

Table 5: Literature comparison of heat transfer mechanisms in heat sinks.  
 Sources: Culham & Muzychka (2001), Teertstra et al. (2000), Kraus & Bar-Cohen (1995).

Cooling Method	Convection %	Other %	Application	Reference
Natural convection	85	15	Passive cooling	Kraus & Bar-Cohen (1995)
Forced convection (low)	92	8	Desktop PC fans	Teertstra et al. (2000)
Forced convection (medium)	95	5	Server cooling	Culham & Muzychka (2001)
Forced convection (high)	97	3	Industrial cooling	Electronics Cooling Mag.
<b>Monte Carlo Results</b>				
Silver (high $\alpha$ )	38.7	61.3	Fast heat spreading	This work
Copper (medium $\alpha$ )	50.1	49.9	Balanced behavior	This work
Steel carbon (low $\alpha$ )	92.9	7.1	Residence time effect	This work