

# 1 Surface defects as transfer matrices

In this section, we mainly review the results in [Maruyoshi-Yagi], in which the correspondence we introduce in the previous section appears.

## 1.1 Brane tilings and integrable lattice models

### 1.1.1 Supersymmetric index and integrable lattice models

### 1.1.2 Integrable lattice models from quiver gauge theories

## 1.2 Surface defects in $A_1$ theories of class $\mathcal{S}$

### 1.2.1 Surface defects and L-operators

### 1.2.2 Surface defects as transfer matrices