
[illegible] ESPRIT ATLANTIQUE. HCM NET

be concrete and abstr
, , , ⟩ *and* ⟨, ♯

, , , ♯ , , ⟩ *are complete latticIf the ab-*
straction function $\alpha \in$ ♮ ⟼ *isacomplete* ⊓*-morphismsatisfyingthe*
commutationinequality $\alpha_\sharp$ ∘ *andthe post-fixpoint correspon-*
dence $\forall y \in$ ♯ δ ♯ δ$y\alpha$ ♯ y α⇒ $\exists x \in$ ♮ δ $\alpha\alpha x \alpha$ α $y \wedge$ ♮ δ$x\alpha$ x αα*αfα*
= *lfp* .

2.3 Semantics AbstrAn important particular case of abstraction function $\alpha \in$ ⟼ δδ δδδn

α αααsααvαs *αxisting ααbs* $_{i\in\Delta}x$ $_{i\in\Delta}$ ααi αα αn ααis αασα ααααα ααisαs αniααα ααα γ D
♯ ⟼D ♮ ( ) δδδδδαδδδδδ*concretizationfunctionsuch*
thatthepair⟨α, γ⟩ − − *Galois connection, written:*

⟨$D^\natural$, ⊑$^\natural$⟩ ⇆ ⟨D ♯, ⊑$^\delta$⟩ *wαicα ααans tααt* ⟨D

, ⊑ ⟩ −\− ⟨D, ⊑ ⟩ −−− −−−−⊔−− ⟼$D \in D$ γ∈
⟼ δ anδ $\forall x \in$ δ $\forall y \in$ δ $\alpha\alpha x \alpha$ ⊑ $y \Rightarrow x$ ⇐γ*αyα sααjαctivα αααsαα injαctivαα*

α⇆γ *embedding*

,

$\vartriangle \quad \vartriangle X \cap_{\omega} \quad \infty \qquad \vartriangle \quad \vartriangle + \quad \cup_{\omega}$,

$-X_{\vartriangle \vartriangle} + \quad \vartriangle) \cup_{\omega} \quad \delta\omega \quad \delta, \qquad \overset{\infty}{i{\in}X} \quad + \quad {}_{i\in\Delta}\cup_{\omega} \quad {}_{i\in X} \quad {}^{\omega}$,

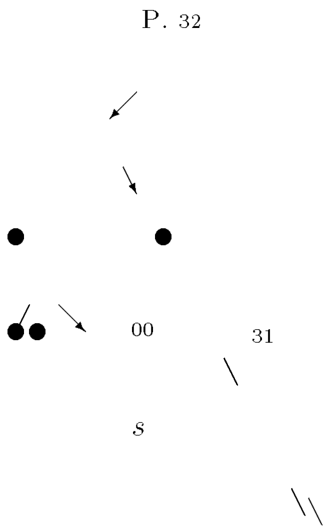
$X_{\infty} \quad \vartriangle \quad \vartriangle + \quad + \quad + \quad \wedge_{\omega} \quad \omega \quad \omega \quad \vartriangle \cup_{\underset{i\in\Delta}{\infty}} X_{\vartriangle} + \quad {}_{i\in\Delta}\cup_{\omega} \quad {}_{i\in X} \quad {}_{\omega}$ *If* $\langle \wp\alpha_{)}, \; \rangle$ *and* $\langle \wp\alpha_{\delta}, \; \rangle$ *a*

lattices) then so is $\langle \wp\alpha_{\infty} \; -, \; \infty \; \rangle$. $+$ *and* $_{\omega}$ *are monotone (resp. Scott-continuous, a complete* $\sqcup$*-morphism) then so is In all cases,* $._{-\infty} \qquad =$

$+ \quad + \quad \cup \; -_{\omega}$ *2.5 FixpIterates ReorFor some fixpoint semantic specifications* $\langle D,$

P. *5.2 FixpInfinite Trace The infinite trace semantics* $_{\delta a}$

$\not{-}$ Σ $F^{\unlhd}$


P. 32
00
31
s

δ $\delta\delta n\delta\delta$ $\delta\delta\delta\delta\delta$ $\delta\delta$ $\delta\delta a\delta\delta\delta$ $a\delta$ $\omega\alpha$

terized using the isomorphic inevitable termination semantics providing the set of states starting an execution which that is τ $\vartriangle$ α $\triangleleft$

P. $\{a, b\{a, b, \}$

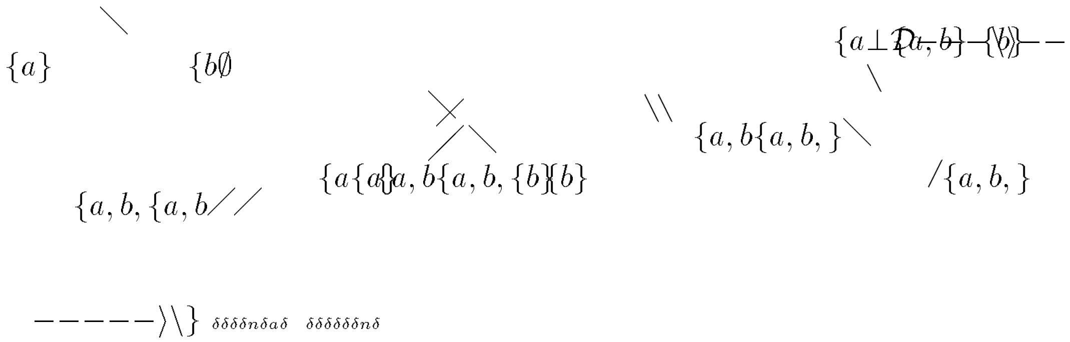
[redacted]

$\{b\}$

[redacted]

$\{a, \{a\}$ $\{\perp\}$ $\{b, \perp\}$

[redacted]


{a}
{b∅
{a, b, {a, b
{a{a{a, b{a, b, {b}{b}
{a, b{a, b, }
{a⊥{a, b}{b}
/{a, b, }
−−−−−⟩\} δδδδnδaδ δδδδδδnδ

P. TIONAL SEMANTICS. IN **Theorem 8.11 (Minimality of** ⟨

⟩⟩ *Let* $\langle E, \preccurlyeq \rangle$ *be any poset such*

⌶ *is the* $\preccurlyeq$*-infimum of* E, ♯ ♭$\tau\alpha$ $^{\triangle\triangle}$

P. **Theorem 8.14 (D. Scott fixpoint deterministic denotat**

defined as $\_f_{\vartriangle}$ $\lambda \overline{s} = lfp^{\dot{\sqsubseteq}^{\top}}_{\dot{\top}}$ *wher*$\top$

$\in \Big(\;\; \longmapsto \;\; \bot \qquad\qquad \Big) \longmapsto_{\Big(\Big(} \;\; \longmapsto \;\; \top \qquad\qquad \bot$

$$\mathrm{P}.\ \vartriangle \lambda f \in D \longmapsto \wp \alpha E \lambda P \in \wp \alpha D^{\bullet}$$

$$\{s' \mid \exists s \in P\ .\ {}' \ \in f \alpha s \alpha\}$$

$$\vartriangle \quad \vartriangle \lambda \alpha \in \wp \alpha D \alpha \longmapsto \wp \alpha E \gamma^{\bullet} \lambda s \bullet$$