

# The University of Waterloo

on the recommendation of the Senate  
hereby signifies that

**Sitharam G. Chalak**

has fulfilled the requirements for the degree of

**Doctor of Philosophy**

(Civil Engineering)

and has been granted admission to that degree with all the rights and  
privileges thereto appertaining. In witness whereof we attach our names,  
and the seal of the University.

*D. Thwing*

President and Vice-Chancellor

*R. F. Boyes*

Registrar



*P. M. Rowe*

Dean

This thirtieth day of May  
nineteen hundred and ninety-two.