





### Currents and e ective resistance

A flow i from u to v is a



 $\begin{array}{l} \mbox{Countable networks}\\ \mbox{Comments on } B_n \,=\, \{ \ ,\, \ldots\, ,\, n\} \end{array}$ 



#### Walsh decomposition

L0.717 Ogw 023i173@)-37452127.825(o)-0.3288@)-0.15230@1-0.97d [1)40.1837

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# Computation of $\frac{i_r^{u,v}(e)}{r(e)}$

Di erentiate the node and cycle laws:

d  $i_r = u - u/R36$  9.9626 Tf 9 16.9 Td [(r)-0.64064735J /R30 9.96264 Tf 81 -26.55 Td [(d)-0.730267]TJ





 $\begin{array}{l} \mbox{Countable networks}\\ \mbox{Comments on } B_n \ = \ \{ \ , \ \ldots \ , n \}^d \mbox{C27}. \end{array}$ 

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Consequence of (2): Gaussian approximation

$$\overline{\mathsf{R}} := \frac{\mathsf{R} - \mathsf{E}(\mathsf{R})}{\sqrt{\mathsf{Var}(\mathsf{R})}}$$

Define  $J(L) = \{$ 

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#### To summarize ...

#### Two conditions for gaussian approximation:

(L) = 
$$\sup_{e}$$



## Adaptation of the preceding setting ?



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Comments on

Countable networks Comments on  $\textbf{B}_n$  = {  $\ , \ \ldots \ , n \}^d$ 

Comments on









