



# PhD in Mechanical Engineering

Investigation of Friction Stir Welding  
between Dissimilar Materials Copper to  
Aluminum



Name : **Dr. Kush P. Mehta**

Roll No: **13RME005**

Date of Registration : **01-07-2013**

Date of Completion : **23-01-2017**

Supervisor :

**Dr Vishvesh Badheka, IWE,**

**Associate Professor,**

**Mechanical Engineering**

**Department**

## **My Journey with PDDPU**

It has been an enriching journey with PDDPU during my doctoral position along with regular lectureships. Six SCI-journal articles have been published from my doctoral work (including review article that created a great impact through large number of citations and reads).

*Formula to success: Time management, Hard work and Self motivation*





# PhD in Mechanical Engineering

## Experimental Investigation on Friction Stir Processed AA7075: Process Variables, Microstructure and Superplasticity



Name : **Patel Vivek Vikrambhai**

Roll No: **13RME010**

Date of Registration : **01-07-2013**

Date of Completion : **09-02-2017**

Supervisor I:

**Dr Vishvesh Badheka, IWE, Associate  
Professor, Mechanical Engineering  
Department**

Supervisor II:

**Dr Abhishek Kumar, Assistant Professor,  
Industrial Engineering Department**

### **My Journey with PDCU**

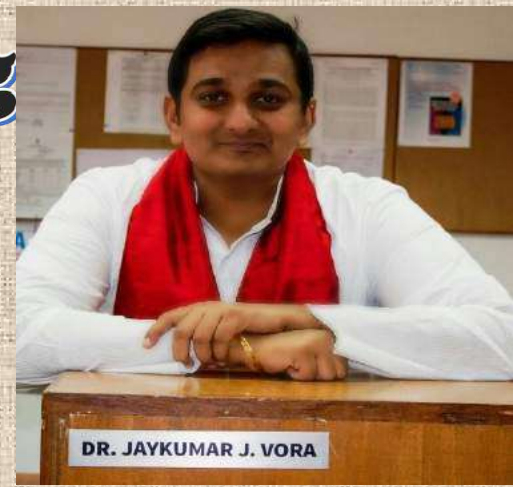
Along with Teaching, It was full of all research aspects i.e. experiments, research funding, developing dedicated testing method and many more. PDCU has provided favourable research environment for the same. Self-motivation, dedication, and continuous focus on research topic accelerate Ph.D. journey.





# PhD in Mechanical Engineering

Development of flux assisted Tungsten inert gas welding process for Low activation Ferritic/ Martensitic steel



Name : **Vora Jaykumar Jatinkumar**

Roll No: **13RME015**

Date of Registration : **01-07-2013**

Date of Completion : **06-03-2017**

Supervisor :

**Dr Vishvesh Badheka, Head,  
Professor, Mechanical Engineering  
Department**

## **My Journey with PDDPU**

Ph.D. Journey is a long, tedious yet exciting one. At PDDPU it was no different. The support and motivation rendered by PDDPU was most beneficial. The key to success and achievement in Ph.D. is only

**“SELF MOTIVATION”**





# PhD in Mechanical Engineering

Offshore wind power potential in India  
based on technical, marine ecosystem and  
economic considerations



Name : **Garlapati Nagababu**

Roll No: **13RME013**

Date of Registration : **01-07-2013**

Date of Completion : **03-05-2017**

Supervisor:

**Dr Surendra Singh Kachhwaha,**  
**Professor, Mechanical Engineering**  
**Department**

Supervisor II:

**Dr Vimal Savsani, Assistant Professor**  
**Mechanical Engineering Department**

## My Journey with PDPU

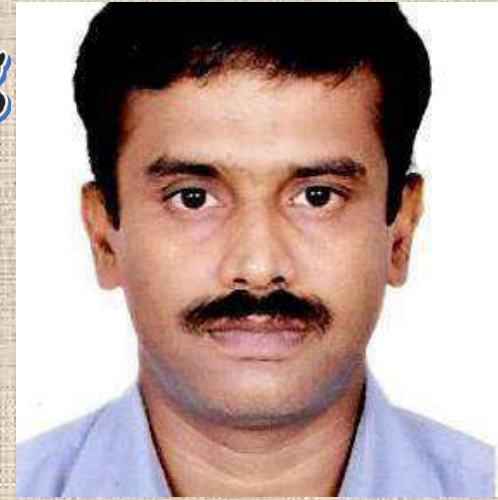
My Ph.D. journey with PDPU radically changed my intellectual journey of discovery. Generally, Ph.D. studies can be frustrating and exhausting at times, but the final result (degree award) is a major achievement. My supervisors and university management always encouraging me in outcome-based research. Their encouragement pushes me to publish in high Impact factor SCI indexed journals (two out of them are in Energy, Elsevier (4.9 Impact factor Journal)). Further, I was attended one international conference abroad during my Ph.D. time. I feel PDPU is one of the few universities in India which can support the students financially for attending International conferences abroad. These conferences will motivate the research momentum as well as improve research networking.





# PhD in Mechanical Engineering

Investigation of Friction Stir Weldability of V-95 CHT1 and D-19CHT Russian Aluminum alloys and evaluating metallurgical feasibility of replacement of riveted joint of stringer-panel of fuel tank of Sukhoi-30MKI aircraft with FSW.



Name : **S Rajesh**

Roll No: **15RME001**

Date of Registration : **01-01-2015**

Date of Completion : **31-10- 2017**

Supervisor I:

**Dr Vishvesh Badheka, IWE, Professor,  
Mechanical Engineering Department**

Supervisor II:

**Dr Abhishek Kumar, Assistant Professor,  
Industrial Engineering Department**

## **My Journey with PDDPU**

Eventful journey made possible through the excellent support from supervisors/faculty of PDDPU and the infrastructure at the college for my work.

The very conducive atmosphere for research and supportive staff enabled me achieve my objective in the minimum possible time





# PhD in Mechanical Engineering

Comparisons of Mechanical and Metallurgical properties of GMAW, FCAW & MCAW weldments of SA516 GR70 steel Material



Name : **Prajapati Priteshkumar Jayantibhai**

Roll No: **13RME011**

Date of Registration : **01-07-2013**

Date of Completion : **24-11-2017**

Supervisor:

**Dr Vishvesh Badheka, IWE,  
Professor and Head,  
Mechanical Engineering Department**

## **My Journey with PDPUI**

It is my pleasure to work in PDPUI. Full set of resources are available in PDPUI for performance of practical. My supervisor ,Dr. Vishvesh Badheka provided enough time and latest knowledge at regular interval time.





# PhD in Mechanical Engineering

## Effect of Advanced Metaheuristic Techniques for Wind Farm Layout Optimization.



Name : **Patel Jaydeep Dineshkumar**

Roll No: **13RME008**

Date of Registration : **01-07-2013**

Date of Completion : **28-12-2017**

Supervisor I:

**Dr Vimal Savsani, Assistant Professor  
Mechanical Engineering Department**

Supervisor II:

**Dr Rajesh Patel, Assistant Professor  
Mechanical Engineering Department**

### **My Journey with PDDPU**

My PhD journey with PDDPU was wonderful. I valued my supervisors' time and the conversations I had with them, exchanging visions and accepting constructive criticism. I've learned from different cultures and I've questioned my paradigms. I've learned how to be resilient and persevere, be tolerant and humble, to forgive myself, and that hard work is rewarding.

**Success is stumbling from failure to failure  
with no loss of enthusiasm.**





# PhD in Mechanical Engineering

Investigation of Mechanical Properties  
of AA 7075 / B<sub>4</sub>C Composite Fabricated  
by Friction Stir Processing



Name : **Rana Harikrishnasinh G.**

Roll No: **13RME012**

Date of Registration : **01-07-2013**

Date of Completion : **16-03-2018**

Supervisor :

**Dr Vishvesh Badheka, Head,  
Professor, Mechanical Engineering  
Department**

## **My Journey with PDDPU**

It was started with a baby step and with the elapsed time and efforts grown to the mature age on the day of my defence. Not all memories are sweet but bitter is also one of the taste to be identified and learned. Today I am on the desk from where now I can raise and feed a baby proposal to the mature research, and that's all might not have been possible without PDDPU and the people it belongs.

Publications : **5** , Citations- **40**, h index – **3**, i10 index – **1**

Profile: <https://scholar.google.co.in/citations?user=h-zumisAAAAJ&hl=en>





# PhD in Mechanical Engineering

Thermo-Economic Analysis of an Organic Rankine Cycle Powered Cascaded Vapor Compression-Absorption Refrigeration System.



Name : **Patel Bhavesh Kanubhai**

Roll No: **13RME007**

Date of Registration : **01-07-2013**

Date of Completion : **23-09-2018**

Supervisor:

**Dr Surendra Singh Kachhwaha,**  
**Professor, Mechanical Engineering**  
**Department**

## **My Journey with PDDPU:**

**PDDPU** was a catalyst for my PhD journey which accelerated my research without being a direct part. As a catalyst, PDDPU always gave an inspiration, motivation, awareness and encouragement through out the Ph.D journey. Despite lots of down fall, every morning I found PDDPU as fresh as it was day before. It was a great time to work at PDDPU overnights for years. I have found lots of faculty mentors who have supported in direct and indirect manner. I am grateful to the my mentors (Surendra Singh and Nishith Desai) who have consistently motivated and encouraged for the hard work. Only happy mind can bloom with creative and positive thoughts. I thank my colleagues in happiness, Meera, Kangana, Ankit, Gaurang, Shrushti, Devanshi, Mumukshu, Bhaumik, Dhiren, Zeel, Ruchita, Pinakeen, Parth, Harsh, Jishnu. The campus was most happening place for me and special thanks to SLS guys who were holding events till late nights everyday. PDDPU has passed on a legacy of principles and values and also nurtured my mind and soul. Today, I am happy to see myself as a PDDPU ALUMNUS and I will be always be indebted to my alma mater.





# PhD in Mechanical Engineering

Investigation of advanced metaheuristic techniques for simultaneous size, shape, and topology optimization of truss structures.



Name : **Tejani Ghanshyam**

Roll No: **13RME014**

Date of Registration : **01-07-2013**

Date of Completion : **28-12-2018**

Supervisor:

**Dr Vimal Savsani, Assistant Professor  
Mechanical Engineering Department**

## **My Journey with PDDPU**

“Thank you PDDPU for the wonderful opportunity to learn from the leading researchers in their field and to network internationally”





# PhD in Mechanical Engineering

Developments of friction stir welding  
process for dissimilar copper - stainless  
steel joints



Name : **Gaurang Joshi**

Roll No: **13RME004**

Date of Registration : **17-07-2013**

Date of Completion : **19-12-2019**

Supervisor :

**Dr Vishvesh Badheka, IWE,  
Head & Professor, Mechanical  
Engineering Department**

## **My Journey with PDPU**

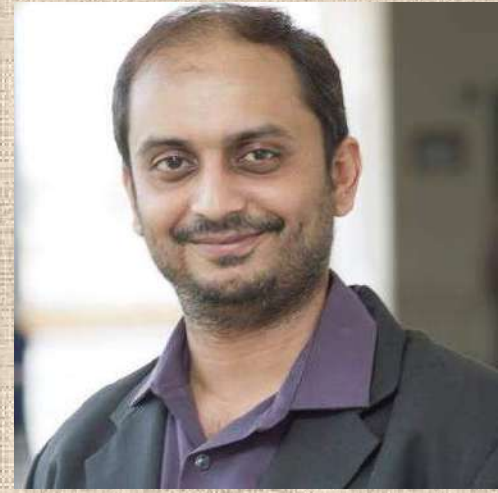
I can not express my journey in the form of words. The diversified environment at the PDPU campus nurture student's life. Additionally, research aptitude is developed by my supervisor helped me lot to grow as researcher. Moreover, I recommend PDPU to everyone. PDPU campus is like a umbrella of joy and skills. Thank you PDPU for everything.





# **PhD in Mechanical Engineering**

**“Surface Texture Inspection of Machined Surfaces in Computer Integrated Manufacturing”**



**Name : Patel Dhiren Ramanbhai**

**Roll No: 14RME04P**

**Date of Registration : 02-07-2014**

**Date of Completion : 06-03-2020**

**Supervisor :**

**Dr. M. B. Kiran**

**Associate Professor**

**Dept. of Industrial Engineering**

## **My Journey with PDPU**

Earning my doctorate from PDPU has been a rewarding and extremely enriching experience of my life. The support that I received from my guide, H.O.D, faculty members, fellow research students and administrative staff is commendable.





# **PhD in Industrial Engineering**

**Novel Techniques to Improve the Traveling  
Wire-Electrochemical Discharge Machining  
(TW-ECDM) Process**



**Name : Ankit Dilipkumar Oza**

**Roll No: 15RIE001**

**Date of Registration : 05-01-2015**

**Date of Completion : 29-05-2020**

**Supervisor :**

**Dr. Abhishek Kumar**

**Assistant Professor**

**Dept. of Industrial Engineering**

## **Journey with PDDPU**

I can not express my journey in the form of words. The diversified environment at the PDDPU campus nurture student's life. Additionally, research aptitude is developed by my supervisor helped me lot to grow as researcher.

Moreover, I recommend PDDPU to everyone.

PDDPU campus is like a umbrella of joy and skills. Thank you PDDPU for everything





# **PhD in Mechanical Engineering**

**“Tribological characterization of Al 6061 surface composites manufactured using Friction Stir Processing”**



**Name : Krunal Mahendra Mehta**

**Roll No: 16RME002**

**Date of Registration : 16-01-2016**

**Date of Completion : 02-06-2020**

**Supervisor :**

**Dr Vishvesh Badheka, IWE,  
Head & Professor, Mechanical  
Engineering Department**

## **My Journey with PDDPU**

It was a very rewarding experience for me to be undertaking my Doctoral Research at PDDPU. At each step I always received encouraging support from my Supervisor as well as the management. I certainly believe that my Doctoral pursuit at PDDPU made me a more competent individual.





# PhD in Mechanical Engineering

“Experimental Investigations and Optimization of Electrical Discharge Machining Process Parameters of Shape Memory Alloys”



Name : **Rakesh Chaudhari**

Roll No: **16RME001**

Date of Registration : **18-01-2016**

Date of Completion : **11-06-2020**

Supervisor :

**Dr. Jaykumar Vora**

**Assistant Professor, Mechanical Engineering Department**

**Dr. D. M Parikh**

**Dean FoET, Head, Industrial Engineering Department**

## **My Journey with PDPU**

Doing a PhD is about having a passion for learning and figuring things out; being determined, consistent, and focused; and taking good care of yourself during a long journey. Despite all its ups and downs, I have embraced this challenge - to get out from my comfort zone, to be transformed, and to create a better version of myself. Onwards and upwards! And if you asked me about what really gets PhDs done, my answer would be self-motivation!





# **PhD in Mechanical Engineering**

**Experimental and Parametric Investigation  
On Silica Gel- Water Pair for Adsorption  
Cooling Application**



**Name : Jaspalsinh B. Dabhi**

**Roll No: 13RME002**

**Date of Registration : 14-07-2013**

**Date of Completion : 04-09-2020**

**Supervisor :**

**Dr. Sukanta Kumar Dash**

**Assistant Professor, Chemical  
Engineering Department,**

**School of Technology,**

**Pandit Deendayal Petroleum  
University, Gandhinagar**

## **My Journey with PDPU**

It is a remarkable journey of attaining my doctorate degree in mechanical engineering. It is an honour for me to receive this award. I feel very grateful to my supervisors to give recognition to my work. Finally some advise for the aspiring researchers: Believe in yourself and ready to work hard for achieving your goal.





# **PhD in Mechanical Engineering**

**“Experimental Investigation on Humidification-Dehumidification Water Desalination Technique using Solar Energy”**

**Name : Patel Vivek Bhagvandas**

**Roll No: 14RME05P**

**Date of Registration : 21-07-2014**

**Date of Completion : 16-10-2020**

**Supervisor I: Dr. Rajesh Patel,  
Associate Professor, Mechanical  
Engineering Department**

**Supervisor II: Dr. Jatin Patel,  
Assistant Professor, Mechanical  
Engineering Department**

**My PhD research journey:**

**“The intrigues, rigour and sense of fulfillment”**





# PhD in Mechanical Engineering

## Solar Wind Hybrid Studies



Name : **Alok Das**

Roll No: **14RME01P**

Date of Registration : **23-01-2014**

Date of Completion : **13-03-2021**

Supervisor:

**Prof. S S Kachhwaha,**

**Professor,**

**Department of Mechanical**

**Engineering**

### **My Journey with PDDPU**

Being an Alumna of IIT, I was inspired to see the approach of PDDPU offering PhD programme which was a blending of academia and industry. This is a visionary for all students who needs to have a pragmatic approach while they are moving towards future life. During my journey, I have seen the caring and cohesiveness of HOD, Supervisors and inspiration & guidance by the Doctoral Committee members with their various suggestion for continual improvement. I would suggest all future students to take a note of diversified and practical approach of PDDPU for career development.





# **PhD in Mechanical Engineering**

Theoretical and experimental investigation of  
Vapour Absorption Refrigeration (VAR) system  
for small scale applications



Name : **Modi Bhaumik Rajeshkumar**

Roll No: **14RME03**

Date of Registration : **15-07-2014**

Date of Completion : **19-03-2021**

Supervisor:

**Dr. Anurag Mudgal, Associate Professor,  
Department of Mechanical Engineering**

## **My Journey with PDDPU**

I'd like to begin by expressing gratitude to PDDPU for the opportunity to be a part of the Research scholar family. I am also grateful to my guide, my colleagues, teaching & non teaching staff, they were my inspiration for this post and the reason why I am able to reflect on some of these challenging aspect of PhD.





# PhD in Mechanical Engineering

## Design And Development Of Air Powered Engine



Name : **Nikhil Kumar Jagjivan Chotai**

Roll No: **13RME001**

Date of Registration : **dd-06-2013**

Date of Completion : **31-05-2021**

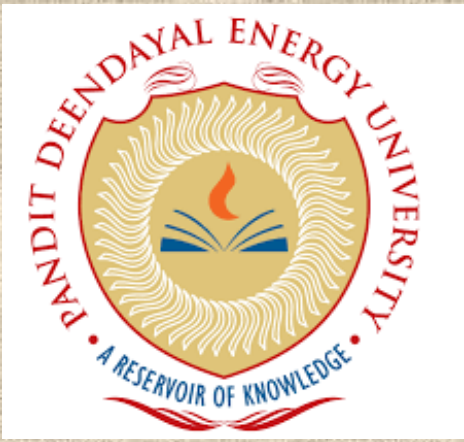
Supervisor :

**Dr. Vivek K Patel**

**Associate Professor,  
Mechanical Engineering  
Department**

**My Journey with PDEU University is perfect blend of joy of gaining knowledge and hardship. Lifelong learning begins in the research laboratories, PDEU provided unique platform to have clear purpose and sense of direction in research by allocating right experimenter/Supervisor**





# **PhD in Mechanical Engineering**

Investigation of Bobbin tool friction Stir Welding



Name : **Fuse Kishan Ashok**

Roll No: **17RME002**

Date of Registration : **15-06-2017**

Date of Completion : **04-08-2021**

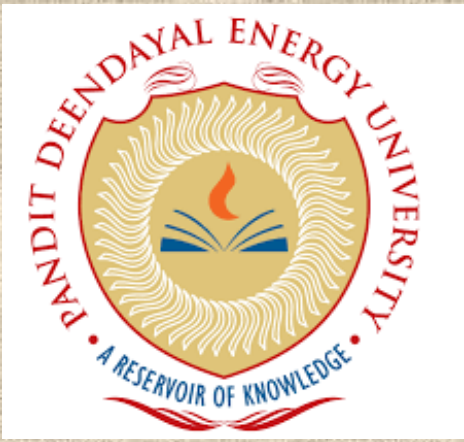
Supervisor:

**Dr Vishvesh Badheka, IWE,  
Professor, Mechanical Engineering  
Department**

## **My Journey with PDEU**

During my PhD journey at PDEU, I learnt about cutting edge innovative technologies in welding. Indeed, PDEU helped me enormously on both a personal and professional level throughout my PhD life to become innovative, result-oriented professional.





# PhD in Mechanical Engineering

Multi-objective optimization approach  
for modified organic Rankine cycle



Name : **Parth Prajapati**

Roll No: **15RME004**

Date of Registration : **01-06-2015**

Date of Completion : **08-09-2021**

Supervisor:

**Dr. Vivek K. Patel,**

**Associate Professor,  
Mechanical Engineering  
Department**

## **My Journey with PDEU**

It has been an enriching journey with PDEU and eventually led me to pursue PhD – a journey full of surprises. University supported in every aspect during my journey in terms of infrastructure and CPDA for attending national and international conferences. I am thankful to PDEU management and everyone who helped me sail through this journey directly or indirectly.





# PhD in Mechanical Engineering

“Investigation of Solar Parabolic Trough Collector for Industrial Process Heating”



Name : **Karan Motwani**

Roll No: **14RME02P**

Date of Registration : **-06-2014**

Date of Completion : **21-06-2021**

Supervisor :

**Dr Jatin Patel**

**Assistant Professor, Mechanical Engineering Department**

**My Journey with PDEU** ...I am glad to share my journey of PhD in PDEU. I am thankful to my PhD supervisor for constant support and guidance.

I am also thankful to Head of Department and doctoral committee in the success of my PhD journey.

Thank you once again to PDEU Family.