



# Indra Ganesan

## COLLEGE OF ENGINEERING

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai  
Accredited by NAAC with 'B+' Grade, 2(f) & 12B Status Institution by UGC

IG Valley, Madurai Main Road, Manikandam, Tiruchirappalli - 620012

# NAAC DOCUMENTS

## QUALITY INDICATOR FRAME WORK

### CRITERION – 2

## TEACHING-LEARNING AND EVALUATION

SUBMITTED BY

# IQAC

INTERNAL QUALITY ASSURANCE CELL

## INDRA GANESAN COLLEGE OF ENGINEERING





**Indra Ganesan**  
**COLLEGE OF ENGINEERING**

Madurai Main Road (NH-45B), Manikandam, Tiruchirappalli - 620 012  
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NAAC Accredited, 2(F) Status Institution by UGC



# 2020-2021

<b>Criteria 2</b>	<b>Teaching-Learning and Evaluation</b>	<b>350</b>
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**Key Indicator-Experiential Learning Method (90)**

**DEPARTMENT OF ELECTRICAL AND  
ELECTRONICS ENGINEERING**



# Indra Ganesan

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### DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

S.No	Project Title	No Students
1	CLOSED LOOP POWER CONVERSION EFFICIENCY IMPROVEMENT OF AC-DC BOOST CONVERTER USING 1:1 TRANSFORMER	04
2	AN IMPROVED CUK CONVERTER WITH OPTIMIZED PSO TYPE-III CONTROLLER	03
3	DESIGN AND PERFORMANCE ANALYSIS OF A FIVE LEVEL ASYMMETRIC CASCADE H BRIDGE	04
4	MITIGATION OF HARMONICS USING SHUNT-SERIES ACTIVE POWER FILTER FOR POWER QUALITY ENHANCEMENT	04
5	PARTIAL POWER DC-DC CONVERTER FOR FAST BATTERY CHARGING WITH REDUCED LOSS	03
6	AN ENERGY CONSERVATION USING 360 DEGREE PIR SENSOR BY ARDUINO MICROCONTROLLER	04

**CLOSED LOOP POWER CONVERSION EFFICIENCY  
IMPROVEMENT OF AC-DC BOOST CONVERTER  
USING 1:1 TRANSFORMER**

**A PROJECT REPORT**



*Submitted by*

<b>ASHOKRAJ.V</b>	<b>(811215105003)</b>
<b>GAYATHRI.R</b>	<b>(811215105009)</b>
<b>MANIKANDAN.M</b>	<b>(811215105016)</b>
<b>SATHEESWARI.P</b>	<b>(811215105027)</b>

*in partial fulfillment for the award of the degree*

*of*

**BACHELOR OF ENGINEERING**

*in*

**ELECTRICAL AND ELECTRONICS ENGINEERING**

**INDRA GANESAN COLLEGE OF ENGINEERING, TRICHY**

**ANNA UNIVERSITY : CHENNAI 600 025**

**MARCH 2019**

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IMPROVEMENT OF AC-DC BOOST CONVERTER  
USING 1:1 TRANSFORMER**

**A PROJECT REPORT**



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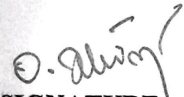
**ANNA UNIVERSITY : CHENNAI 600 025**

**MARCH 2019**

**ANNA UNIVERSITY: CHENNAI 600 025**

**BONAFIDE CERTIFICATE**

Certified that this project report "CLOSED LOOP POWER CONVERSION EFFICIENCY IMPROVEMENT OF AN AC-DC BOOST CONVERTER USING 1:1 TRANSFORMER" is the Bonafide work of "V.ASHOKRAJ, R.GAYATHRI, M.MANIKANDAN, P.SATHEESWARI" who carried out the project work under my supervision.



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Mr.O.KARTHIKEYAN B.Tech., M.E

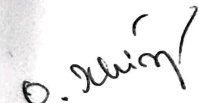
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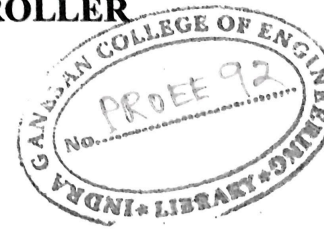
Trichy-12.



**EXTERNAL EXAMINER**

**AN IMPROVED CUK CONVERTER WITH  
OPTIMIZED PSO TYPE-III CONTROLLER**

**A PROJECT REPORT**



*Submitted by*

**GAJALAKSHMI.B (811215105008)**

**MEENAKSHI.P (811215105018)**

**VANITHA.S (811215105039)**

**VIGNESHWARAN.N (811215105041)**

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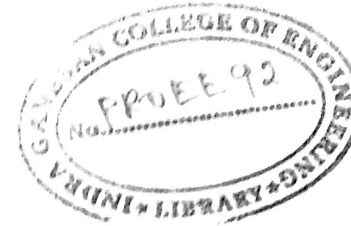
**INDRA GANESAN COLLEGE OF ENGINEERING, TRICHY**

**ANNA UNIVERSITY : CHENNAI 600 025**

**MARCH 2019**

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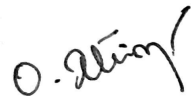
**MARCH 2019**



**ANNA UNIVERSITY : CHENNAI 600 025**

**BONAFIDE CERTIFICATE**

Certified that this project report “AN IMPROVED CUK CONVERTER WITH OPTIMIZED PSO TYPE-III CONTROLLER” is the bonafide work of “GAJALAKSHMI.B, MEENAKSHI.P, VANITHA.S, VIGNESHWARAN.N” who carried out the project work under my supervision.



**SIGNATURE**

Mr.O.Karthikeyan B.Tech.,ME.,

**Head of the Department**

Associate professor

Electrical and Electronics Engineering

Indra Ganesan College of Engineering

Trichy 620 012.



**SIGNATURE**

Mr.A.Richards Rethinasamy BE., ME.,

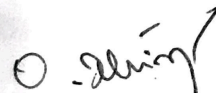
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Trichy 620 012.



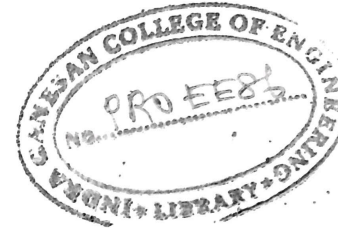
**INTERNAL EXAMINER**



**EXTERNAL EXAMINER**

**DESIGN AND PERFORMANCE ANALYSIS OF A FIVE  
LEVEL ASYMMETRIC CASCADE H BRIDGE  
INVERTER**

**A PROJECT REPORT**



*Submitted by*

**GOMATHY.M (811215105011)**  
**JERALD FELIX.A (811215105014)**  
**MEENA.S (811215105017)**  
**PRASANTH.R (811215105022)**

*in partial fulfillment for the award of degree*

*Of*

**BACHELOR OF ENGINEERING**

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**ELECTRICAL AND ELECTRONICS ENGINEERING**

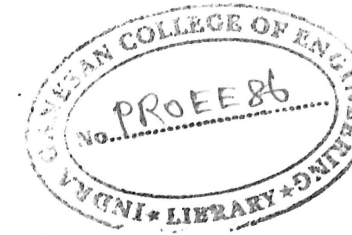
**INDRA GANESAN COLLEGE OF ENGINEERING, TRICHY**

**ANNA UNIVERSITY : CHENNAI 600 025**

**MARCH 2019**

**DESIGN AND PERFORMANCE ANALYSIS OF A FIVE  
LEVEL ASYMMETRIC CASCADED H BRIDGE  
INVERTER**

**A PROJECT REPORT**



*Submitted by*

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**INDRA GANESAN COLLEGE OF ENGINEERING, TRICHY**

**ANNA UNIVERSITY: CHENNAI 600 025**

**MARCH 2019**

**BONAFIDE CERTIFICATE**

Certified that this project report title “**DESIGN AND PERFORMANCE ANALYSIS OF A FIVE LEVEL ASYMMETRIC CASCADE H BRIDGE INVERTER**” is the bonafide work of “**GOMATHY.M, JERALD FELIX.A, MEENA.S, PRASANTH.R**” Who carried out the project work under my supervision.



**SIGNATURE**

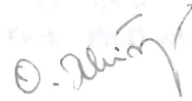
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Trichy 620 012



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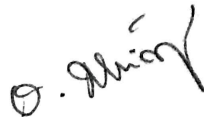
**Mr.O.Karthikeyan B.Tech.,M.E**

Assistant professor,

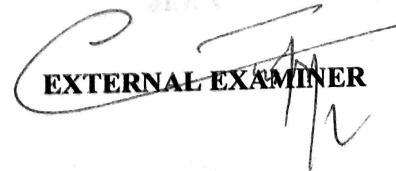
Electrical and Electronics Engineering

Indra Ganesan College of Engineering

Trichy 620 012



**INTERNAL EXAMINER**



**EXTERNAL EXAMINER**

**MITIGATION OF HARMONICS USING SHUNT-SERIES  
ACTIVE POWER FILTER FOR POWER QUALITY  
ENHANCEMENT**

**A PROJECT REPORT**



*Submitted by*

<b>C.FATHIMASELVI</b>	<b>(811215105007)</b>
<b>M.SATHYAPRIYA</b>	<b>(811215105030)</b>
<b>R.VIJAYALAKSHMI</b>	<b>(811215105342)</b>

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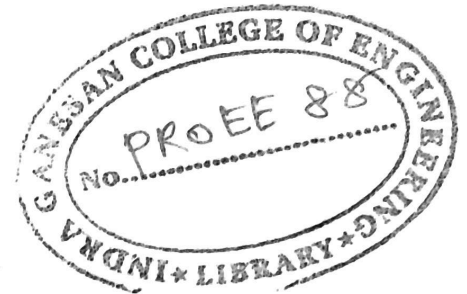
**INDRA GANESAN COLLEGE OF ENGINEERING, TRICHY**

**ANNA UNIVERSITY : CHENNAI 600 025**

**MARCH 2019**

**MITIGATION OF HARMONICS USING SHUNT-SERIES  
ACTIVE POWER FILTER FOR POWER QUALITY  
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**A PROJECT REPORT**



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<b>R.VIJAYALAKSHMI</b>	<b>(811215105042)</b>

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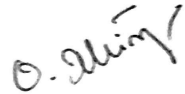
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**MARCH 2019**

**BONAFIDE CERTIFICATE**

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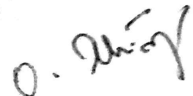
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**Mr.O.Karthikeyan B.Tech.,ME.,**  
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**INTERNAL EXAMINER**



**EXTERNAL EXAMINER**

**PARTIAL POWER DC-DC CONVERTER FOR FAST  
BATTERY CHARGING WITH REDUCED LOSS**

**A PROJECT REPORT**

*Submitted by*

**V.ANAND (811215105002)**

**M.GUNASEELAN (811215105013)**

**A.SIVASAKTHI (811215105034)**

**M.VARATHARAJU (811215105301)**

*in partial fulfillment for the award of the degree*

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**MARCH 2019**



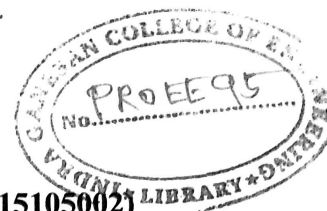


**PARTIAL POWER DC-DC CONVERTER FOR FAST  
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**A PROJECT REPORT**

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<b>M.GUNASEELAN</b>	<b>(811215105013)</b>
<b>A.SIVASAKTHI</b>	<b>(811215105034)</b>
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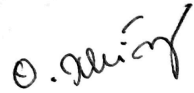
**ANNA UNIVERSITY : CHENNAI 600 025**

**MARCH 2019**

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**BONAFIDE CERTIFICATE**

**Certified that this project report "PARTIAL POWER DC-DC CONVERTER FOR FAST BATTERY CHARGING WITH REDUCED LOSS" is the bonafide work of V.ANAND,M.GUNASEELAN,A.SIVASAKTHI,M.VARATHARAJU who carried out the project work under my supervision.**



**SIGNATURE**

Mr.O.Karthikeyan B.Tech.M.E.,

**HEAD OF THE DEPARTMENT**

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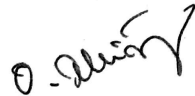
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**INTERNAL EXAMINER**



**EXTERNAL EXAMINER**

**AN ENERGY CONSERVATION USING 360 DEGREE  
PIR SENSOR BY ARDUINO MICROCONTROLLER**

**A PROJECT REPORT**

*Submitted by*

**BALACHANDRAN. M (811215102004)**  
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**DEEPARAGAVI.M (811215105006)**  
**NIVETHA. B (811215105021)**



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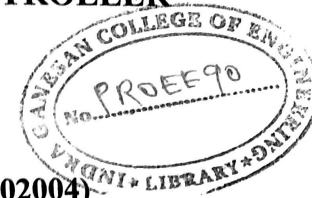
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**ELECTRICAL AND ELECTRONICS ENGINEERING**

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**MARCH 2019**



ACKNOWLEDGEMENT

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**SIGNATURE**

**Mr.O.Karthikeyan B.Tech., M.E.,**  
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Associate Professor,  
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Indra Ganesan College of Engineering,  
Tiruchirappalli - 620 012.

  
**SIGNATURE**

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Indra Ganesan College of Engineering,  
Tiruchirappalli - 620 012.

  
**INTERNAL EXAMINER**

  
**EXTERNAL EXAMINER**