

# Chap 6. LR(k) Parsing.

Deterministic Parsing of CFG

GLR(k) - Left Parser ... lookahead  $A \rightarrow d$

LR(k) - Right Parser - lookback & lookahead.  $\text{First}_k(\alpha) \cap \text{Follow}(A)$

G:

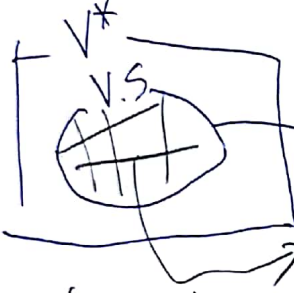
$S \rightarrow aA | bB$

$A \rightarrow c | dAd$

$B \rightarrow c | dBd$

$$L(G) = \{ ad^n cd^n, bd^m cd^m \mid n, m \geq 0 \}$$

Viable stack string - infinite  $\rightarrow$  finite



infinite - viable stack string

finite - LR(k) state

Viable stack string - regular expression

$\frac{R}{Z} M \frac{H}{Z} k y$  - CFMSM (characteristic Finite state machine)

on  $V = \{ \text{nodes} \}$   
 $(\Sigma)$

Let  $h \in \mathbb{N}, \alpha \in V^*$   
 $k: \alpha \dots \rightarrow \alpha \text{ string}$   
 $\alpha: k \rightarrow \dots$   
 $3: \text{school} = \text{sch}$   
 $100: \text{school} = \text{school}$