

**Short-range order in high entropy alloys:
Thermodynamic modeling and application to
Nb-Ti-V-Zr system**

Thesis submitted for the degree of

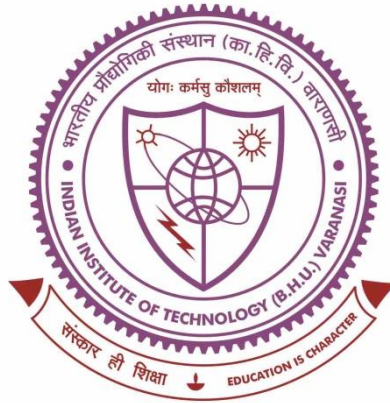
Doctor of Philosophy

in

Metallurgical Engineering

by

Shanker Kumar



Department of Metallurgical Engineering

Indian Institute of Technology (Banaras Hindu University)

Varanasi-221005, India