

05-F2

二叉树

中序遍历：迭代算法

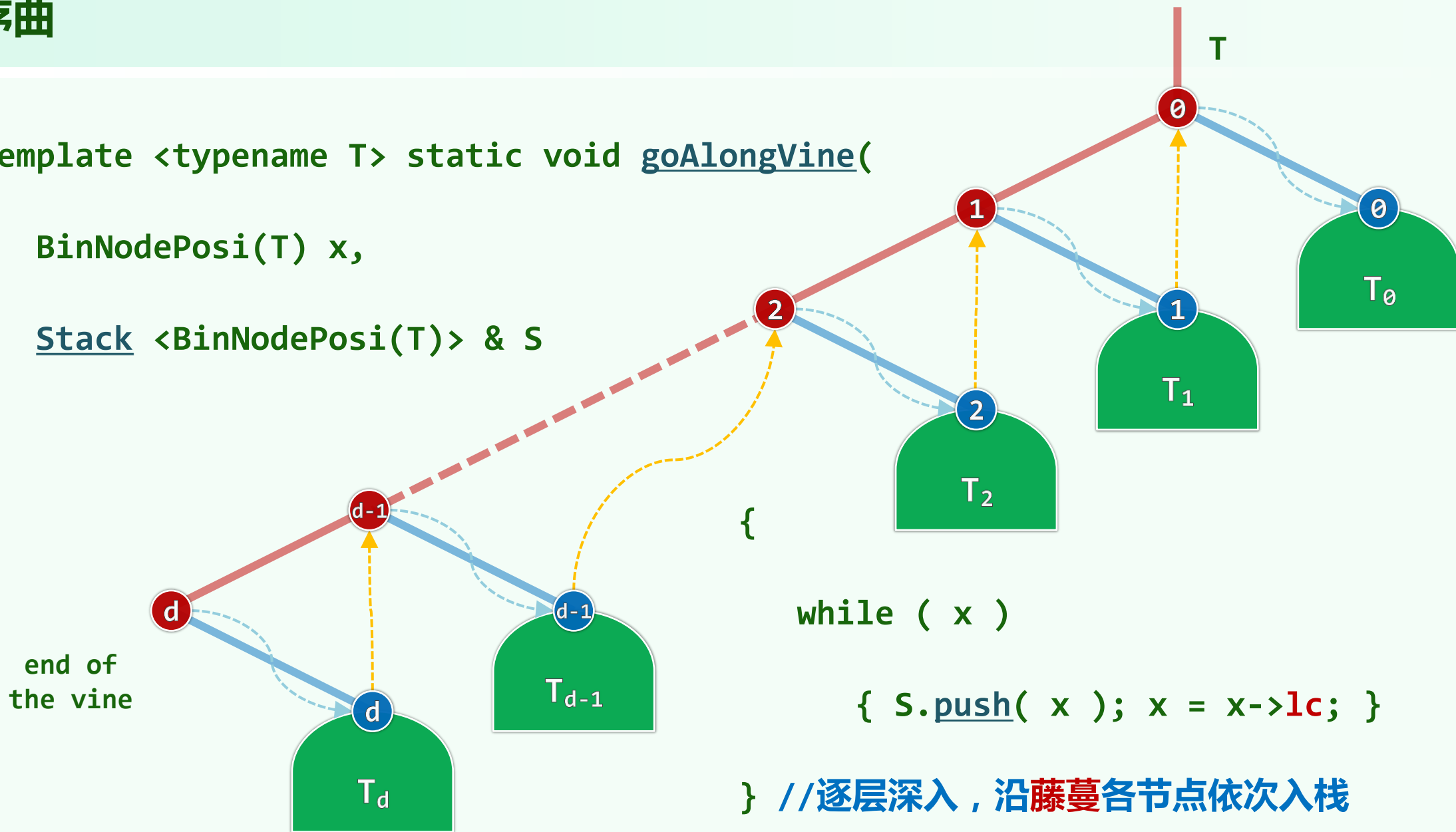
Although we've come to the end of the road
Still I can't let you go

邓俊辉

deng@tsinghua.edu.cn

序曲

```
template <typename T> static void goAlongVine(  
    BinNodePosi(T) x,  
    Stack <BinNodePosi(T)> & S  
)
```



```
{  
    while ( x )  
    { S.push( x ); x = x->lc; }  
} //逐层深入，沿藤蔓各节点依次入栈
```

全曲

❖ template <typename T, typename V>

```
void travIn_I1( BinNodePosi(T) x, V& visit ) {
```

```
    Stack < BinNodePosi(T) > S; //辅助栈
```

```
    while ( true ) { //反复地
```

```
        goAlongVine( x, S ); //从当前节点出发，逐批入栈
```

```
        if ( S.empty() ) break; //直至所有节点处理完毕
```

```
        x = S.pop(); //x的左子树或为空，或已遍历（等效于空），故可以
```

```
        visit( x->data ); //立即访问之
```

```
        x = x->rc; //再转向其右子树（可能为空，留意处理手法）
```

```
    }
```

```
}
```

实例

