

Language Virtualization $\llbracket \text{if}(c) \ t \ \text{else} \ e \rrbracket = \text{ifThenElse}[T](c, t, e)$



DSL Intrinsification

$\llbracket \text{var } b: \text{Int} = \text{varDef}(0) \rrbracket =$
 $\text{var } b: \text{Rep}[\text{Int}] = \text{this.varDef}(\text{lift}[\text{Int}](0))$

Constants and
Free Variables

$\llbracket 0 \rrbracket = \text{lift}[\text{Int}](0)$
 $\llbracket x \rrbracket = \text{hole}[\text{Int}](\text{id})$

Types

$\llbracket \text{Int} \rrbracket = \text{Rep}[\text{Int}]$

Operations

$\llbracket \text{varDef}(t) \rrbracket =$
 $\text{this.varDef}(t)$