

ON DIFFUSION IN THIN LAYERS
SEPARATED BY SEMI-PERMEABLE MEMBRANES

Adam Bobrowski
Lublin University of Technology, Lublin, Poland

We discuss a theorem saying that diffusion in two thin 3D regions separated by a semi-permeable membrane may be approximated by diffusion on two sides of this membrane. Interestingly, permeability coefficients featuring in transmission conditions become integral parts of the limit equation and play the role of intensities of jumps from one side of the membrane to the other.