5}
e_5	{26, 50}	{0.85, 0.15}	{0.5, 0.5}
e_6	{21, 68}	{0.9, 0.1}	{0.5, 0.5}
e_7	{65, 75}	{0.6, 0.4}	{0.5, 0.5}
e_8	{59, 78}	{0.7, 0.3}	{0.5, 0.5}
e_9	{90, 96}	{0.95, 0.05}	{0.5, 0.5}
e_{10}	{89, 96}	{0.85, 0.15}	{0.5, 0.5}
e_{11}	{32, 67}	{0.8, 0.2}	{0.5, 0.5}
e_{12}	{16, 42}	{0.7, 0.3}	{0.5, 0.5}
e_{13}	{3, 15}	{0.6, 0.4}	{0.5, 0.5}
e_{14}	{17, 45}	{0.8, 0.2}	{0.5, 0.5}

Table 1: Edge-weight random variables for *Alex1-A*.

<i>Edge</i>	<i>Weight</i>	<i>Probability S</i>	<i>Probability E</i>
e_1	{2, 8, 12}	{0.9, 0.08, 0.02}	{0.333, 0.333, 0.333}
e_2	{10, 24, 35}	{0.85, 0.12, 0.03}	{0.333, 0.333, 0.333}
e_3	{6, 18, 21}	{0.88, 0.1, 0.02}	{0.333, 0.333, 0.333}
e_4	{12, 22, 30}	{0.85, 0.11, 0.04}	{0.333, 0.333, 0.333}
e_5	{17, 35, 50}	{0.75, 0.2, 0.05}	{0.333, 0.333, 0.333}
e_6	{3, 7, 12}	{0.84, 0.13, 0.03}	{0.333, 0.333, 0.333}
e_7	{10, 19, 24}	{0.8, 0.14, 0.06}	{0.333, 0.333, 0.333}
e_8	{4, 6, 10}	{0.75, 0.17, 0.08}	{0.333, 0.333, 0.333}
e_9	{9, 13, 20}	{0.82, 0.15, 0.03}	{0.333, 0.333, 0.333}
e_{10}	{21, 33, 45}	{0.85, 0.09, 0.06}	{0.333, 0.333, 0.333}
e_{11}	{8, 14, 18}	{0.77, 0.13, 0.10}	{0.333, 0.333, 0.333}
e_{12}	{20, 30, 40}	{0.87, 0.09, 0.04}	{0.333, 0.333, 0.333}
e_{13}	{10, 17, 30}	{0.95, 0.03, 0.02}	{0.333, 0.333, 0.333}
e_{14}	{15, 28, 45}	{0.79, 0.15, 0.06}	{0.333, 0.333, 0.333}

Table 2: Edge-weight random variables for *Alex1-B*.

<i>Edge</i>	<i>Weight</i>	<i>Probability S</i>	<i>Probability E</i>
e_1	{70, 94}	{0.95, 0.05}	{0.5, 0.5}
e_2	{42, 61}	{0.7, 0.3}	{0.5, 0.5}
e_3	{26, 50}	{0.85, 0.15}	{0.5, 0.5}
e_4	{58, 95}	{0.7, 0.3}	{0.5, 0.5}
e_5	{90, 96}	{0.95, 0.05}	{0.5, 0.5}
e_6	{89, 96}	{0.85, 0.15}	{0.5, 0.5}
e_7	{60, 88}	{0.9, 0.1}	{0.5, 0.5}
e_8	{32, 67}	{0.8, 0.2}	{0.5, 0.5}
e_9	{63, 99}	{0.75, 0.25}	{0.5, 0.5}
e_{10}	{32, 48}	{0.75, 0.25}	{0.5, 0.5}
e_{11}	{16, 42}	{0.7, 0.3}	{0.5, 0.5}
e_{12}	{3, 15}	{0.6, 0.4}	{0.5, 0.5}
e_{13}	{56, 71}	{0.8, 0.2}	{0.5, 0.5}
e_{14}	{17, 45}	{0.8, 0.2}	{0.5, 0.5}
e_{15}	{50, 66}	{0.75, 0.25}	{0.5, 0.5}

Table 3: Edge-weight random variables for *Alex2-A*.

<i>Edge</i>	<i>Weight</i>	<i>Probability S</i>	<i>Probability E</i>
e_1	{2, 8, 12}	{0.9, 0.08, 0.02}	{0.333, 0.333, 0.333}
e_2	{6, 18, 21}	{0.88, 0.1, 0.02}	{0.333, 0.333, 0.333}
e_3	{17, 35, 50}	{0.75, 0.2, 0.05}	{0.333, 0.333, 0.333}
e_4	{3, 7, 10}	{0.68, 0.25, 0.07}	{0.333, 0.333, 0.333}
e_5	{9, 13, 20}	{0.82, 0.15, 0.03}	{0.333, 0.333, 0.333}
e_6	{21, 33, 45}	{0.85, 0.09, 0.06}	{0.333, 0.333, 0.333}
e_7	{18, 27, 36}	{0.94, 0.05, 0.01}	{0.333, 0.333, 0.333}
e_8	{8, 14, 18}	{0.77, 0.13, 0.10}	{0.333, 0.333, 0.333}
e_9	{15, 21, 25}	{0.76, 0.22, 0.02}	{0.333, 0.333, 0.333}
e_{10}	{25, 38, 50}	{0.8, 0.12, 0.08}	{0.333, 0.333, 0.333}
e_{11}	{20, 30, 40}	{0.87, 0.09, 0.04}	{0.333, 0.333, 0.333}
e_{12}	{10, 17, 30}	{0.95, 0.03, 0.02}	{0.333, 0.333, 0.333}
e_{13}	{4, 19, 15}	{0.75, 0.14, 0.11}	{0.333, 0.333, 0.333}
e_{14}	{15, 28, 45}	{0.79, 0.15, 0.06}	{0.333, 0.333, 0.333}
e_{15}	{8, 14, 25}	{0.85, 0.1, 0.05}	{0.333, 0.333, 0.333}

Table 4: Edge-weight random variables for *Alex2-B*.

<i>Edge</i>	<i>Weight</i>	<i>Probability S</i>	<i>Probability E</i>
e_1	{70, 94}	{0.95, 0.05}	{0.5, 0.5}
e_2	{25, 52}	{0.8, 0.2}	{0.5, 0.5}
e_3	{42, 61}	{0.7, 0.3}	{0.5, 0.5}
e_4	{26, 50}	{0.85, 0.15}	{0.5, 0.5}
e_5	{58, 95}	{0.7, 0.3}	{0.5, 0.5}
e_6	{15, 43}	{0.8, 0.2}	{0.5, 0.5}
e_7	{65, 75}	{0.6, 0.4}	{0.5, 0.5}
e_8	{59, 98}	{0.7, 0.3}	{0.5, 0.5}
e_9	{21, 68}	{0.9, 0.1}	{0.5, 0.5}
e_{10}	{89, 96}	{0.85, 0.15}	{0.5, 0.5}
e_{11}	{32, 67}	{0.8, 0.2}	{0.5, 0.5}
e_{12}	{63, 99}	{0.75, 0.25}	{0.5, 0.5}
e_{13}	{66, 98}	{0.8, 0.2}	{0.5, 0.5}
e_{14}	{60, 88}	{0.9, 0.1}	{0.5, 0.5}
e_{15}	{32, 48}	{0.75, 0.25}	{0.5, 0.5}
e_{16}	{16, 42}	{0.7, 0.3}	{0.5, 0.5}
e_{17}	{56, 71}	{0.8, 0.2}	{0.5, 0.5}
e_{18}	{90, 96}	{0.95, 0.05}	{0.5, 0.5}
e_{19}	{17, 45}	{0.8, 0.2}	{0.5, 0.5}
e_{20}	{3, 15}	{0.6, 0.4}	{0.5, 0.5}
e_{21}	{50, 66}	{0.75, 0.25}	{0.5, 0.5}

Table 5: Edge-weight random variables for *Alex3-A*.

<i>Edge</i>	<i>Weight</i>	<i>Probability S</i>	<i>Probability E</i>
e_1	{2, 8, 12}	{0.9, 0.08, 0.02}	{0.333, 0.333, 0.333}
e_2	{10, 24, 35}	{0.85, 0.12, 0.03}	{0.333, 0.333, 0.333}
e_3	{6, 18, 24}	{0.88, 0.1, 0.02}	{0.333, 0.333, 0.333}
e_4	{17, 35, 50}	{0.75, 0.2, 0.05}	{0.333, 0.333, 0.333}
e_5	{3, 7, 10}	{0.68, 0.25, 0.07}	{0.333, 0.333, 0.333}
e_6	{12, 22, 30}	{0.85, 0.11, 0.04}	{0.333, 0.333, 0.333}
e_7	{10, 19, 24}	{0.80, 0.14, 0.06}	{0.333, 0.333, 0.333}
e_8	{4, 6, 10}	{0.75, 0.17, 0.08}	{0.333, 0.333, 0.333}
e_9	{3, 7, 12}	{0.84, 0.13, 0.08}	{0.333, 0.333, 0.333}
e_{10}	{21, 33, 45}	{0.85, 0.09, 0.06}	{0.333, 0.333, 0.333}
e_{11}	{8, 14, 18}	{0.77, 0.13, 0.10}	{0.333, 0.333, 0.333}
e_{12}	{15, 21, 25}	{0.76, 0.22, 0.02}	{0.333, 0.333, 0.333}
e_{13}	{5, 10, 12}	{0.65, 0.23, 0.12}	{0.333, 0.333, 0.333}
e_{14}	{18, 27, 36}	{0.94, 0.05, 0.01}	{0.333, 0.333, 0.333}
e_{15}	{25, 38, 50}	{0.8, 0.12, 0.08}	{0.333, 0.333, 0.333}
e_{16}	{20, 30, 40}	{0.87, 0.09, 0.04}	{0.333, 0.333, 0.333}
e_{17}	{4, 19, 15}	{0.75, 0.14, 0.11}	{0.333, 0.333, 0.333}
e_{18}	{9, 13, 20}	{0.82, 0.15, 0.03}	{0.333, 0.333, 0.333}
e_{19}	{15, 28, 45}	{0.79, 0.15, 0.06}	{0.333, 0.333, 0.333}
e_{20}	{10, 17, 30}	{0.95, 0.03, 0.02}	{0.333, 0.333, 0.333}
e_{21}	{8, 14, 25}	{0.85, 0.1, 0.05}	{0.333, 0.333, 0.333}

Table 6: Edge-weight random variables for *Alex3-B*.

<i>Edge</i> (v_1, v_2)	<i>Weight</i>	<i>Probability</i> S	<i>Probability</i> E
(1, 2)	{1, 5, 9}	{0.9, 0.06, 0.04}	{0.333, 0.333, 0.333}
(1, 3)	{4, 6, 10}	{0.85, 0.10, 0.05}	{0.333, 0.333, 0.333}
(1, 4)	{1, 7, 15}	{0.7, 0.23, 0.07}	{0.333, 0.333, 0.333}
(1, 5)	{8, 9, 10}	{0.65, 0.3, 0.05}	{0.333, 0.333, 0.333}
(2, 3)	{4, 7, 11}	{0.92, 0.06, 0.02}	{0.333, 0.333, 0.333}
(2, 4)	{2, 3, 10}	{0.83, 0.13, 0.04}	{0.333, 0.333, 0.333}
(2, 5)	{5, 6, 7}	{0.81, 0.12, 0.07}	{0.333, 0.333, 0.333}
(3, 4)	{8, 12, 13}	{0.78, 0.19, 0.03}	{0.333, 0.333, 0.333}
(3, 5)	{1, 6, 9}	{0.95, 0.03, 0.02}	{0.333, 0.333, 0.333}
(4, 5)	{3, 5, 7}	{0.84, 0.1, 0.06}	{0.333, 0.333, 0.333}

Table 7: Edge-weight random variables for K_5 .

<i>Edge</i> (v_1, v_2)	<i>Weight</i>	<i>Probability</i> S	<i>Probability</i> E
(1, 2)	{1, 5, 9}	{0.9, 0.06, 0.04}	{0.333, 0.333, 0.333}
(1, 3)	{4, 6, 10}	{0.85, 0.10, 0.05}	{0.333, 0.333, 0.333}
(1, 4)	{1, 7, 15}	{0.7, 0.23, 0.07}	{0.333, 0.333, 0.333}
(1, 5)	{8, 9, 10}	{0.65, 0.3, 0.05}	{0.333, 0.333, 0.333}
(1, 6)	{4, 5, 13}	{0.82, 0.14, 0.04}	{0.333, 0.333, 0.333}
(2, 3)	{4, 7, 11}	{0.92, 0.06, 0.02}	{0.333, 0.333, 0.333}
(2, 4)	{2, 3, 10}	{0.83, 0.13, 0.04}	{0.333, 0.333, 0.333}
(2, 5)	{5, 6, 7}	{0.81, 0.12, 0.07}	{0.333, 0.333, 0.333}
(2, 6)	{2, 11, 12}	{0.77, 0.22, 0.01}	{0.333, 0.333, 0.333}
(3, 4)	{8, 12, 13}	{0.78, 0.19, 0.03}	{0.333, 0.333, 0.333}
(3, 5)	{1, 6, 9}	{0.95, 0.03, 0.02}	{0.333, 0.333, 0.333}
(3, 6)	{3, 4, 6}	{0.87, 0.1, 0.03}	{0.333, 0.333, 0.333}
(4, 5)	{3, 5, 7}	{0.84, 0.1, 0.06}	{0.333, 0.333, 0.333}
(4, 6)	{5, 9, 12}	{0.74, 0.23, 0.03}	{0.333, 0.333, 0.333}
(5, 6)	{1, 5, 9}	{0.8, 0.1, 0.1}	{0.333, 0.333, 0.333}

Table 8: Edge-weight random variables for K_6 .

<i>Edge</i> (v_1, v_2)	<i>Weight</i>	<i>Probability</i> S	<i>Probability</i> E
(1, 2)	{1, 5, 9}	{0.9, 0.06, 0.04}	{0.333, 0.333, 0.333}
(1, 3)	{4, 6, 10}	{0.85, 0.10, 0.05}	{0.333, 0.333, 0.333}
(1, 4)	{1, 7, 15}	{0.7, 0.23, 0.07}	{0.333, 0.333, 0.333}
(1, 5)	{8, 9, 12}	{0.65, 0.3, 0.05}	{0.333, 0.333, 0.333}
(1, 6)	{4, 7, 11}	{0.92, 0.06, 0.02}	{0.333, 0.333, 0.333}
(1, 7)	{2, 3, 10}	{0.83, 0.13, 0.04}	{0.333, 0.333, 0.333}
(2, 3)	{5, 6, 7}	{0.81, 0.12, 0.07}	{0.333, 0.333, 0.333}
(2, 4)	{8, 12, 13}	{0.78, 0.19, 0.03}	{0.333, 0.333, 0.333}
(2, 5)	{1, 6, 9}	{0.95, 0.03, 0.02}	{0.333, 0.333, 0.333}
(2, 6)	{3, 5, 7}	{0.84, 0.1, 0.06}	{0.333, 0.333, 0.333}
(2, 7)	{4, 5, 13}	{0.82, 0.14, 0.04}	{0.333, 0.333, 0.333}
(3, 4)	{2, 11, 12}	{0.77, 0.22, 0.01}	{0.333, 0.333, 0.333}
(3, 5)	{3, 4, 6}	{0.87, 0.1, 0.03}	{0.333, 0.333, 0.333}
(3, 6)	{5, 9, 12}	{0.74, 0.23, 0.03}	{0.333, 0.333, 0.333}
(3, 7)	{1, 5, 9}	{0.8, 0.1, 0.1}	{0.333, 0.333, 0.333}
(4, 5)	{7, 9, 14}	{0.95, 0.03, 0.02}	{0.333, 0.333, 0.333}
(4, 6)	{3, 20, 22}	{0.84, 0.12, 0.04}	{0.333, 0.333, 0.333}
(4, 7)	{5, 8, 13}	{0.86, 0.11, 0.03}	{0.333, 0.333, 0.333}
(5, 6)	{2, 3, 4}	{0.79, 0.12, 0.09}	{0.333, 0.333, 0.333}
(5, 7)	{4, 6, 8}	{0.82, 0.1, 0.08}	{0.333, 0.333, 0.333}
(6, 7)	{2, 7, 11}	{0.73, 0.17, 0.1}	{0.333, 0.333, 0.333}

Table 9: Edge-weight random variables for K_7 .