

Scala Inline

No Author Given

No Institute Given

Abstract. [?]

Keywords: Partial Evaluation, Macros
[paper.tex]subfiles float

1 Syntax

2 Typing

$t ::=$	Terms:
x	identifier
$(x : iT) \Rightarrow t$	function
$t(t)$	application
$\{x = t\}$	record
$t.x$	selection
$inline\ t$	inlining starting point
$T ::=$	Types:
$iT \Rightarrow jT$	function type
$\{x : iT\}$	record type
$iT, jT, kT ::=$	Inlineable Types:
T	dynamic type
$static\ T$	static type
$inline?\ T$	maybe inline type
$inline!\ T$	must inline type

Fig. 1.

$\frac{x : iT \in \Gamma}{\Gamma \vdash x : iT}$	(T-IDENT)
$\frac{\Gamma, x : iT_1 \vdash t : jT_2}{\Gamma \vdash (x : iT_1) \Rightarrow t : static\ iT_1 \Rightarrow jT_2}$	(T-FUNC)
$\frac{\Gamma \vdash \{x = t\} : static\ \{x : iT\}}{\Gamma \vdash t : iT}$	(T-REC)
$\frac{\Gamma \vdash t_1 : i(jT_1 \Rightarrow kT_2) \quad \Gamma \vdash t_2 : jT_2}{\Gamma \vdash t_1(t_2) : (i \bar{\wedge} j \bar{\wedge} k)T_2}$	(T-APP)
$\frac{\Gamma \vdash t : i\{x = jT_1, y = kT_2\}}{\Gamma \vdash t.x : (i \bar{\wedge} j)T_1}$	(T-SEL)
$\frac{\Gamma \vdash t : static\ T}{\Gamma \vdash inline\ t : inline!\ T}$	(T-INLINE)

Fig. 2. $\Gamma \vdash t : iT$

TODO

Fig. 3. Intersection of inlineable types $iT_1 \bar{\wedge} jT_2$

TODO

Fig. 4. Intersection of types $T_1 \wedge T_2$