

UNDERTAKING

I, Sunny, certify that the work embodied in this Ph.D. thesis entitled “**Classification and Quantification of Individual/Mixture of Gases/Odors with Soft Computational Techniques Using SnO₂ Based Thick Film Sensor Array**” is my own bonafide work carried out by me under the supervision of **Prof. V. N. Mishra** and co-supervision of **Prof. R. R. Das**, for a period of three years and six months from 06 September, 2011 to 02 March, 2015 in the Department of Electronics Engineering, Indian Institute of Technology (Banaras Hindu University), Varanasi. The matter embodied in this Ph.D. thesis has not been submitted for the award of any other degree/diploma.

(Sunny)

CANDIDATE'S DECLARATION

I, Sunny, certify that the work embodied in this Ph. D. thesis is my own bonafide work carried out by me under the supervision of **Prof. V. N. Mishra** and co-supervision of **Prof. R. R. Das** for a period of three years and six months from 06 September 2011 to 02 March 2015, in the Department of Electronics Engineering, Indian Institute of Technology (Banaras Hindu University), Varanasi. The matter embodied in this Ph.D. thesis has not been submitted for the award of any other degree/diploma.

I declare that I have faithfully acknowledged, given credit to and referred to the research workers wherever their works have been cited in the text and the body of the thesis. I further certify that I have not willfully lifted up some other's work, para, text, data, results, etc. reported in the journals, books, magazines, reports, dissertations, thesis, etc., or available at websites and included them in this Ph. D. thesis and cited as my own work.

Date:

Place: Varanasi

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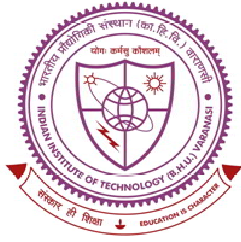
Certificate from the Supervisor/Co-supervisor

This is to certify that the above statement made by the candidate is correct to the best of our knowledge.

Prof. V. N. Mishra
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Prof. R. R. Das
(Co-supervisor)

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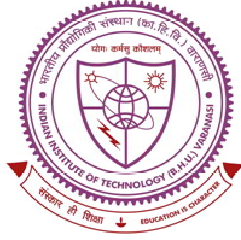
COURSE WORK COMPLETION CERTIFICATE

This is to certify that Mr. Sunny (Enrollment No. 338955), a bonafide research scholar of this department, has successfully completed the course work requirement which is a part of his Ph.D. programme.

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COMPREHENSIVE EXAMINATION COMPLETION CERTIFICATE

This is to certify that Mr. Sunny (Enrollment No. 338955), a bonafide research scholar of this department, has successfully completed the comprehensive examination clearance requirement which is a part of his Ph. D. programme.

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Ph.D. PRE-SUBMISSION SEMINAR CERTIFICATE

This is to certify that **Mr. Sunny**, Ph.D. Scholar, Department of Electronics Engineering, Indian Institute of Technology (Banaras Hindu University), Varanasi has delivered his Ph.D. Pre-Submission Seminar on his Ph.D. topic "**Classification and Quantification of Individual/Mixture of Gases/Odors With Soft Computational Techniques Using SnO₂ Based Thick Film Sensor Array**", on 18th October, 2014 at 11:00 A.M. in the Committee Room of the Department as per the satisfaction of RPC and DRC/DPGC members.


(Prof. V. N. Mishra)
Supervisor


Convener of DPGC


18/10/2014
Head of the Department

Signature of RPC Members:

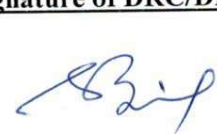
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Signature of DRC/DPGC Members:

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Title of the Thesis: **“Classification and Quantification of Individual/Mixture of Gases/Odors with Soft Computational Techniques Using SnO₂ Based Thick Film Sensor Array”**

Candidate’s Name: Sunny

Copyright Transfer

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Signature of the candidate

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