

$$X = \mathbb{H}_n^{\text{her-asym}}$$

$$X_+ = \mathbb{H}_p^{\text{asym}} \times \mathbb{H}_q^{\text{asym}}$$

$$X_+^{\mathbb{C}} = {}_2\mathbb{C}_n^{\text{asym}}$$

$$\begin{array}{ccccc} & & {}_2\mathbb{H}_n^{\mathcal{D}} & & \\ & \nearrow & & \swarrow & \\ \mathbb{H}_n^{\mathbb{C}} & \longrightarrow & {}_2\mathbb{C}_n^{\mathbb{C}} & \longleftarrow & {}_2\mathbb{C}_{\mathscr{N}}^{\mathbb{U}} \\ & \nwarrow & & \nearrow & \\ & \text{metrics} & & & \\ & & {}_2\mathbb{H}_{\mathscr{N}}^{\mathbb{U}} & & \end{array}$$

$$\begin{array}{ccccc} & & {}_2^n\mathbb{H}_n^{\mathcal{D}} & & \\ & \nearrow & & \swarrow & \\ \frac{0}{ji} \Big| \frac{ij}{0} & & & & \frac{i+j}{0} \Big| \frac{0}{i+j} \\ & \searrow & & \swarrow & \\ \frac{1}{-i} \Big| \frac{ij}{-j} & {}^n\mathbb{H}_n^{\mathbb{C}} & \frac{1}{ji} \Big| \frac{i}{j} & & {}^n{}_2\mathbb{C}_n^{\mathbb{U}} \\ & \swarrow & & \nearrow & \\ & /J & & & \frac{0}{-\mathfrak{t}} \Big| \frac{\mathfrak{t}}{0} \\ & \searrow & & \swarrow & \\ & & {}^n\mathbb{H}_n^{\mathbb{U}}_{\mathbb{C}} & & \end{array}$$

