学习汇报

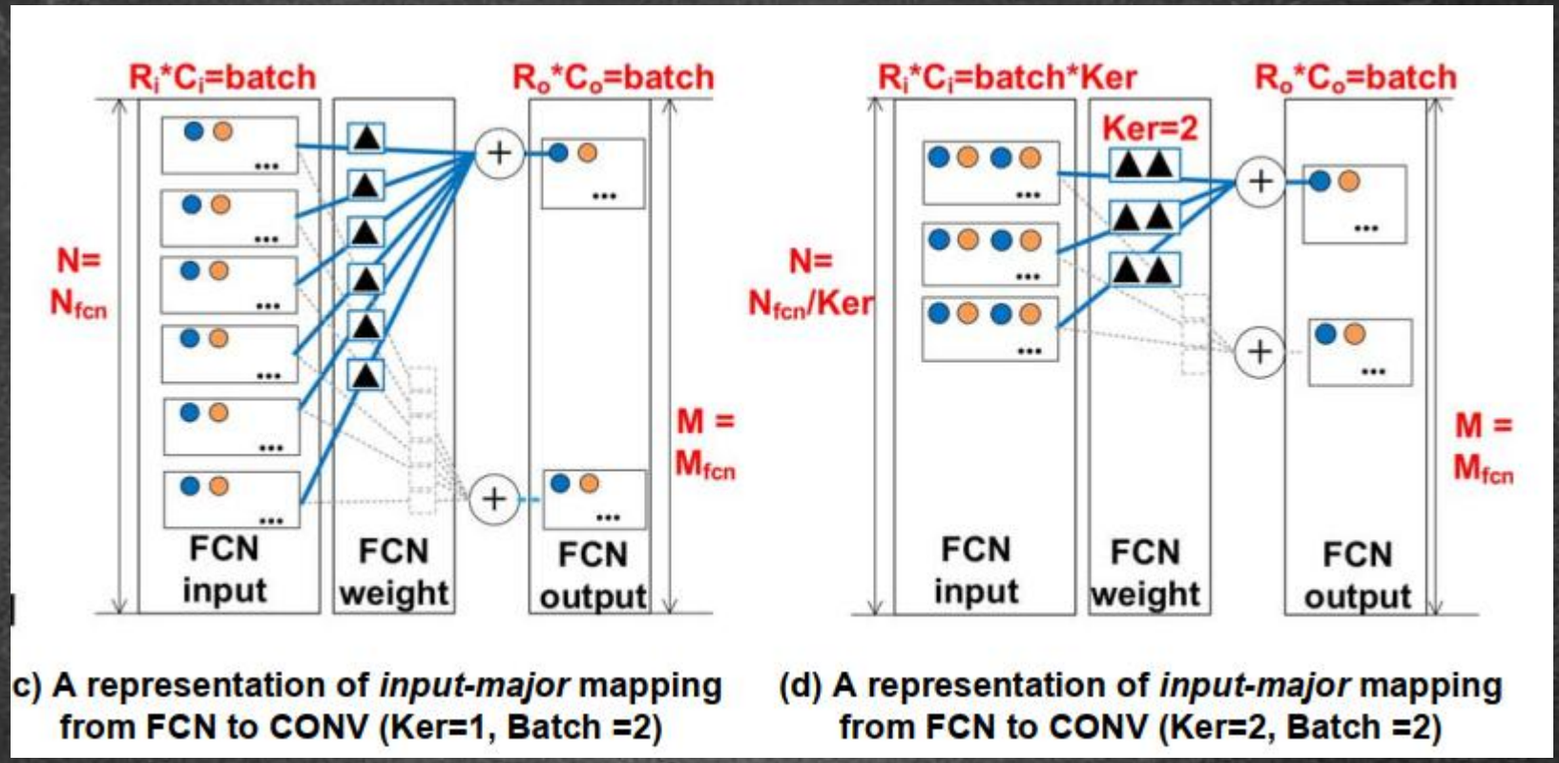
焦强

论文
年前学习计划

论文

2点贡献：
1，UNIFORMED CNN REPRESENTATION。统一的CNN表示。
2，通过动态随机存取存储器布局重组优化带宽。

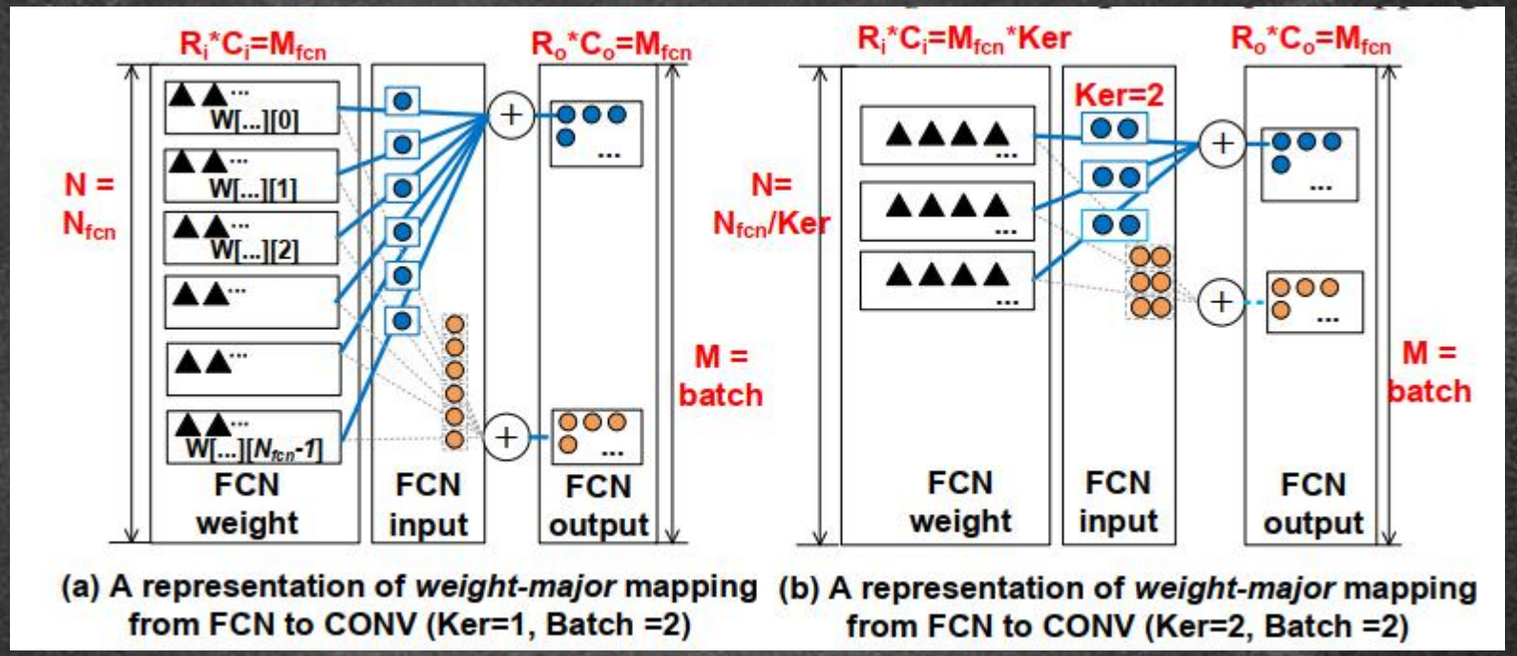
UNIFORMED CNN REPRESENTATION：输入映射



c) A representation of *input-major* mapping from FCN to CONV (Ker=1, Batch =2)

(d) A representation of *input-major* mapping from FCN to CONV (Ker=2, Batch =2)

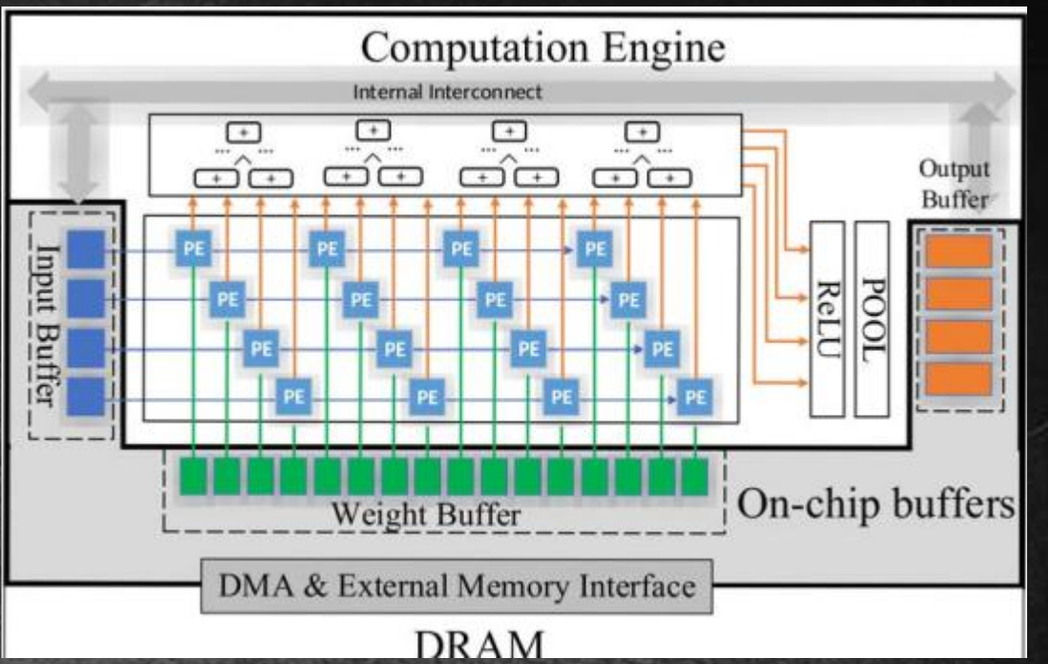
UNIFORMED CNN REPRESENTATION：权重映射

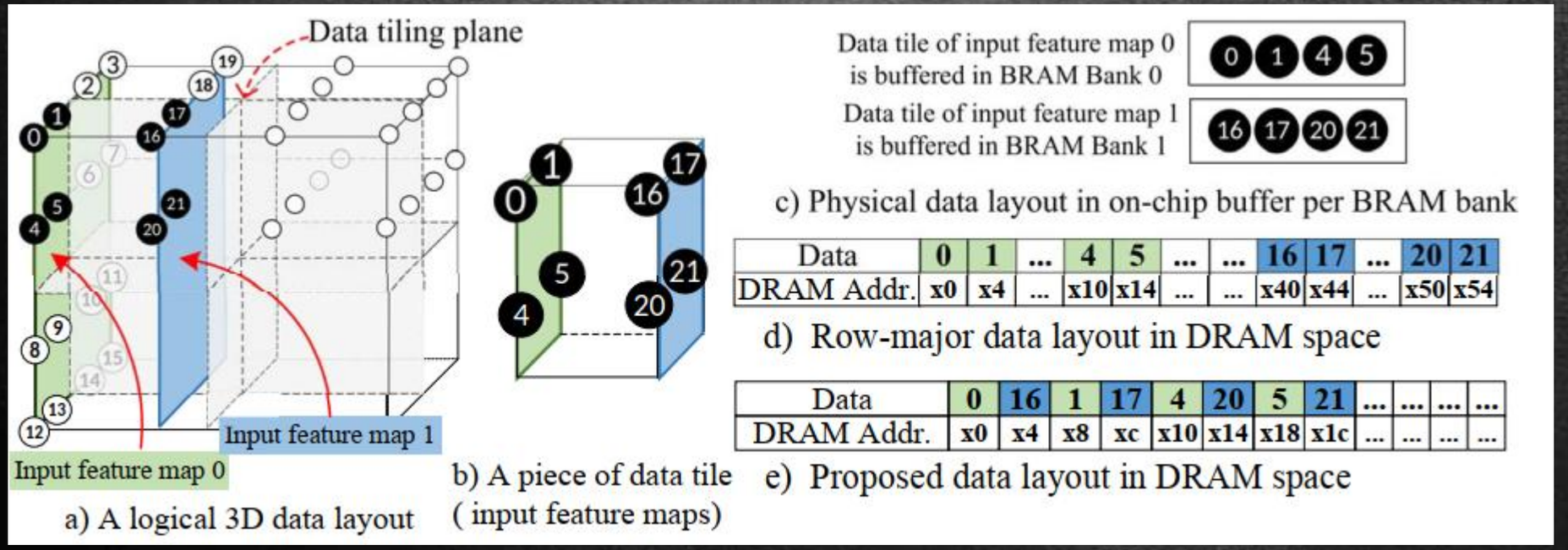


(a) A representation of *weight-major* mapping from FCN to CONV (Ker=1, Batch =2)

(b) A representation of *weight-major* mapping from FCN to CONV (Ker=2, Batch =2)

	Uniformed	Conv	FCN-Input	FCN-Weight
Input FM #	N	N_{conv}	N_{fcn}/ker	N_{fcn}/ker
Input FM size	$R_i \cdot C_i$	$R^{in}_{conv} \cdot C^{in}_{conv}$	batch · ker	$M_{fcn} \cdot ker$
Output FM #	M	M_{conv}	M_{fcn}	batch
Output FM size	$R_o \cdot C_o$	$R^{out}_{conv} \cdot C^{out}_{conv}$	batch	M_{fcn}
Kernel size	$K_1 \cdot K_2$	$K_1 \cdot K_2$	ker	ker
Stride	$S_1 \cdot S_2$	$S_1 \cdot S_2$	ker	ker





Data	0	1	...	4	5	...	...	16	17	...	20	21
DRAM Addr.	x0	x4	...	x10	x14	...	...	x40	x44	...	x50	x54

Data	0	16	1	17	4	20	5	21	...	...	...	...
DRAM Addr.	x0	x4	x8	xc	x10	x14	x18	x1c	...	...	...	...

年前计划

年前计划：论文，视频。UG902实验