

# North Carolina State University



On the recommendation of the Faculty and by virtue of the authority vested in them, the Trustees of the University have conferred upon

**Sugandha Singh**  
the degree of  
**Doctor of Philosophy**  
in Civil Engineering

In testimony whereof, the seal of the University and the signatures of its officers are hereunto affixed this the fourth day of December, two thousand twenty.

Self Attested By  
*Sugandha*

*Tim E. C. ...*  
Chairman of the Board of Governors

*Peter Hans*  
President of the University of North Carolina

*Thomas E. Calver*  
Chairman of the Board of Trustees

*Larry Woodson*  
Chancellor

*[Signature]*  
Dean Graduate School

*[Signature]*

ORIGINAL SEEN & VERIFIED