Translation from Multi-Staged Calculus to Context Calculus

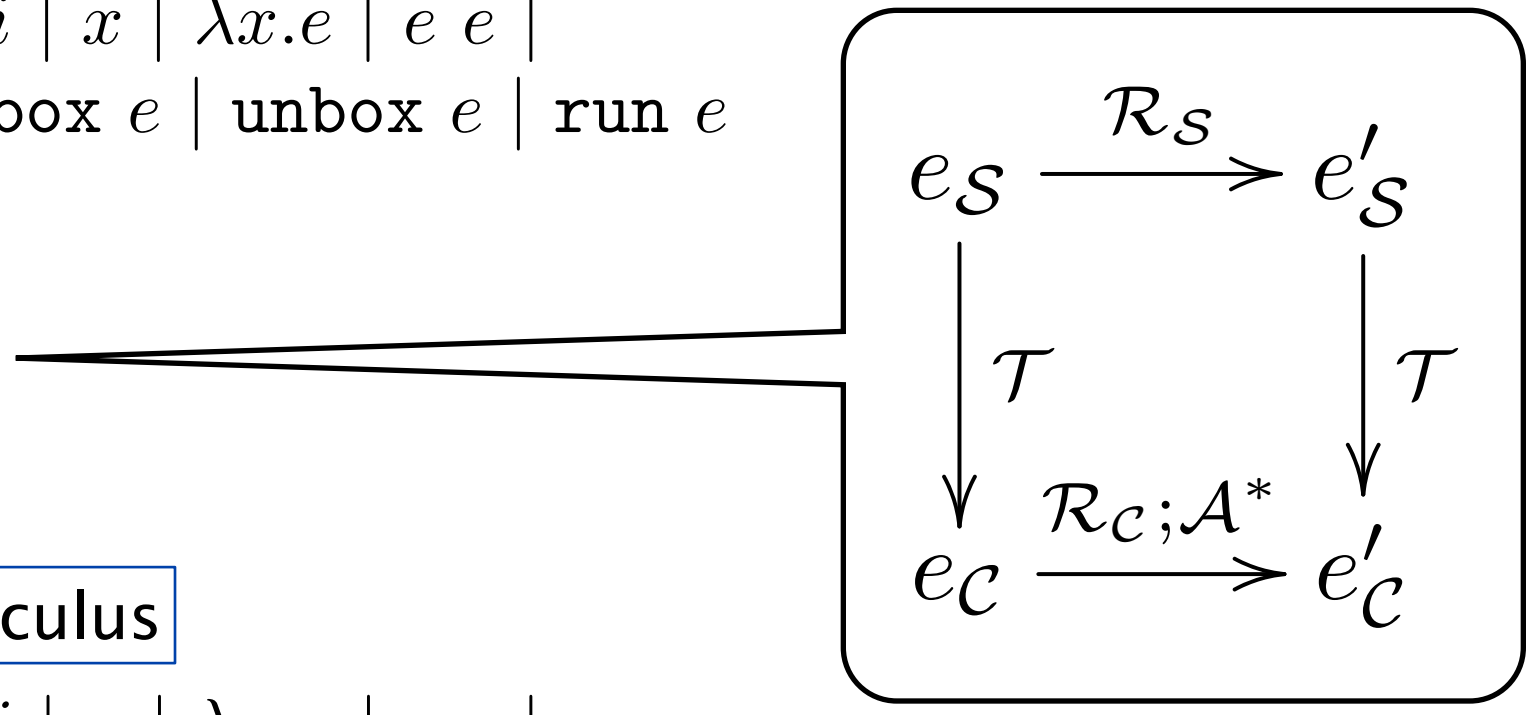
Joonwon Choi / Undergraduate, Seoul National University
jwchoi@ropas.snu.ac.kr

Multi-Staged Calculus

$$\lambda_{\mathcal{S}} \quad e := \quad i \mid x \mid \lambda x.e \mid e\ e \mid \texttt{box}\ e \mid \texttt{unbox}\ e \mid \texttt{run}\ e$$

Context Calculus

$$\lambda_{\mathcal{C}} \quad e := \quad i \mid x \mid \lambda x.e \mid e\ e \mid \delta X.e \mid e \odot e$$



Simulation Property

Example

$$\texttt{box}\ e \mapsto \lambda\rho.e$$
$$\texttt{unbox}\ e \mapsto e\ ()$$