1 Coherent states

1.1 Coherent states for Bosons

For bosons we have the commutation relation

$$\left[a_i, a_j^\dagger\right] = \delta_{i,j} \tag{1.1}$$

for bosonic creation/annihilation operators. We want to construct (right) eigenvalues of annihilation operators:

$$a_i \left|\alpha\right\rangle = \alpha_i \left|\alpha\right\rangle . \tag{1.2}$$