We aim here at analyzing Self-adjoint Boundary Value Problems on finite networks associated with positive-definite Schrödinger operator. In this discrete setting, such operator can be interpreted as an integral operator and therefore a discrete Potential Theory with respect to its associated kernel can be built. We prove that the Schrödinger kernel satisfies enough principles to assure the existence of equilibrium measures for any proper subset. These measures are used to obtain systematic expressions of the resolvent kernels associated with the different BVP’s.

REFERENCES