

# भारतीय प्रौद्योगिकी संस्थान रुड़की

(पूर्व रुड़की विश्वविद्यालय)

अभिषद् की अनुशंसा पर

डॉक्टर ऑफ़ फ़िलॉसफी

की उपाधि

सहजपाल सिंह

को, जिन्होंने इस उपाधि की अवधि हेतु विनियम विहित अपेक्षाओं को सन् 2002 में सफलतापूर्वक पूरा कर लिया है, यत्नद्वारा प्रदान करता है।  
शोध प्रबन्ध शीर्षक: स्टडीज़ इन मेटल फ़िनिशिंग विद मैग्नेटिकली असिस्टेड एब्रेसिव लो मशीनिंग  
भारतीय गणराज्य के अन्तर्गत रुड़की में आज, दिनांक 24 नवम्बर 2002, संस्थान की मुद्रा अंकित यह उपाधि दी गई।

## INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

(Formerly University of Roorkee)

Upon the recommendation of the Senate hereby confers the degree of

Doctor of Philosophy

on

**SEHJIPAL SINGH**

who has successfully completed in the year 2002 the requirements prescribed under the regulations for the award of this degree

Thesis Title: **STUDIES IN METAL FINISHING WITH MAGNETICALLY ASSISTED ABRASIVE FLOW MACHINING**

Given this day, the 24<sup>th</sup> of November 2002, under the seal of the Institute at Roorkee in the Republic of India.

*J.R. Goshi*  
अध्यक्ष, अभिशासक परिषद्  
Chairman, Board of Governors

*Sham Nath*  
निदेशक एवं अध्यक्ष, अभिषद्  
Director & Chairman, Senate

*N. D. Sharma*  
कुलसचिव  
N. D. SHARMA Registrar

Ccy. Commander

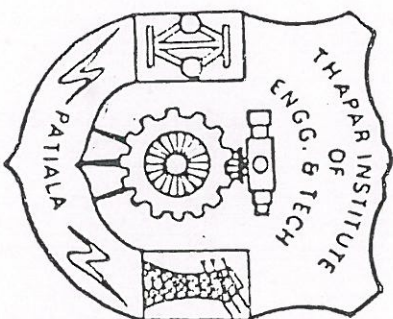




# Factor of Philosophy

Given this day under the seal of the Institute at Natal  
The Eight day of October, One Thousand Nine Hundred  
and Ninety Nine.

*Barbara*  
Director



Alto bed  
down



## भारतीय प्रौद्योगिकी संस्थान रुड़की

(पूर्व रुड़की विश्वविद्यालय)

अभिषद् की अनुमति पर

डॉक्टर ऑफ़ फ़िलॉसफी

की उपाधि

हरदीप सिंह

को, जिन्होंने इस उपाधि की अवाप्ति हेतु विनियम विहित अपेक्षाओं को सन् 2003 में सफलतापूर्वक पूरा कर लिया है, एतद्वारा प्रदान करता है।  
शोध प्रबन्ध शीर्षक: ए स्टडी ऑन पोटेन्शियल ऑफ़ जेनेटिक अल्गोरिथम्स इन सिविल इंजीनियरिंग  
भारतीय गणराज्य के अन्तर्गत रुड़की में आज, दिनांक 17 नवम्बर 2003, संस्थान की मुद्रा अंकित यह उपाधि दी गई।

## INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

(Formerly University of Roorkee)

Upon the recommendation of the Senate hereby confers the degree of

Doctor of Philosophy

on

**HARDEEP SINGH**

who has successfully completed in the year 2003 the requirements prescribed under the regulations for the award of this degree

Thesis Title: A STUDY ON POTENTIAL OF GENETIC ALGORITHMS IN CIVIL ENGINEERING

Given this day, the 17<sup>th</sup> of November 2003, under the seal of the Institute at Roorkee in the Republic of India.

*Dr. Gopal*  
अध्यक्ष, अभिशासक परिषद्  
Chairman, Board of Governors

*Pranlal*  
निदेशक एवं अध्यक्ष, अभिषद्  
Director & Chairman, Senate

*Shivani*  
कुलसचिव  
Registrar





(4)

# राँची विश्वविद्यालय



प्रमाणित किया जाता है कि

**जगदा नन्द भा**

को,

जिन्होंने शक संवत् १९१७ के वैशाख मास  
(तदनुसार मई १९९५ ई०)

में आयोजित

डॉक्टर ऑफ फिलॉसफी (इजीनियरिंग)

परीक्षा उत्तीर्ण की,

आज यह उपाधि प्रदान की गयी ।

शोध का विषय :

स्ट्रेन्थ एण्ड डिफार्मेशन कीरअक्टरइस्टइक ऑफ रेनफोर्सड  
सीन्ड सबग्रेड्स बिलो एगजिस्टिंग फुटइइगस!

राँची विश्वविद्यालय, राँची

तिथि .....

अनवर अ. खात  
कुलपति



5

Registration No. 90602501



# Shri Ram University, Patiala

(Declared as Deemed-to-be-University u/s 3 of the UGC Act, 1956)

## Doctor of Philosophy

*(Signature)*

Certified that \_\_\_\_\_ Harvinder Singh \_\_\_\_\_ son of

Shri Baldev Singh & Smt. Joginder Kaur

has obtained the Degree of Doctor of Philosophy on his having successfully completed the prescribed requirements for the said degree in May 2012.

The title of his thesis is :

Flexural Behaviour of Reinforced Concrete Slabs

with Generalized Edge-Conditions

Given this day under the seal of the University at Patiala, the Tenth day of November, Two Thousand and Twelve.

*(Signature)*



*(Signature)*  
A: \_\_\_\_\_



# Punjab Agricultural University

Ludhiana (India)

Certified that Jagbir Singh

Admission No. L-2002-AE-84-D

son of Mr. Bhag Singh and Mrs. Gurnash Kaur  
having successfully completed the programme,  
has obtained the degree of Doctor of Philosophy  
in the discipline of Civil Engineering  
with Overall Credit Point Average 7.95 out of 10.00  
(Seven point nine five out of Ten) in August 2007.

Given under the seal of the University



Dated : February 4, 2008

Registrar

Vice-Chancellor

Chancellor

587

Civil



EDP S. No.: 600000072

Regn. cum Roll No. 01.27.09

ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ  
Punjab Technical University  
Jalandhar



Doctor of Philosophy

The Board of Governors of Punjab Technical University, Jalandhar upon the recommendation of the Academic council hereby confers on Mr./Ms. **Kubir Singh Gill** Son/Daughter of Sh. Harmohinder Singh Gill Degree of Doctor of Philosophy in the faculty of CIVIL ENGINEERING. The subject on which He/She presented the thesis for the Degree was " BEARING CAPACITY AND STABILITY ANALYSIS OF REINFORCED FLY ASH SLOPES "

Given under the seal of the University

ਬਿਜਲਾ  
Registrar  
Jalandhar, 10/11/2013

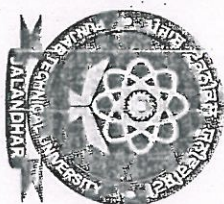
ਵਾਈਸ-ਚਾਂਸਲਰ  
Vice-Chancellor

ਚਾਂਸਲਰ  
Chancellor



ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ

# PUNJAB TECHNICAL UNIVERSITY




## Doctor of Philosophy


The Board of Governors of Punjab Technical University, Jalandhar upon the recommendation of the Academic council hereby confers on Mr./Ms. Baljit Singh Walia Son/Daughter of Sh. Raghubir Singh Walia Degree of Doctor of Philosophy in the faculty of Engineering at the convocation of 2007.


The subject on which He/She presented the thesis for the Degree was:-

"Behaviour of Footings Resting on Reinforced Layered Sand."

Given under the seal of the University

  
ਵਾਈਸ ਚਾਂਸਲਰ

  
ਰਜਿਸਟਰਾਰ

  
ਡੀਨ



# भारतीय प्रौद्योगिकी संस्थान दिल्ली

प्रविष्टि संख्या/Entry No. 2003ESSZ0008

आभिमर्श की अनुशंसा पर

विद्या वाचस्पति  
की उपाधि एतद्वारा

परमजीत सिंह  
को प्रदान करता है।

शोध-प्रबन्ध शीर्षक : स्टडी ऑफ वोरटेक्स ट्यूब अल्टरनेटिव रेफ्रिजरेशन ऐन्ड एयर कन्डिशनिंग ऑप्शंस फॉर एनर्जी कन्सर्वेशन ।  
भारतीय गणराज्य के अन्तर्गत दिल्ली में आज, दिनांक 8 अगस्त 2010 को संस्थान की मुद्रा अंकित यह उपाधि दी गई।

*Indian Institute of Technology Delhi*

Upon the recommendation of the Senate hereby confers the degree of

Doctor of Philosophy  
on

**PARAMJIT SINGH**

Thesis title : STUDY OF VORTEX TUBE INTEGRATED ALTERNATIVE REFRIGERATION & AIR CONDITIONING OPTIONS FOR  
ENERGY CONSERVATION.

Given this day, the 8<sup>th</sup> of August 2010, under the seal of the Institute at Delhi in the Republic of India.

*Paramjit Singh*

*Paramjit Singh*

*Paramjit Singh*





Serial N

No 7026

Roll No. 1932

Registration No. BBSE(FS)93-47



(Established under Punjab Act No. 35 of 1961)

## Doctor of Philosophy

Certified that Harvinder Singh, son/daughter  
of Shri Mohinder Singh and Smt. Bhupinder Kaur,  
of the Punjab State, has

this day been admitted by the Senate in the degree of  
**Doctor of Philosophy**

in

A Study to Improve the Utilization of

New Technologies in Manufacturing Industry

in the faculty of

Engineering and Technology

Given under the seal of the University.

CHANCELLOR

VICE-CHANCELLOR

REGISTRAR

PATIALA September 02, 200x 2010



Serial N<sup>o</sup> 89252

145/2  
Roll No. 2392

Registration No. PUP(PH.D)2008-183

# Punjabi University Patiala



(Established under Punjab Act No. 35 of 1961)

## Doctor of Philosophy

Certified that Jatinder Kapoor, son/daughter  
of Shri Suraj Parkash and Smt. Pushpa Kapoor,  
of the Punjab State  
has this day been admitted by the Senate in the degree of

## Doctor of Philosophy

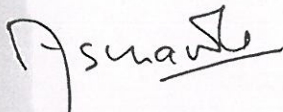
in

Effect of Cryogenic Treated Brass Wire on  
the Performance of Wire Electrical  
Discharge Machining

in the faculty of

Engineering and Technology

Given under the seal of the University.

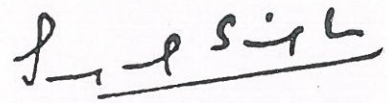


REGISTRAR

PATIALA May 6, 2013



CHANCELLOR



VICE-CHANCELLOR



## भारतीय प्रौद्योगिकी संस्थान रुड़की

अभिषद् की अनुशंसा पर

विद्या वाचस्पति

की उपाधि

हरमीत सिंह

को, जिन्होंने इस उपाधि की अवधि हेतु विनियम विहित अपेक्षाओं को सन् 2013 में सफलतापूर्वक पूरा कर लिया है, एतद्वारा प्रदान करता है।  
 शोध प्रबन्ध शीर्षक: इनवेस्टीगेशन ऑन परफॉरमेंस ऑफ ए पैकड बैड सोलर एनर्जी स्टोरेज सिस्टम  
 भारतीय गणराज्य के अन्तर्गत रुड़की में आज, दिनांक 21 सितम्बर 2013, संस्थान की मुद्रा अंकित यह उपाधि दी गई।

## INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

On the recommendation of the Senate hereby confers the degree of

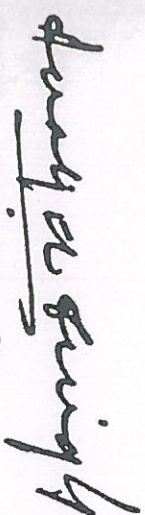
Doctor of Philosophy

upon

**HARMEET SINGH**

who has successfully completed in the year 2013 the requirements prescribed under the regulations for the award of this degree

Thesis Title: INVESTIGATION ON PERFORMANCE OF A PACKED BED SOLAR ENERGY STORAGE SYSTEM

Given this day, the 21<sup>st</sup> of September 2013, under the seal of the Institute at Roorkee in the Republic of India

अध्यक्ष, अभिशासक परिषद्  
Chairman, Board of Governors

निदेशक एवं अध्यक्ष, अभिषद्  
Director & Chairman, Senate

कुलसचिव  
Registrar



Serial No. PH-00325

Registration No. PME 1008

## संत लौंगोवाल अभियांत्रिकी एवं प्रौद्योगिकी संस्थान

लौंगोवाल, जिला संगरूर, पंजाब (भारत) - 984906  
(भारत शासन अधीन सम विश्वविद्यालय)

अभिषद की अनुशंसा पर

विद्या वाचस्पति

की उपाधि एतद द्वारा

शुभिंदर सिंह सुत्र तेजा सिंह

विभाग यांत्रिक अभियांत्रिकी

को प्रदान करता है।

शोध प्रबन्ध शीर्षक : सम स्टडीज ऑन फ्रिक्शन स्टिर वेल्डिंग ऑफ मैग्नीशियम एलाय

सात मार्च दो हजार बीस को भारतीय गणराज्य के अधीन लौंगोवाल (पंजाब) में स्थित संस्थान की मुद्रा अंकित यह उपाधि प्रदान की गयी।

Sant Longowal Institute of Engineering and Technology

(Deemed to be University under Section 3 of UGC Act, 1956)

(CETI under MHRD, Govt. of India)

Longowal, Dist. Sangrur, Punjab (India) - 148106

Upon recommendation of the Senate hereby confers the degree of

Doctor of Philosophy

on

BHUPINDER SINGH Son of TEJA SINGH

Department of Mechanical Engineering

THESIS TITLE : SOME STUDIES ON FRICTION STIR WELDING OF MAGNESIUM ALLOY

Given this day, the 07<sup>th</sup> March, 2020, under the seal of the Institute at Longowal (Punjab) in the Republic of India.

कुल सचिव

संगरूर

निदेशक एवं अध्यक्ष, अभिषद

डिरेक्टर &amp; ध्यातमान, केमान

अध्यक्ष, प्रबंधन मंडल

ध्यातमान, बोर्ड ऑफ़ ध्यातमान





ਆਈ. ਕੇ. ਗੁਜਰਾਲ ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ ਜਲੰਧਰ  
Dr. Bunsal Bunsal Technical University Jalandhar

Formerly

Jalandhar Technical University Jalandhar



Doctor of Philosophy

The Board of Governors of Punjab Technical University, Jalandhar upon the recommendation of the Academic council hereby confers on Mr./Ms Chawant Singh Pandher Son/Daughter of Sh. Jasbir Singh Pandher Degree of Doctor of Philosophy in the faculty of ENGINEERING (MECHANICAL ENGINEERING) IN SEPTEMBER-2019. The subject on which He/She presented the thesis for the Degree was " DESIGN OF COMPOSITE LEAF SPRING - AN EXPERIMENTAL AND NUMERICAL APPROACH. "

Given under the seal of the University

ਰਜਿਸਟਰਾਰ  
Registrar

Jalandhar, 18-02-2020

ਵਾਈਸ-ਚਾਂਸਲਰ  
Vice-Chancellor

ਚਾਂਸਲਰ  
Chancellor



80



EXPLORE • INNOVATE • EXCEL



Document ID: 13308012  
Serial No: D180509

Punjab Engineering College

(Deemed to be University)  
Chandigarh

On recommendation of the Senate, the Institute hereby confers the degree of

*Doctor of Philosophy*


on


**Harish Kumar Banga**

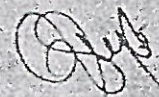
who has successfully completed in the year 2018 the requirements for the award of this degree

Thesis Title: "Enhancing Walking Stability of Patients with Foot Drop Deformities using  
Ankle Foot Orthosis Fabricated by Additive Manufacturing"

Given this day, 13<sup>th</sup> of October, 2018 under the seal of the Institute at Chandigarh

  
Registrar

  
Director

  
Chairman Board of Governors



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EDP S. No.: 600000113

Regn. cum Roll No.

05.39.08

ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ

ਮੁਹਿੰਸ਼ਾਹ ਓਰੀਐਂਟਲ ਯੂਨੀਵਰਸਿਟੀ

ਮੁਹਿੰਸ਼ਾਹ



Doctor of Philosophy

The Board of Governors of Punjab Technical University, Jalandhar upon the recommendation of the Academic council hereby confers on Mr./Ms. Jasmaninder Singh Grewal Son/Daughter of Sh. Gurbir Singh Grewal Degree of Doctor of Philosophy in the faculty of Mechanical Engineering. The subject on which He/She presented the thesis for the Degree was "Study of Nanostructured and Conventional Tiain Coating on Bailer Stainless Steels with Respect to Erosion and Wear."

Given under the seal of the University

2. 12.2014

ਚਾਂਸਲਰ

ਰਜਿਸਟਰ

ਵਾਈਸ-ਚਾਂਸਲਰ

ਚਾਂਸਲਰ

Jalandhar, 12/09/2014



22

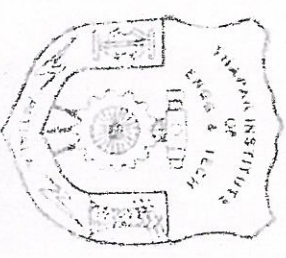
Registration No. 9010553

Chhapper Institute of Engineering and Technology, Patiala  
(Deemed University)

Doctor of Philosophy

Certified that Harjinder Singh son/daughter of Harjinder Singh & Smt. Jasinder Kaur has obtained the Degree of Doctor of Philosophy on his/her having successfully completed the prescribed requirements for the said degree in September 2006.  
Given this day under the seal of the Institute at Patiala, the Twenty-fourth day of October, Two Thousand and Six.

Registrar



Director



ਮਾਮਲਾ ਨੰ 6914

152

146

ਚੋਲ ਨੰਬਰ 1869

ਰਜਿਸਟ੍ਰੇਸ਼ਨ ਨੰ. ਪਿੰਡ ਪੀ (ਪੀ.ਐੱਚ. ਡੀ) 2007-141

# ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ ਪਟਿਆਲਾ



(1961 ਦੇ ਪੰਜਾਬ ਐਕਟ ਨੰ: 35 ਤਹਿਤ ਸਥਾਪਤ)

ਡਾਕਟਰ ਆਰ ਫਿਲਾਸਫੀ

ਪ੍ਰਮਾਣਿਤ ਕੀਤਾ ਜਾਂਦਾ ਹੈ ਕਿ

ਹਰਪ੍ਰੀਤ ਸਿੰਘ

ਪੰਜਾਬੀ ਸ਼੍ਰੀ

ਗੁਰਦੀਪ ਸਿੰਘ ਅਤੇ ਕ੍ਰਿਸ਼ਨੀ ਸ਼ਰਮਾ ਵੱਲੋਂ

ਪੰਜਾਬ ਸਟੇਟ

ਯੂਨੀਵਰਸਿਟੀ ਦੀ ਸੈਨੇਟ ਦੁਆਰਾ

“ ਦੇ ਸਕਾਲਰ ਆਫ ਪਾਥਰ ਰਿਸਰਚ ਕੀਲਾਇਬਿਲਟੀ ਐਂਡ

ਰਿਸਰਚ ਇੰਫੋਰਮੇਸ਼ਨ ਆਲ ਸਕੀਮ ਇੰਸਟੀਟਿਊਟ ਆਫ ਪੰਜਾਬ ”

ਦੇ ਵਿਸ਼ੇ ਤੇ

ਇੰਸਟੀਟਿਊਟ ਆਫ ਪਾਥਰ ਰਿਸਰਚ

ਫੈਕਲਟੀ ਵਿਚ

ਡਾਕਟਰ ਆਰ ਫਿਲਾਸਫੀ

ਦੀ ਡਿਗਰੀ

ਪ੍ਰਦਾਨ ਕੀਤੀ ਜਾਂਦੀ ਹੈ

ਯੂਨੀਵਰਸਿਟੀ ਦੀ ਸੀਲ ਅਧੀਨ ਪ੍ਰਦਾਨ ਕੀਤੀ ਗਈ ।

ਸ. ਮਹਿਤਾ

ਰਜਿਸਟਰਾਰ

ਪਟਿਆਲਾ, 24, 2009

ਚਾਂਸਲਰ

ਚਾਂਸਲਰ

ਵਾਈਸ-ਚਾਂਸਲਰ



25

ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ

# PUNJAB TECHNICAL UNIVERSITY



## Doctor of Philosophy

This is to certify that **Yadvinder Singh Brar** Son of Shri Gurdev Singh, and of the Faculty of Engineering, has been awarded the Degree of Doctor of Philosophy (Electrical Engineering) of this University in 2005.

The topic of his Thesis was "Economic Dispatch of Electric Power System with Conflicting Objectives."

Given under the seal of the University

*[Signature]*

REGISTRAR  
16 Feb 2005

*[Signature]*

VICE-CHANCELLOR

*[Signature]*

CHANCELLOR

10202

21



26

भारतीय का अनुशासन पर

डॉक्टर ऑफ़ फ़िलॉसफ़ी

की उपाधि

कंवरदीप सिंह

244

को, जिन्होंने इस उपाधि की अर्वाचि हेतु विनियम विहित अपेक्षाओं को सन् 2010 में सफलतापूर्वक पूरा कर लिया है, एतद्वारा प्रदान करता है।  
शोध प्रबन्ध शीर्षक: कन्जेशन मैनेजमेन्ट अन्डर ट्रांसमिशन ओपन एक्सेस  
भारतीय गणराज्य के अन्तर्गत रुड़की में आज, दिनांक 13 नवम्बर 2010, संस्थान की मुद्रा अंकित यह उपाधि दी गई।

## INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

On the recommendation of the Senate hereby confers the degree of

Doctor of Philosophy

upon

**KANWARDEEP SINGH**

who has successfully completed in the year 2010 the requirements prescribed under the regulations for the award of this degree

Thesis Title: CONGESTION MANAGEMENT UNDER TRANSMISSION OPEN ACCESS

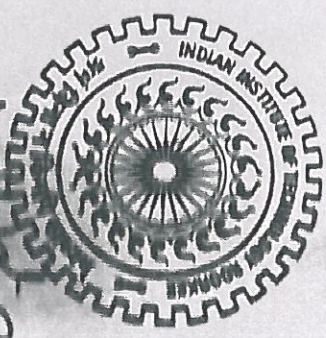
Given this day, the 13<sup>th</sup> of November 2010, under the seal of the Institute at Roorkee in the Republic of India.

*Signature*  
मान, अभिशासक परिषद्

man, Board of Governors

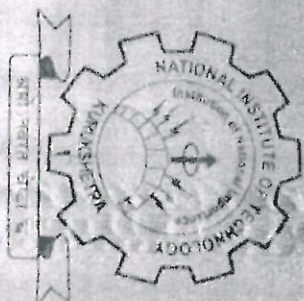
*Signature*  
निदेशक एवं अध्यक्ष, अभिषद्  
Director & Chairman, Senate

*Signature*  
कुलसचिव  
Registrar



REMARKS OR COSTS OF DAMAGES WHATSOEVER OR HOWSOEVER CAUSED ARISING DIRECTLY OR INDIRECTLY IN CONNECTION WITH OR ARISING OUT OF THE USE OF THIS MATERIAL.





# राष्ट्रीय प्रौद्योगिकी संस्थान

कुरुक्षेत्र

एतद्वारा इलेक्ट्रिकल इंजीनियरिंग में  
डॉक्टर ऑफ फिलॉसफी

की उपाधि नवनीत सिंह भंगू

पुत्र/पुत्री श्री साधु सिंह भंगू को प्रदान करता है, जिसके शोध विषय का शीर्षक

“इन्वर्सटीगेशन फॉर आर सी एम इमपलीमेंटेशन इन थर्मल पावर प्लान्ट” है।

यह मुद्रित उपाधि ४ मार्च, २०१७ को प्रदान की गई।

## National Institute of Technology

### Kurukshetra

hereby confers the degree of

## Doctor of Philosophy

in Electrical Engineering

on **Mr. Naveet Singh Bhangu**  
son / daughter of **Shri Sadhu Singh Bhangu**





Serial No.: } 12Ph.D.06  
कम संख्या : }

Registration No.: } 2K7-Ph.D. ECE-85  
पंजीकरण संख्या : }

# National Institute of Technology, Hamirpur (Himachal Pradesh)

*Upon the recommendation of the Senate hereby confers the degree of*

*Doctor of Philosophy*

*or*

SANDEEP SINGH GILL

THESIS TITLE: VLSI CIRCUIT PARTITIONING USING EVOLUTIONARY OPTIMIZATION TECHNIQUES  
*Given this day, the 13<sup>th</sup> of June 2013 under the seal of the Institute at Hamirpur in the Republic of India.*

राष्ट्रीय प्रौद्योगिकी संस्थान, हमीरपुर (हिमाचल प्रदेश)

अभिषद की अनुशंसा पर

विद्या वाचसांति

की उपाधि एतद्वारा

संदीप सिंह गिल

को प्रदान करता है।

शोधप्रबन्ध शीर्षक: वी एल एस आई सर्किट पारटिशनिंग यूजिंग एवोल्यूशनरी ऑप्टिमाइजेशन टेक्नीक्स  
भारतीय गणराज्य के अन्तर्गत हमीरपुर, (हि.प्र.) में आज, दिनांक 13 जून 2013 को संस्थान की मुद्रा अंकित यह उपाधि दी गई।

*S. J. J.*  
Chairman, Board of Governors  
अध्यक्ष, अभिशासक परिषद्

*Rayini*  
Director & Chairman, Senate  
निदेशक एवं अध्यक्ष, अभिषद

*24*  
Registrar  
कुलसचिव



348

29



385

EDP S. No.: 600000327

Regn. cum Roll No.

1005008

ਆਈ. ਕੇ. ਗੁਜਰਾਲ ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ ਜਲੰਧਰ  
J.K. Gujral Punjab Technical University Jalandhar  
Formerly Punjab Technical University Jalandhar



## Doctor of Philosophy

The Board of Governors of I.K. Gujral Punjab Technical University, Jalandhar upon the recommendation of the Academic council hereby confers on Mr./Ms **Narwant Singh Grewal** Son/Daughter of Sh. Dalvir Singh Degree of Doctor of Philosophy in the faculty of ENGINEERING (ELECTRONICS AND COMMUNICATION ENGINEERING) IN APRIL-2018. The subject on which He/She presented the thesis for the Degree was " ANTENNA ARRAY FAILURE CORRECTION USING OPTIMIZATION TECHNIQUES. "

Given under the seal of the University

ਰਜਿਸਟਰਾਰ  
Registrar

Jalandhar, 12-07-2018

ਵਾਈ-ਚਾਂਸਲਰ  
Vice-Chancellor

ਚਾਂਸਲਰ  
Chancellor

V. S. Singh

385



Serial N<sup>o</sup> 7024

Registration No. PUPPH.D/2017/11

# Punjab University Patiala



(Established under Punjab Act No. 35 of 1961)

Doctor of Philosophy

Certified that Munish Rattan, son/daughter

Shri Vijay Kumar and Smt. Mohini Devi,

the Punjab State, has

been admitted by the Senate in the degree of  
Doctor of Philosophy

in

Antenna Array Optimization Using

Evolutionary Approaches

in the faculty of

Engineering and Technology

Given under the seal of the University.



Serial No.: } 14Ph.D.46  
क्रम संख्या : }

Registration No.: } 2K8-Ph.D-E&CE-165  
पंजीकरण संख्या : }

# National Institute of Technology, Hamirpur (Himachal Pradesh)

*Upon the recommendation of the Senate hereby confers the degree of*

*Doctor of Philosophy*

*in*

*Electronics & Communication Engineering*

*an*

**BALJEET KAUR HURA**

THIS TITLE: PERFORMANCE EVALUATION AND ANALYSIS OF EPON FOR RADIO OVER FIBER OPTICAL NETWORKS  
*Given this day, the 17<sup>th</sup> of December 2014 under the seal of the Institute at Hamirpur in the Republic of India.*

**राष्ट्रीय प्रौद्योगिकी संस्थान, हमीरपुर (हिमाचल प्रदेश)**

अभिषद की अनुशंसा पर

विद्या वाचस्पति की उपाधि

इलैक्ट्रोनिक्स एवं संचार अभियांत्रिकी एतद्वारा

**बलजीत कौर हुरा**

को प्रदान करता है।

शोधप्रबन्ध शीर्षक: परफॉरमेंस इवैल्यूएशन एण्ड एनालिसिस ऑफ इपीओएन फार रेडियो ओवर फाइबर ऑप्टिकल नेटवर्कस  
भारतीय गणराज्य के अन्तर्गत हमीरपुर, (हि.प्र.) में आज, दिनांक 17 दिसम्बर 2014 को संस्थान की मुद्रा अंकित यह उपाधि दी गई।

*[Signature]*  
Chairman, Board of Governors  
अध्यक्ष, अभिशासक परिषद्

*[Signature]*  
Director & Chairman, Senate  
निदेशक एवं अध्यक्ष, अभिषद

*[Signature]*  
Registrar  
कुलसचिव





ਆਈ. ਕੇ. ਗੁਜਰਾਲ ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ ਜਲੰਧਰ

Dr. K. Gural Technical University Jalandhar

Formerly

Jalandhar Technical University Jalandhar



## Doctor of Philosophy

The Board of Governors of Punjab Technical University, Jalandhar upon the recommendation of the Academic council hereby confers on Mr./Ms. Naveet Kaur Son/Daughter of Sh. Amarjeet Singh Degree of Doctor of Philosophy in the faculty of ENGINEERING (ELECTRONICS & COMMUNICATION ENGINEERING) IN JULY-2019. The subject on which He/She presented the thesis for the Degree was " DESIGN AND PERFORMANCE OPTIMIZATION OF MULTIGATE FIELD EFFECT TRANSISTOR STRUCTURE. "

Given under the seal of the University

ਟੀਸੀਓ  
Registrar

25.11.2019

ਵਾਈਸ-ਚਾਂਸਲਰ  
Vice-Chancellor

ਚਾਂਸਲਰ  
Chancellor

68/1



33

3411

EDP S. No.: 600000536

Regn. cum Roll No. 1405013

ਆਈ. ਕੇ. ਗੁਜਰਾਲ ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ ਜਲੰਧਰ  
J.K. Gujral Punjab Technical University Jalandhar  
Formerly  
Punjab Technical University Jalandhar



Doctor of Philosophy

The Board of Governors of Punjab Technical University, Jalandhar upon the recommendation of the Academic council hereby confers on Mr/Ms Harsimranjit Singh Gill Son/Daughter of Sh. Didar Singh Gill Degree of Doctor of Philosophy in the faculty of ENGINEERING (ELECTRONICS & COMMUNICATION ENGINEERING) IN MAY-2019. The subject on which He/She presented the thesis for the Degree was "MITIGATION OF SECURITY ISSUES IN NEXT GENERATION PASSIVE OPTICAL NETWORKS."

Given under the seal of the University

ਰਜਿਸਟਰਾਰ  
Registrar  
Jalandhar, 25-09-2019

ਵਾਈਸ-ਚਾਂਸਲਰ  
Vice-Chancellor

V. P. Singh  
ਚਾਂਸਲਰ  
Chancellor



Serfal N N<sup>o</sup> 89418

336

Roll No. 2589

Registration No. PU(P)2003-915

# Punjabi University Patiala



(Established under Punjab Act No. 35 of 1961)

## Doctor of Philosophy

Certified that Parminder Singh, son/daughter  
of Shri Swarn Singh and Smt. Gurmeet Kaur,  
of the Punjab State

has this day been admitted by the Senate in the degree of

## Doctor of Philosophy

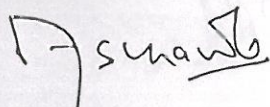
in

A Syllable Based Text-To-Speech Synthesis  
System for Punjabi

in the faculty of

Engineering and Technology

Given under the seal of the University.

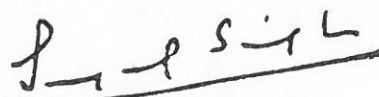


REGISTRAR

PATIALA March 15, 2014



CHANCELLOR



VICE-CHANCELLOR



S. No. 12131



Roll No: 15320155007

Registration: 258-DBU(Ph.D)2015



# Desh Bhagat University

Research | Innovation | Entrepreneurship

## Doctorate of Philosophy

Mr./Ms. Daljeet Singh son/daughter of Sh. Amarjeet Singh and Smt. Rajinder Kaur having completed the course of studies approved by the University and having passed the prescribed examination held in August 2019 has been conferred the degree of Doctorate of Philosophy in Computer Science Engineering from this University.

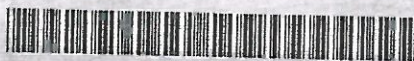
The Title of his/her thesis is:  
*Optimizing the Software Metrics for Structural and Behavioural Diagrams  
of UML using Program Slicing Techniques*

Given under the seal of University

*Khandal*  
Controller of Examination  
Mandi Gobindgarh(Pb)

*Prindar Singh*  
Vice Chancellor

*[Signature]*  
Chancellor  
Date : 19 November 2019





# Punjab Technical University

Jalandhar




## Doctor of Philosophy

The Board of Governors of Punjab Technical University, Jalandhar upon the recommendation of the Academic council hereby confers on Mr./Ms **Kulwinder Singh Mann** Son/Daughter of Sh. Jasjit Singh Mann Degree of Doctor of Philosophy in the faculty of COMPUTER SCIENCE ENGINEERING. The subject on which He/She presented the thesis for the Degree was " INFORMATION MODELLING USING DECISION SUPPORT SYSTEM FOR STRENGTHENING RURAL HEALTH ISSUES "

Given under the seal of the University

  
ਗੁਰਮਤਿਕਾਰ  
Registrar

Jalandhar, 10/17/2013

  
ਵਾਈਸ-ਚਾਂਸਲਰ  
Vice-Chancellor

  
ਚਾਂਸਲਰ  
Chancellor





Regd No.: 2010.Ph.D.(Comp.Sc.)-02

The Senate of  
**GURU NANAK DEV UNIVERSITY**  
have conferred upon

son/daughter of

MANPREET SINGH  
NARINDER SINGH

the degree of  
**Doctor of Philosophy**

in the faculty of

ENGINEERING & TECHNOLOGY (COMPUTER SCIENCE & ENGINEERING)

Registrar

Amritsar : November 13, 2013

Vice-Chancellor

Chancellor

24/03/14



# Sant Longowal Institute of Engineering and Technology

(Deemed University, Under MHRD, Govt. of India)

## Longowal, Dist. Sangrur (Punjab) -148106

Upon recommendation of the Senate hereby confers the degree of  
**Doctor of Philosophy**

on  
**AMIT KAMRA**

Son of Sh. KEWAL KRISHAN KAMRA

**THESIS TITLE : COMPUTER AIDED DIAGNOSIS OF BREAST CANCER TOWARDS DETECTION OF SUBTLE SIGNS**

liberated this day, the 13<sup>th</sup> February, 2016, under the seal of the Institute at Longowal in the Republic of India.

## संत लौगोवाल अभियांत्रिकी एवं प्रौद्योगिकी संस्थान

अभिषद की अनुशंसा पर

**विद्या वाचस्पति**

की उपाधि एतद द्वारा

**अमित कामरा**

सुपुत्र श्री केवल कृष्ण कामरा

को प्रदान करता है।

**शोध प्रबन्ध शीर्षक : कंप्यूटर ऐडिड डायग्नोसिस ऑफ ब्रेस्ट कैंसर टर्वाइस डिटेक्शन ऑफ सबटल साइन्स**  
 तेरह फरवरी सन् दो हजार सोलह को भारतीय गणराज्य के अधीन लौगोवाल से स्थित संस्थान की मुद्रा अंकित यह उपाधि प्रदान की गयी।

*Kamra*  
 कुल मन्त्रि  
 Registrar

*K. S. Singh*  
 निदेशक एवं अध्यक्ष, अभिशासक परिषद  
 Director & Chairman, Senate

*M. Sharma*  
 अध्यक्ष, प्रबंधन मंडल  
 Chairman, Board of Management





S. No. 1841



Roll No: 13320178008  
Registration: 116-DBEC(mg)2013

# Desh Bhagat University

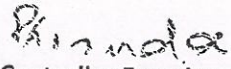
Research | Innovation | Entrepreneurship

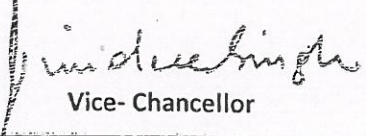
## *Doctor of Philosophy*

Mr./Ms. Kamaljit Kaur son/daughter of Sh. Buta Singh Grewal and Smt. Surjit Kaur having completed the course of Studies approved by the University and having passed the prescribed examination held in October 2017 has been conferred the degree of Doctor of Philosophy in Computer Science Engineering of this University.

*The title of his/her Thesis is:*

COMPUTER BASED RECOMMENDER SYSTEM FOR ADMISSION ON GUIDANCE OF TECHNICAL  
STUDENT: AN EXPERIMENTAL STUDY

  
Controller Examination  
Mandi Gobindgarh (Pb)

  
Vice-Chancellor

  
Chancellor

Date: 14/02/2018



EDP S. No.: 6000000112

Regn. cum Roll No.

ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ  
Jalandhar  
Jalandhar



Doctor of Philosophy

The Board of Governors of Punjab Technical University, Jalandhar upon the recommendation of the Academic council hereby confers on Mr./Ms. Pradeep Kumar Jaswal Son/Daughter of Sh. Omkar Singh Jaswal Degree of Doctor of Philosophy in the faculty of Computer Science and Engineering. The subject on which He/She presented the thesis for the Degree was " Three Dimensional Modelling, Recognition and Reconstruction of 3D Shapes Using Simulation and Modeling. "

Given under the seal of the University

ਗੁਰਮਿਤ-ਸਿੰਘ  
Vice-Chancellor

ਸਿਰਮੋਰੀ  
Jalandhar, 12/09/2014



# Punjabi University



Doctor of Philosophy

Certified that Sukhdev Singh, son/daughter  
of Shri Harnam Singh, and of  
the Punjab State, has  
this day been admitted by the Syndicate in the degree of  
Doctor of Philosophy  
in  
"Inventory Management Practices  
in Public Enterprises of Punjab."

in the faculty of  
Business Administration & Commerce

Given under the seal of the University

*[Signature]*  
REGISTRAR

*[Signature]*  
CHANCELLOR

*[Signature]*  
VICE-CHANCELLOR

Patiala DECEMBER 10, 1998



Roll No.: 68

Regd No.: 90.K/A.344



The Senate of

# GURU NANAK DEV UNIVERSITY

have conferred upon

**PARAMPAL SINGH**

son/daughter of

PRITAM SINGH

the degree of

**Doctor of Philosophy**

in the faculty of

ECONOMICS & BUSINESS (BUSINESS ADMINISTRATION)

Registrar

Vice-Chancellor

Chancellor

Amritsar : February 21, 2014



leted her Ph.D.

16214030

Enroll No: PEN/CMG/14/00325

SHRI JAGDISHPRASAD JHABARMAL TIBREWALA UNIVERSITY

श्री जगदीशप्रसाद झाबरमल टीबडेवाला विश्वविद्यालय

Vidyanagari, Jhunjhunu - Churu Road, Dist- Jhunjhunu, Rajasthan - 333001

(Established U/S 2(f) of UGC Act, 1956 vide Act No. F2(5) Vidhi/2/2009 of 5-2-2009 of Govt. of Raj)

## Provisional Degree

### Doctor Of Philosophy

Certified that the thesis on the subject 'Sales person-Organizational fit it's impact on their formal and informal behavior at work : Test of mediated model' Submitted by **Amanjot Kaur Gill** For the Degree of Doctor of Philosophy in the Subject of Management Has been approved by the President on 24/06/2019.

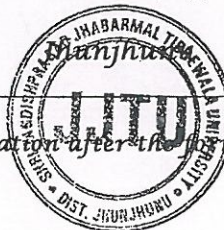
The Ph.D. degree has been awarded in compliance of the University Grants Commission (Minimum standards and procedure for award of Ph.D. Degree) Regulation July 2009.

Ref No- JJT/Ph.D./Degree/2019/2275

Issue Date : 02/07/2019

Registrar  
Registrar

Shri JJT University  
Jhunjhunu (Raj.)



Note: - Degree of Ph.D. subject to confirmation after the formal approval by the Board of Management.



# Punjab Agricultural University Ludhiana (India)

Certified that **Mandeep Kaur**  
Admission No. L-2004-BS-42-D

daughter of Mr. Gurmurt Singh and Mrs. Ranjeet Kaur  
having successfully completed the programme,  
has obtained the degree of Doctor of Philosophy  
in the discipline of Business Administration  
with Overall Credit Point Average 7.58 out of 10.00  
(Seven point five eight out of Ten) in March 2009.

Given under the seal of the University



Head of Department,  
Department of Management,  
Guru Nanak Dev Engineering College,  
Ludhiana.

Dated : December 23, 2009

Registrar

Vice-Chancellor

Chancellor



क्रमसंख्या  
Serial No.

236



अनुक्रमसं

Regn. No. 2K-ud-11-10-10

# कुरुक्षेत्र - विश्वविद्यालयः

डॉक्टर ऑफ़ फ़िलॉसॉफी

इदमत्र प्रमाणीक्रियते यत् देविन्द्र सिंह पठानियाँ  
श्री सुरेन्द्र सिंह पठानियाँ महोदयस्य पुत्रः/पुत्री २००६  
तमे संवत्सरे विज्ञान स्कायें तोऽस्य  
विश्वविद्यालयस्य नामित विषये

डॉक्टर ऑफ़ फ़िलॉसॉफी इत्युपाधिना समलङ्कृत/समलङ्कृता इति।

अस्य/अस्याः शोध प्रबन्धस्य विषयः "तरंगं सतनन ऊन्दर लेजीन वाली डव्मा  
सूक्ष्म ध्रुविम स्थिति-स्थापक पत्र" इत्यासीत्।

## Kurukshetra University

Doctor of Philosophy

This is to certify that Devinder Singh Pathania,  
son/daughter of Shri Surinder Singh Pathania, and  
of the Faculty of Science \_\_\_\_\_, has been awarded  
the Degree of Doctor of Philosophy ( Mathematics )  
of this University, in 2006.

The topic of his/her Thesis was "Wave Propagation in Heat  
Conducting Micropolar Elastic Plates."

[Signature]  
Registrar  
कुलसचिवः

[Signature]  
Vice-Chancellor  
कुलपतिः

ARKidwa  
Chancellor  
बुलाधिपतिः

Kurukshetra Dated Sept 4, 2006.  
कुरुक्षेत्रः तिथिः ४ सितम्बर २००६.



55

# Punjab University

Doctor of Philosophy  
(In the Faculty of Science)

Verified that **Harpreet Kaur**, Regd. No. 91-9601-381,  
daughter of **Shri Bikhar Singh**, and of the Punjab State,  
has obtained the degree of Doctor of Philosophy in this University  
on the result of the examination held in 2000.

(Given under the seal of the University)

Ramvir Singh

Controller of Examinations

Ramvir Singh  
Registrar

Chandigarh, July 14, 2000.



K. K. Pathak

VICE-CHANCELLOR

Attested to be true by  
K. K. Pathak  
Vice-Chancellor



# Sant Longowal Institute of Engineering and Technology

(Deemed University, Under MHRD, Govt. of India)  
Longowal, Distt. Sangrur (Punjab) -148106

Upon recommendation of the Senate hereby confers the degree of

Doctor of Philosophy

on

**RUPINDERJIT KAUR**

Daughter of Sh. GURDEV SINGH

**THESIS TITLE: INEQUALITIES INVOLVING MATRIX FUNCTIONS**

Given this day, the 28<sup>th</sup> March, 2015, under the seal of the Institute at Longowal in the Republic of India.

**संत लौंगोवाल अभियांत्रिकी एवं प्रौद्योगिकी संस्थान**

अभिषद की अनुमति पर

**विद्या वाचस्पति**

की उपाधि एतद द्वारा

**रुपिंदरजीत कौर**

सपुत्री श्री गुरदेव सिंह

को प्रदान करता है।

**शोध प्रबन्ध शीर्षक: इन्ईक्वालिटीस इन्वॉल्विंग मैट्रिक्स फंक्शन्स**

भारतीय गणराज्य के अंतर्गत लौंगोवाल में आज, दिनांक २८ मार्च, २०१५ को संस्थान की मुद्रा अंकित यह उपाधि दी गई।



निदेशक एवं अध्यक्ष, अभिषद  
Director & Chairman, Senate

*[Signature]*

अधिष्ठाता (शैक्षणिक)  
Dean (Academics)

*[Signature]*

कुल सचिव  
Registrar

*[Signature]*



Roll No. —

Enroll. No. PH95-109

लक्ष्मीबाई राष्ट्रीय शारीरिक शिक्षा संस्थान, ग्वालियर  
Lakshmbai National Institute Of Physical Education, Gwalior  
सम विश्वविद्यालय  
Deemed University



## डॉक्टर ऑफ फिलॉसफी

प्रमाणित किया जाता है कि इस संस्थान से

श्री/श्रीमती/कु. गुंजन भारद्वाज ने

डॉक्टर ऑफ फिलॉसफी

की उपाधि वर्ष...2007..

शीर्षक

में प्राप्त की।

## DOCTOR OF PHILOSOPHY

This is to certify that

Mr./Mrs./Miss Gunjan Bhardwaj

of this Institute obtained the degree of

## DOCTOR OF PHILOSOPHY

in the year 2007

Title Comparison of Psychological Parameters of Different Levels of Participation among Track and Field Athletes.

कुल सचिव  
Registrar

Gwalior M.P. (India)  
Dated : 26 SEP 2007

कुलपति  
Vice Chancellor



S. No. 1640



Roll No: 12110161001

Registration: 501-DBIMCS(MG)2012

# Desh Bhagat University

Research | Innovation | Entrepreneurship

## Doctor of Philosophy

Mr./Ms. Inderjit Singh son/daughter of Sh. Gurmit Singh and Smt. Harmit Kaur having completed the course of studies approved by the University and having passed the prescribed examination held in October, 2016 has been conferred the degree of Doctor of Philosophy in Computer Science of this University.

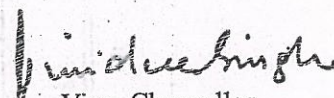
The title of his/her Thesis is:

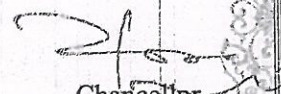
Optimizing Energy Requirement for Cloud Services during  
Virtual Machine Live Migration

Given under the seal of the University.

  
Registrar

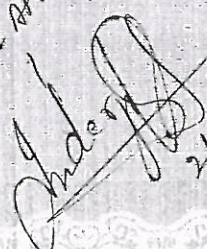
Mandi Gobindgarh(Pb)

  
Vice- Chancellor

  
Chancellor

Date : 14 Feb 2017

Self-attested

  
Chand

24/03/2017



# Harimab University

Doctor of Philosophy

(In the faculty of Education)

Roll No. 2838



Certified that  
son of Shri

Paramvir Singh

Avatar Singh

Regd. No. 06-ped-15

, and of

the Punjab State

has obtained the degree of Doctor of Philosophy  
of this University on the result of the examination held in 2014

Given under the seal of the University

Controller of Examinations

*Pr Singh*

Registrar

*[Signature]*

*all attached*  
*[Signature]*



Vice Chancellor

*[Signature]*

Chancellor

Chandigarh, July. 17. 2014





Registration No. 901411013

*Thapar Institute of Engineering and Technology, Patiala*

(Deemed-to-be-University)

## Doctor of Philosophy


Certified that Sandeep Kaur Chouhan daughter of  
Shri Sukhdev Singh Chouhan & Smt. Harjit Kaur Chouhan  
has obtained the Degree of Doctor of Philosophy on her having successfully completed the prescribed requirements  
for the said degree in August 2019.

The title of her thesis is :

Integrability and  $L^1$ -Convergence of Trigonometric Series with Real and  
Complex Coefficients

Given this day under the seal of the Institute at Patiala, the First Day of November, Two Thousand and Nineteen.

  
Registrar

  
Director



J. K. Guiral Junior Technical University Jalandhar

The Board of Governors of I.K.Gujral Punjab Technical University, Jalandhar upon the recommendation of the Academic council hereby confers on Mr./Ms **Pankaj** Son/Daughter of Sh. Surinder Kumar Degree of Doctor of Philosophy in the faculty of ENGINEERING (COMPUTER SCIENCE AND ENGINEERING) IN OCTOBER-2018. The subject on which He/She presented the thesis for the Degree was " IMPLEMENTING MACHINE LEARNING ALGORITHMS FOR DISTANCE BASED PHYLOGENETIC TREES. "

ਵਾਈਸ-ਚਾਂਸਲਰ  
Vice-Chancellor

V. P. Lang,  
Chancellor



# Shri Jagdishprasad Jhabarmal Tibrewala University, Jhunjhunu श्री जगदीशप्रसाद झाबरमल टिबड़ेवाला विश्वविद्यालय, झुंझुनूं



## डॉक्टर ऑफ़ फिलॉसफी

प्रमाणित किया जाता है कि **Kiran Jyoti** को इस विश्वविद्यालय के **Engineering** संकाय के अन्तर्गत डॉक्टर ऑफ़ फिलॉसफी की उपाधि से वर्ष 2014 में विभूषित किया गया।

इनके शोध प्रबन्ध का विषय निम्नलिखित था :-

Statistical Pattern Recognition And Data Clustering Techniques In Industrial Plant.

## DOCTOR OF PHILOSOPHY

*This is to certify that **Kiran Jyoti** has been awarded the degree of Doctor of Philosophy in the faculty of **Engineering** of this university in the year 2014.*

*The title of his/ her thesis was:-*

Statistical Pattern Recognition And Data Clustering Techniques In Industrial Plant.



*[Signature]*  
Chancellor/Chairman  
कुलाधिपति / चेयरमैन

*[Signature]*  
Vice-Chancellor/President  
कुलपति / अध्यक्ष



ਆਈ. ਐੱਸ. ਬੀ. ਬੀ. ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ ਜਲੰਧਰ  
**Dr. K. Gaurish Technical University Jalandhar**  
 Formerly Punjab Technical University Jalandhar



### Doctor of Philosophy

The Board of Governors of I.K. Gujral Punjab Technical University, Jalandhar upon the recommendation of the Academic council hereby confers on Mr./Ms **Babwinder Singh** Son/Daughter of Sh. **Ujagar Singh** Degree of Philosophy in the faculty of ENGINEERING (ELECTRONICS AND COMMUNICATION ENGINEERING) IN SEPTEMBER-2016. The subject on which He/She presented the thesis for the Degree was " **DEVELOPMENT AND OPTIMIZATION OF FRACTAL PATCH ANTENNAS FOR MEDICAL AND COMMUNICATION APPLICATIONS.** "

Given under the seal of the University

*(Signature)*  
**ਅੰਮ੍ਰਿਤ ਕੜਿਆ**  
 Jalandhar, 21-11-2017

*(Signature)*  
**ਵਰਿੰਦ-ਬਾਗਤ**  
 Vice-Chancellor

*(Signature)*  
**ਬਾਗਤ**  
 Chancellor





संख्या / Roll No. 2K09-NITK-Ph.D-1226



# राष्ट्रीय प्रौद्योगिकी संस्थान कुरुक्षेत्र

एतद्वारा इलेक्ट्रिकल इंजीनियरिंग में  
डॉक्टर ऑफ फिलॉसफी  
की उपाधि **अरविंद धींगरा**

पुत्र/पुत्री श्री ईश्वर दत्त धींगरा को प्रदान करता है, जिसके शोध विषय का शीर्षक  
“हारमोनिक मिटीगेशन ऑफ इण्डक्शन फ्रान्स” है।  
यह मुद्रित उपाधि १६ फरवरी, २०१८ को प्रदान की गई।

**National Institute of Technology  
Kurukshetra**

*hereby confers the degree of*  
**Doctor of Philosophy**

*in Electrical Engineering  
on Arvind Dhingra*

*son/daughter of Shri Ishwar Datt Dhingra*

*the title of his/her thesis is "Harmonic Mitigation of Induction Furnace"*

*Given this day, the 16<sup>th</sup> February of 2018 under the seal of the Institute.*

कुलसचिव  
Registrar

निदेशक  
Director

अध्यक्ष, निष्पापक मण्डल  
Chairman, Board of Governors



ਆਈ. ਕੇ. ਗੁਜਰਾਲ ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ ਜਲੰਧਰ  
 Dr. K. Gurial Punjab Technical University Jalandhar

Formerly  
 Punjab Technical University Jalandhar



### Doctor of Philosophy

The Board of Governors of Punjab Technical University, Jalandhar upon the recommendation of the Academic council hereby confers on Mr./Ms **Raman Kumar** Son/Daughter of Sh. Sansar Chand Degree of Doctor of Philosophy in the faculty of ENGINEERING (MECHANICAL ENGINEERING) IN JUNE-2019. The subject on which He/She presented the thesis for the Degree was " OPTIMIZATION OF ENERGY CONSUMPTION, SURFACE ROUGHNESS AND MATERIAL REMOVAL RATE IN TURNING OPERATIONS. "

Given under the seal of the University

ਰਜਿਸਟਰ  
 Registrar

Jalandhar, 25-09-2019

ਵਾਈ. ਚਾਂਸਲਰ  
 Vice-Chancellor


ਚਾਂਸਲਰ  
 Chancellor





# Punjab Agricultural University

Certified that **Aman Deep Baur**  
Admission No. L-93-BS-26-D  
daughter of Shri Satinder Singh  
having successfully completed the programme,  
has obtained the degree of Doctor of Philosophy  
in the discipline of Chemistry  
with Overall Credit Point Average 8.09 out of 10.00  
(Eight point zero nine out of Ten) in July 1997.  
Given under the seal of the University



  
Registrar

  
Vice-Chancellor

  
Chancellor

Ludhiana May 4, 1998



Registration No. 90714501

# Shri Chhatrapati Shahu Maharaj University, Jalgaon

(Declared as Deemed-to-be-University u/s 3 of the UGC Act, 1956)

## Doctor of Philosophy

Verified that \_\_\_\_\_ son of \_\_\_\_\_

Shri K.S Cheema & Smt. Jatinder Kaur Cheemahas obtained the Degree of Doctor of Philosophy on his having successfully completed the prescribed requirements for the said degree in May 2017.

The title of his thesis is :

Integrated Water Resource Management Studies in Rural Human Settlements

Given this day under the seal of the University at Jalgaon, the Third day of November, Two Thousand and Seventeen.

  
Registrar  
Director





# Jammu University

Doctor of Philosophy



( In the faculty of Science )



Certified that Randhir Singh . Regd. No. 93-94-227 . son of  
Shri. Gurdev Singh . and of the Punjab State . has obtained the degree of  
Doctor of Philosophy of this University on the result of the examination held in  
2019 .

Given under the seal of the University



Controller of Examinations

Rishi

Khurshid

Registrar

Chandigarh, February, 18, 2019

Rishi

Vice Chancellor

Manda

Chancellor



Roll No. 4348

VIBRATIONAL SPECTROSCOPIC STUDY OF SOLVATION OF LASER DYES

Ph.D. thesis submitted by Ranvir Singh  
In the Faculty of Science/Physics  
Panjab University Chandigarh

Citation

This thesis contains studies of the interactions of some laser dyes with a number of solvent molecules. Interactions have been studied with density functional theory calculations and vibrational spectroscopic techniques in order to understand the charge transfer interactions at molecular level that lead to shift in the frequencies and change in the intensities of certain vibrational bands in the solvents.

Y.M.S.  
Registrar







**J. K. Guirál Technical University**  
**Formerly Punjab Technical University**



The Board of Governors of I.K. Gujral Punjab Technical University, Jalandhar upon the recommendation of the Academic council hereby confers on Mr./Ms Gurdeepak Singh Son/Daughter of Sh. S. Priam Singh Degree of Doctor of Philosophy in the faculty of ENGINEERING (CIVIL ENGINEERING) IN MAY-2017. The subject on which He/She presented the thesis for the Degree was " PREDICTION OF ULTIMATE LOAD CARRYING CAPACITY OF CAST-IN-SITU CONCRETE CIRCULAR BORED PILE BY ARTIFICIAL NEURAL NETWORK MODEL. "

27

1899

V 9 Aug.

**विश्व  
Cincelor**



Reg No:- 28816001

Enroll No: PEN/PED/16/00377



SHRI JAGDISHPRASAD JHABARMAL TIBREWALA UNIVERSITY

श्री जगदीशप्रसाद झाबरमल टीबडेवाला विश्वविद्यालय

Vidyanagari, Jhunjhunu - Churu Road, Dist- Jhunjhunu, Rajasthan - 333001

(Established U/S 2(f) of UGC Act, 1956 vide Act No. F2(5) Vidhi/2/2009 of 5-2-2009 of Govt. of Raj)

## Provisional Degree

### Doctor Of Philosophy

*Certified that the thesis on the subject ' A NOVEL APPROACH FOR SECURITY OF DIGITAL IMAGES USING VISUAL CRYPTOGRAPHY ' Submitted by Amit Jain For the Degree of Doctor of Philosophy in the Subject of Computer Science & Engineering Has been approved by the President on 07/10/2019.*

*The Ph.D. degree has been awarded in compliance of the University Grants Commission (Minimum standards and procedure for award of Ph.D. Degree) Regulation July 2016.*

Ref No:- JJT/Ph.D./Degree/2019/2342

Issue Date :15/10/2019

Jhunjhunu



*Note: - Degree of Ph.D. subject to confirmation after the formal approval by the Board of Management.*





I. K. GUJRAL PUNJAB TECHNICAL UNIVERSITY,  
JALANDHAR

Ph.D NOTIFICATION

(87)

Endst. No. IKGPTU/Ph.D/ 308

Dated: 5/6/18

Notification: IKGPTU/2018/423 for the Ph.D degree award

With the approval of competent authority, I. K. Gujral Punjab Technical University notify the award of Ph.D degree to Mr/Ms. Harmohan Singh Dhall S/D/o Manmohan Singh Dhall, Regd. No. 11.91.09 in the faculty of *Business Administration (Management)*. This notification is issued on 5/6/18 after completion of thesis work and successfully defended his/her case during presentation among expert panel of university.

Year of Enrolment	Date of Viva-voce	Title of the Thesis	Name & Address of the Research Supervisor
2009	14/05/2018	STUDY ON THE IPO PRICING EFFICIENCY IN INDIA.	Dr. Sukhdev Singh Professor & Head, Department of Business Administration, Guru Nanak Dev Engineering College, Ludhiana.

Final degree will be conferred in the annual convocation of the University.

Dean (R&D)

Controller of Examination

Registrar





**Dr. Anirudh P.Singh**

Dean,  
Research, Innovation & Consultancy

326

INDER KUMAR GUJRAL

**PTU** PUNJAB  
TECHNICAL  
UNIVERSITY

ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ ਕਪੂਰਥਲਾ

Ref. No PTU/RIC/Ph.D/1003011/213

Dated 31.07.18

**TO WHOM IT MAY CONCERN**

This is to certify that Mr/Ms. Sumeet Kaur Sehra, provisional number 1003011 had been registered for Ph.D degree with this university in the discipline of Computer Science and Engineering.

Mr/Ms. Sumeet Kaur Sehra conducted research work on the following topic:

Research Topic	An Approach based on Multi Criteria Decision Making for Software Effort Estimation
Registration Number	1003011
Registration Date	10/02/2011
Supervisor Name	Yadwinder Singh Brar - 11040002

Mr/Ms Sumeet Kaur Sehra had submitted his/her research work thesis on 22/02/2018. The same has been evaluated by experts. He/She successfully gave his/her viva-voce on 27/07/2018. Subsequently the committee has recommended to award the provisional Ph.D degree to Mr/Ms Sumeet Kaur Sehra. The final degree will be awarded after approval of Academic Council and Board of Governors, PTU.

(Anirudh P.Singh)  
Dean (RIC)

*"Developing Youth for a Prosperous Knowledge Society"*

ਇੰਦਰ ਕੁਮਾਰ ਗੁਜਰਾਲ, ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ, ਜਲੰਧਰ-ਕਪੂਰਥਲਾ ਹਾਈਵੇ, ਕਪੂਰਥਲਾ 144601  
Inder Kumar Gujral, Punjab Technical University, Jalandhar-Kapurthala Highway, Kapurthala (India)  
Phone: +91-1822-662558, 662572 Fax: 01822-255504 Website: www.ptu.ac.in  
E-mail: deanricptu@gmail.com, deanric@ptu.ac.in





# I.K. GUJRAL PUNJAB TECHNICAL UNIVERSITY, JALANDHAR

## Ph.D NOTIFICATION

Endst. No. IKGPTU/Ph.D/ 75

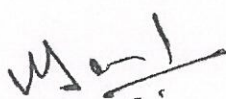
Dated: 29/3/19

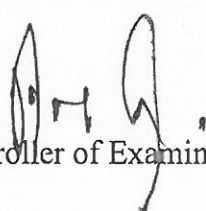
### Notification: IKGPTU/2019/577 for the Ph.D degree award

With the approval of competent authority, I. K. Gujral Punjab Technical University notify the award of Ph.D degree to Mr/Ms. Jagdeep Singh S/D/o Balbir Singh, Regd. No. 1206029 in the faculty of Engineering (Mechanical Engineering). This notification is issued on 29/3/19 after completion of thesis work and successfully defended his/her case during presentation among expert panel of university.

Year of Enrolment	Date of Viva-voce	Title of the Thesis	Name & Address of the Research Supervisor
2012	14/02/2019	TECHNOLOGY AWARENESS AND UTILIZATION: ITS IMPACT ON THE AUTO PARTS INDUSTRIES OF PUNJAB.	Dr. Harpuneet Singh Assistant Professor, Guru Nanak Dev Engineering College, Ludhiana.

Final degree will be conferred in the annual convocation of the University.

  
Dean (R&D)

  
Controller of Examination

  
Registrar





# I.K. GUJRAL PUNJAB TECHNICAL UNIVERSITY, JALANDHAR

## Ph.D NOTIFICATION

Endst. No. IKGPTU/Ph.D/ 962

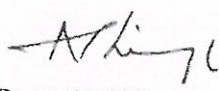
Dated: 7/1/19

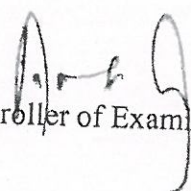
Notification: IKGPTU/2018/533 for the Ph.D degree award

With the approval of competent authority, I. K. Gujral Punjab Technical University notify the award of Ph.D degree to Mr/Ms. Vivek Thapar S/D/o Kapleshwar Raj Thapar, Regd. No. 1003016 in the faculty of Engineering (Computer Science & Engineering). This notification is issued on 7/1/19 after completion of thesis work and successfully defended his/her case during presentation among expert panel of university.

Year of Enrolment	Date of Viva-voce	Title of the Thesis	Name & Address of the Research Supervisor
2011	30/11/2018	A NOVEL APPROACH TO ANALYZE THE PERFORMANCE OF CLOUD COMPUTING ENVIRONMENT	Dr. O.P Gupta Professor, Punjab Agricultural University, Ludhiana.

Final degree will be conferred in the annual convocation of the University.

  
Dean (R&D)

  
Controller of Examination

  
Registrar





I. K. GUJRAL PUNJAB TECHNICAL UNIVERSITY,  
JALANDHAR

Ph.D NOTIFICATION

132

Endst. No. IKGPTU/Ph.D/404

Dated: 4/7/18

Notification: IKGPTU/2018/435 for the Ph.D degree award

With the approval of competent authority, I. K. Gujral Punjab Technical University notify the award of Ph.D degree to Mr/Ms. Inderpreet Kaur S/D/o Gurjant Singh Punia, Regd. No. 1102003 in the faculty of Engineering (Civil Engineering). This notification is issued on 4/7/18 after completion of thesis work and successfully defended his/her case during presentation among expert panel of university.

Year of Enrolment	Date of Viva-voce	Title of the Thesis	Name & Address of the Research Supervisor
2011	04/06/2018	DEVELOPMENT OF RECTANGULAR HYBRID STIFFENED-PLATE STRUCTURAL SYSTEM.	Dr. H. S. Rai Professor, Department of Civil Engineering, Guru Nanak Dev Engg. College, Ludhiana (Pb).

Final degree will be conferred in the annual convocation of the University.

*Alhij*

Dean (R&D)

*Qur*

Controller of Examination

*4/7/18*  
Registrar





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**I.K. GUJRAL PUNJAB TECHNICAL UNIVERSITY,  
JALANDHAR**

**Ph.D NOTIFICATION**

Indst. No. IKGPTU/Ph.D/ 852

Dated: 20/11/18

**Notification: IKGPTU/2018/511 for the Ph.D degree award**

With the approval of competent authority, I. K. Gujral Punjab Technical University notify the award of Ph.D degree to Mr/Ms. Prashant Garg S/D/o Shyam Lal Gupta, Regd. No. 1002005 in the faculty of Engineering (Civil Engineering). This notification is issued on 20/11/18 after completion of thesis work and successfully defended his/her case during presentation among expert panel of university.

Year of Enrolment	Date of Viva-voce	Title of the Thesis	Name & Address of the Research Supervisor
2011	26/10/2018	BEARING CAPACITY AND SETTLEMENT CHARACTERISTICS OF PILED-RAFT FOUNDATION.	Dr. Harvinder Singh Professor, Guru Nanak Dev Engineering College, Ludhiana.  Dr. J.N. Jha Principal, Muzafarpur Institute of Technology, Muzafarpur, Bihar.

Final degree will be conferred in the annual convocation of the University.

Dean (R&D)

Controller of Examination

Registrar





74/11

# Punjab Engineering College, Chandigarh (Deemed to be University)

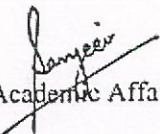
No. PEC/DAA/S6/250

Dated: 09-06-2020

## PROVISIONAL DEGREE CERTIFICATE

This is to certify that Ms. Heena Malhotra D/o Sh. Parveen Malhotra SID-15303004 has been a Ph.D. student of Punjab Engineering College (Deemed to be University), Chandigarh in the Department of Civil Engineering during 2015-2020. She has completed her Ph.D. programme on 04<sup>th</sup> June, 2020. She will be awarded degree in accordance with the provisions of the UGC regulations 2009 in the next Convocation.

The medium of instructions and evaluation for all degree programmes in this University is English.

  
Dean Academic Affairs

Dean Academic Affairs  
Punjab Engineering College,  
(Deemed to be University)  
Chandigarh

(A Deemed University under Section 3 of UGC Act, 1956)

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**PUNJABI UNIVERSITY PATIALA**  
(Established Under Punjab Act No. 35 of 1961)  
**Ph.D. GAZETTE NOTIFICATION**

No. Ph.D./995

The following candidates of the Faculty of PHYSICAL SCIENCES have been awarded the Degree of *Doctor of Philosophy* on the recommendations made by the Research Award Committee in its meeting held on 17.09.2018 (deemed date of the Award of Ph.D. Degree):

Sr. No.	Roll No.	Regd. No.	Name of the Candidate Father/Mother	Subject	Title of the Thesis	DEPT.	Supervisor / Co-Supervisor	Candidate's Address	State
1	3781	PU(P)2007-539	INDERPREET KAUR KAMALJEET SINGH SATWINDER KAUR	MATHEMATICS	SOLUTION OF TWO POINT BOUNDARY VALUE PROBLEMS USING QUINTIC HERMITE SPLINE COLLOCATION	MATHEMATICS	DR. R.K. NAGAICH PROF. DEPT. OF MATHEMATICS PUNJABI UNIVERSITY, PATIALA. CO-SUP. DR. SHELLY ARORA DEPT. OF MATHEMATICS PUNJABI UNIVERSITY, PATIALA.	KAMAL ENGINEERS, NEAR SILVER OAK FARMS, VILL. HASSANPUR, SIRHIND ROAD, PATIALA.	PUNJAB
2	3782	GRC(S)2004-967	RAVIR KAUR DEVINDER SINGH SINDER DEVI	CHEMISTRY	REMOVAL OF TEXTILE DYES FROM AQUEOUS SOLUTION : KINETIC AND THERMODYNAMIC STUDIES	CHEMISTRY	DR. HARPREET KAUR DEPT. OF CHEMISTRY PUNJABI UNIVERSITY, PATIALA	VILL. BASANPUR, P.O. BHASOUR TEH. DHURI, DISTT. SANGRUR, PUNJAB 148024	PUNJAB
3	3783	PU(P)2010-89	SHABNAM PREET CHARANJIT SINGH TEJ KAUR SIDHU	FORENSIC SCIENCE	FORENSIC STUDIES ON COMPUTER MANIPULATED DOCUMENTS USING IMAGE PROCESSING TECHNIQUES	FORENSIC SCIENCE	DR. KOMAL SAINI ASSTT. PROF. DEPT. OF FORENSIC SCIENCE PUNJABI UNIVERSITY, PATIALA	HOUSE FED COLONY H.NO-211, BATHINDA	PUNJAB

PATIALA

DATED: 28/09/2018

CLERK

O.S.E

A.R. / D.R. (Examination)

Controller (Examination)

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6. THE HEAD OF DEPARTMENT, PUNJABI UNIVERSITY, PATIALA - 147002.
7. SUPERVISOR/CO-SUPERVISOR OF THE CANDIDATE
8. THE SUPERINTENDENT, RESEARCH THESIS EVALUATION CELL AND PMU CELL PUNJABI UNIVERSITY, PATIALA.
9. THE CHIEF LIBRARIAN, PUNJABI UNIVERSITY, PATIALA.

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