# HYDROML, HYbriD PaRallel PrOgramming in ML

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## Plan

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## Ocaml : a ML language

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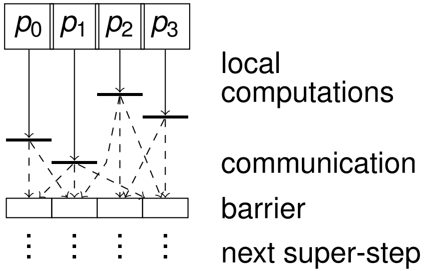

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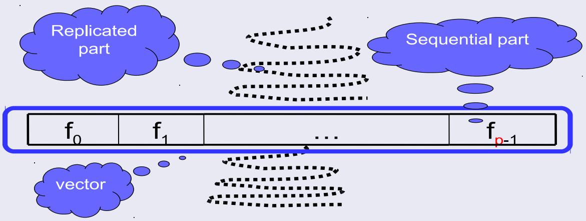
## Main idea

Parallel data structure $\Rightarrow$ vectors :



$\langle\, v_0, \ldots, v_{p-1} \,\rangle : \alpha\, \text{par} \equiv v_i$ on node $i$

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- put : $(int \rightarrow' a)\ par \rightarrow (int \rightarrow' a) par$

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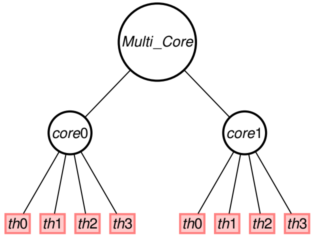

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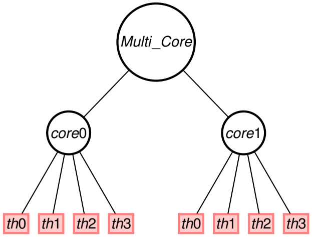
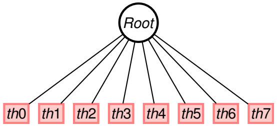
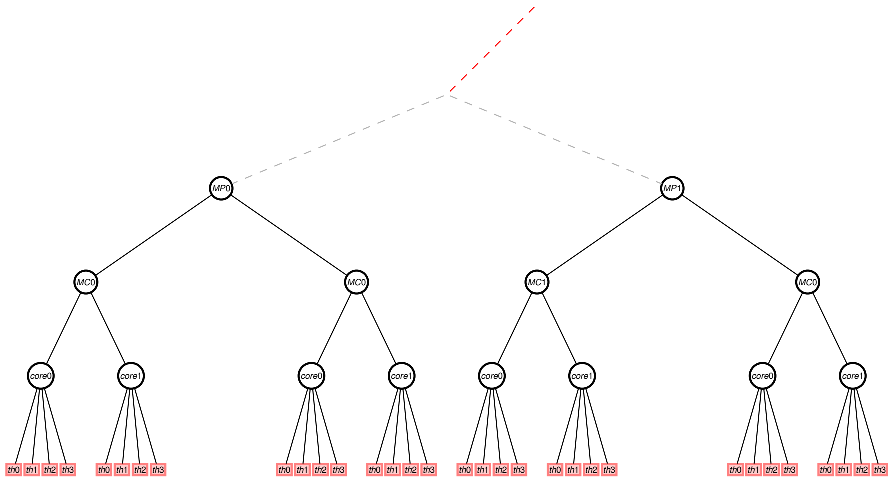


BSP

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### Goals

$$\text{Formal proof} \xrightarrow{\text{Extraction}} \text{H-BSML} \xrightarrow{\text{Compiler}} \text{Hierarchical program}$$

## Thank you for your attention !

Any questions ?