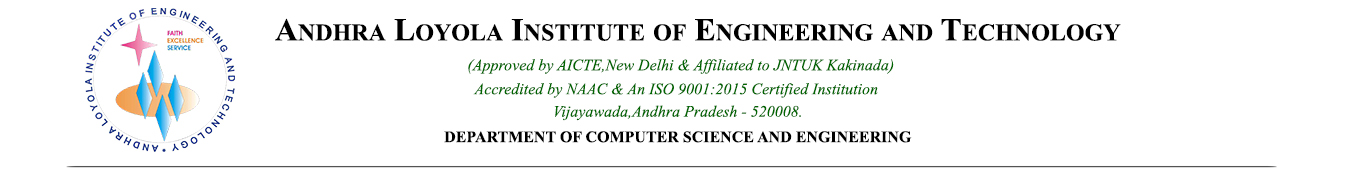
** Dt: 15-04-2021**

**IMPLEMENTATION PROCEDURE FOR CONDUCTING FINAL YEAR PROJECT**

The main objective of the Final Year Project is to learn and experience the process of conducting a quality projects. The following points serve as a guideline of activities that take place in the process.

**Problem Statement**

A problem statement is a concise statement of the problems which initiate/spark the idea questions or design ideas. Some of the points that could be highlighted are:

* What is the issue that we want to address (problem statement)?
* Why need to address the issues?
* How the project can solve the issues?
* Who get benefits from the project?

Objective sets a clear goal of what we want to accomplish by doing the project work. Student should only state the technical objective of the project (e.g. to evaluate the performance of the design, to test a hypotheses, to study the relationship between variable x and variable y etc.). Use measurable action verbs when defining an objective (e.g. define, design, identify, describe, analyze, evaluate etc).

**Scope**

Scope sets a clear boundary (time, geography, environment, function etc.) of our work to provide a common understanding of the project among stakeholders (in Final Year Project the stakeholders are students, lecturer, panels etc.). Scope makes our project achievable and realistic by defining the limits and constrains of the study.

**Literature review**

A literature review discussed published information in a particular subject area. The purpose of a literature review is to summarize and synthesize the ideas of others. When we write a literature review, it usually consists of 3 main sections:

* Introduction section that describe the topic of the review.
* Body section which contains the discussion of sources.
* Conclusions from the discussion of sources and recommendations (if any). The main point in the conclusion of the literature review would be the clarification and emphasis of the gaps (unexplored/unsolved problem in the field) and the contribution of the student’s project.

The discussion of the sources could be arranged chronologically, thematically or methodologically or in combination of any of them. In the discussion, students should:

* Be clear of the items that need to be discussed. It can be a variable or a technique or different design decisions.
* Make comparisons and give technical comments. Summary of the comparison could be tabulated or shown in graphs to clarify the differences.
* For engineering design, discuss on the tradeoff of a particular design decision

**Methodology**

Methodology is the part where we design and execute our work. We design our methodology by asking the following questions:

1. What is the objective of the study? (e.g. given a new design idea, we want to evaluate the performance of the new design in terms of its sensitivity, accuracy, processing time etc.)
2. What do we want to measure? (e.g. time, storage size, current, cost, sensitivity, accuracy etc.)
3. How do we perform the measurement? (e.g. built prototype then measure directly or indirectly the sensitivity of the system by following the equation suggested by person X in paper/book Y).
4. What are the tools (e.g. simulation software) or equipment (e.g. oscilloscope, robot prototype etc.) required for the experiment?
5. How are the measurements going to be recorded? What is the procedure of the experiment?
6. What error, situations, or part of the procedure that we design that could interfere with the measurements and how we could overcome them?
7. How do we analyze the result of the experiment? What kind of statistical tools/calculations/graphs/tables/figures could we used in order to make the data meaningful?

Research methodology describes how we conduct our experiment and NOT how we conduct our project. Its description should not include non-technical activities such as discussion with supervisor, submission of proposal, report writing etc.

**Result, Analysis and Discussion**

By answering point(**e**) in methodology section, we should now have the results of the study/experiments in the forms of graphs or tables that summarize our measurements (data). At this stage of the process, we are expected to discuss the results. Examples of points of discussion are:

* Statement of how the variable of interest changes with the change of another variable and whether the trend is expected.
* Academic interpretation of the result (i.e. with proof, comparison with other works, intelligent guess).
* Significance (its impact to the world) and implication of findings.
* Possible applications.

**RESPONSIBILITIES**

Responsibilities of the Student

* The student should take responsibility for the design, methodology and presentation of the project.
* It is the responsibility of the student to edit their work, and ensure all information is accurate and complete.
* The student is responsible for presenting their project proposal to the Faculty for approval before embarking on the data collection.
* Students are reminded that their project must be their own work and all quotations from other sources, whether published or unpublished, must be properly acknowledged. Plagiarism is a very serious offence and, where proven against a student, may result in disqualification from the examination of the project.
* The student should submit material in sufficient time to allow for comment and discussion before proceeding to the next stage.
* The student takes responsibility for maintaining regular contact with the supervisor. The student should participate in the progress reports to demonstrate their commitment to completing the project in time.
* The student takes responsibility for incorporating supervisor’s comments and feedback into their work, and seeking clarification where necessary.
* Students should keep track of their project to ensure it progresses according to the time frame. Where deviations are observed, they should be brought to the attention of the supervisor as soon as possible.
* Any problems encountered in conducting the project should be brought to the attention of the supervisor as soon as possible after they occur so that remedial action can be taken immediately.

Any problem encountered by the student during the project should be discussed with the supervisor. If the matter cannot be resolved, it should be reported to the project Coordinator and eventually to Head of Department.

**Responsibility of the Supervisor**

* Discuss and reach agreement with the student on details of the supervisory arrangements, including a regular meeting schedule. Ensure maintenance of the meeting schedule. Discuss what should be done of someone cannot attend a scheduled meeting. Also discuss access to the supervisor outside scheduled meetings.
* Ensure that the student is familiar with the policies relating to their studies.
* Assist the students to develop a realistic program of study to ensure they complete their project within the required time
* Monitor the student’s Progress
* If you find the student frequently cancelling meetings, it could be an indication of problems they may be experiencing. Contact the student to indicate your concern and set a new meeting time. Insist on seeing the student and emphasize at this meeting that you need to communicate regularly. It is worthwhile to reiterate that the purpose of the meeting is to help the student to progress and that lack of progress is a cause for mutual concern which is not alleviated by avoiding discussion.
* Keep written documentation about decisions and follow-up activities that stem from each meeting.
* Take up the issue of unsatisfactory progress with the Department Evaluation committee to determine what action should be taken.

**Project Proposal**

Project Proposal Form submitted by student to his/her supervisor prior to the commencement of the projects. The form must include a title, an abstract to the project, objectives /aim (or goal) and scope of the project. The first proposal is submitted before the proposal presentation (seminar) for panel assessment. Then after presentation, student must resubmit the proposal after correction complying the panel comments. The final proposal will be evaluated by both supervisor and panel.

**Project Logbook**

Students use project logbook to record all findings, data and factual information worthwhile to their project. In the logbook assessment, student is evaluated based on the effectiveness of meetings with supervisor and also the relevance of contents in logbook. Preparation of Logbook Student may used any appropriate book or file folder as working logbook. Supervision Record.

**Zero Review**

For Zero Review, Students will be required to make a brief (10 minutes) presentation about the project proposal. However, to ensure that they are entitled to present their findings, they need approval from their supervisor by filling up Review Approval Form. The verified form must be submitted to the panels during the presentation. The presentation slideshow should cover the following:

* Title
* Abstract to the project
* Objectives /aim (or goal)
* Scope of the project

**First Review**

For First Review, Students will be required to make a brief (15 minutes) presentation about the project first review proposal. However, to ensure that they are entitled to present their findings, they need approval from their supervisor by filling up Review Approval Form. The verified form must be submitted to the panels during the presentation. The presentation slideshow should cover the following:

* Introduction and overview of the project.
* Problem statement.
* Project objectives and scope.
* Literature survey and theory.
* Methodology.
* References.

During the presentation, students are evaluated in various aspects of knowledge. These may include communication skill, presentation contents, ability to answer any question, readiness of facing critics and comment, as well as ability to interact with audience

**Second Review**

For second Review, Students will be required to make a brief (15 minutes) presentation about the project second review. However, to ensure that they are entitled to present their findings, they need approval from their supervisor by filling up Review Approval Form. The verified form must be submitted to the panels during the presentation. The presentation slideshow should cover the following:

* User Interface
* System Architecture
* UML Diagrams
* Coding

**Third Review**

For third Review, Students will be required to make a brief (15 minutes) presentation about the project third review. However, to ensure that they are entitled to present their findings, they need approval from their supervisor by filling up Review Approval Form. The verified form must be submitted to the panels during the presentation. The presentation slideshow should cover the following:

* Test cases
* Execution
* Results

**Final Review (Internal)**

For Final Review, Students will be required to make a brief (20 minutes) presentation about the project final review. However, to ensure that they are entitled to present their findings, they need approval from their supervisor by filling up Review Approval Form. The verified form must be submitted to the panels during the presentation. The presentation slideshow should cover the following:

* Abstract
* Methodology
* Dataset explanation
* System architecture
* User Interface
* UML Diagrams
* Coding
* Test cases
* Execution
* Results

During the presentation, students are evaluated in various aspects of knowledge. These may include communication skill, presentation contents, ability to answer any question, readiness of facing critic and comment, as well as ability to interact with audience. The project demonstration (if any) takes place right after the presentation on the same day of presentation schedule. However, the panel may arrange suitable time for demonstration.

**Final Draft Report**

Upon completing the project, a draft report should be submitted to the supervisor for evaluation. The report must contain an updated progress report, and all information as predetermined by the faculty. As such, instructions for completing the project final report are contained in Guidelines for Preparation of Final Year Project Report.

**Documentation Guidelines**

**1. ARRANGEMENT OF CONTENTS:**

The sequence in which the project report material should be arranged and bound should be as follows:

1. Cover Page
2. Inside cover page
3. Certificate from external guide (if any)
4. Certificate from the college
5. Acknowledgements
6. Abstracts
7. Table of contents
8. List of tables
9. List of figures
10. Abbreviations (if any)
11. Nomenclature ( if any)
12. Chapters
13. Appendices
14. References
15. Publications (if any)
16. **PAGE DIMENSION AND BINDING SPECIFICATIONS:**

The project report should be prepared in A4 size, and should be hard bound with **BLACK** colour wrapper.

1. **PREPARATION FORMAT:**

**3.1 Cover Page & Title Page** – A specimen copy of the Cover page & Title page ofthe project report are given in **Annexure1.** The fonts and locations of various items on this page should be exactly as shown in Annexure 1.

**3.2** **Inside cover page** Same as cover page

1. **Certificate** - **See Annexure 2**.
2. **Acknowledgement** This should not exceed one page. **Annexure 1B**

The fonts and locations of various items on this page should be exactly as shown in Annexure 2. The Certificate should be in double line spacing using Times New Roman Font Style and, as per the format in Annexure 2.

1. **Abstract –** Abstract should be a one page synopsis of the project work, typed indouble line spacing (about 300 words with max 6 key words). Font Style Times New Roman and Font Size 12. **See Annexure 3**.
2. **Table of Contents –** The table of contents should list all headings, sub headingsafter the table of contents page, as well as any titles preceding it. The title page, Bonafide Certificate, Abstract and Acknowledgements will not find a place among the items listed in the Table of Contents. One and a half spacing should be adopted for typing the matter under this head. A specimen copy of the Table of Contents of the project report is given in **Annexure 4**.
3. **List of Tables –** The list should use exactly the same captions as they appearabove the tables in the body of the report. One and a half spacing should be adopted for typing the matter under this head. **See Annexure 5.**
4. **List of Figures –** The list should use exactly the same captions as they appearbelow the figures in the body of the text. One and a half spacing should be adopted for typing the matter under this head. **See Annexure 6.**
   * **Table and figures -** The word Table means tabulated numerical data in the bodyof the project report as well as in the appendices. All other non-verbal materials used in the body of the project work and appendices such as charts, graphs, maps, photographs and diagrams should be designated as figures.
5. **List of Symbols, Abbreviations and Nomenclature** – One and a half spacingshould be adopted for typing the matter under this head. Standard symbols, abbreviations etc. should be used. **See Annexure 7.**

1. **Chapters** – The chapters may be broadly divided into 4 or 4 parts with minimumtotal pages 50, (i) Introductory chapter, (ii) Literature Review (if any) (iii) Chapters developing the main theme of the project work (iv) Conclusion and (v)Future Scope.

The main text will be divided into several chapters and each chapter may be further divided into several divisions and sub-divisions.

The format for typing chapter headings, division headings, sub division headings are explained through the following examples.

Chapter heading : CHAPTER 1

INTRODUCTION

Division heading : 1.1 OUTLINE OF PROJECT

Sub-division heading: 1.1.2.Literature review

The word CHAPTER without punctuation should be centred 50mm down from the top of the page. Two spaces below, the title of the chapter should be typed centrally in capital letters. The text should commence 4 spaces below this title, the first letter of the text starting 20mm, inside from the left hand margin.

The division and sub-division captions along with their numberings should be left justified, The typed material directly below it and should be offset 20mm from the left hand margin. Even paragraph should commence 3 spaces below the last line of the preceding paragraph, the first letter in the paragraph being offset from the left hand margin by 20 mm.

* Each chapter should be given an appropriate title.
* Tables and figures in a chapter should be placed in the immediate vicinity of the reference where they are cited.
* Footnotes should be used sparingly. They should be typed single space and placed directly underneath in the very same page, which refers to the material they annotate.

**See Annexure 8**

1. **Appendices -** Same format as Chapters
2. **List of References** –The listing of references should be typed 4 spaces below theheading “REFERENCES” in alphabetical order, in single spacing and left – justified. The reference material should be listed in the alphabetical order of the surname of the first author. The name of the author/authors should be immediately followed by the year and other details. **See Annexure 9**.
3. **TYPING INSTRUCTIONS:**

The impression on the typed copies should be black in colour.

One and a half spacing should be used for typing the general text. The general text shall be typed in the Font style ‘Times New Roman’ and Font size 12. Use A4 (210 mm X 297 mm) bond un-ruled paper (80 gsm) for all copies submitted. Use one only side of the paper for all printed/typed matter.

**4.1**. **NUMBERING**

Every page in the seminar/project report, except the seminar/project report title page, must be accounted for and numbered.

The page numbering, starting from acknowledgements and till the beginning of the introductory chapter, should be printed in small Roman numbers, i.e, i, ii, iii, iv......

The page number of the first page of each chapter should not be printed (but must be accounted for). All page numbers from the second page of each chapter should be printed using Times New Roman numerals, i.e. 2,3,4,5...

All printed page numbers should be located at the bottom centre of the page.

1. **CHAPTERS**

Use only Times New Roman numerals. Chapter numbering should be centered on the top of the page using large bold print. < size 14> <Times new Roman>

1. **SECTIONS**

Use only Times New Roman numerals with decimals. Section numbering should be left justified using bold print. Example: 1.1, 1.2, 1.3, etc.

**4.3.1 SUBSECTIONS**

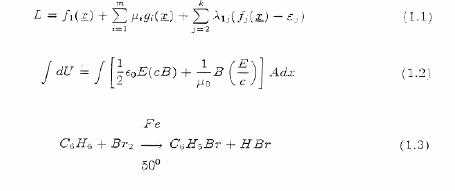
Use only Times New Roman numerals with two decimals. Subsection numbering should be left Justified using bold print. Example: 1.1.1, 1.1.2, 1.1.3, etc.

1. **EQUATION(S)/FORMULA**

Use only Times New Roman numerals with single decimal. Equation numbers should be right justified using normal print.

Format: (<Chapter number>.<Equation serial number>).

Example (1.1)



1. **REFERENCES**

Use only Times New Roman numerals. Serial numbering should be carried out based on Alphabetical order of surname or last name of first author. **Ref. Annexure 9**

**5** **TEXT**

**5.1** **COLOR** - Black

1. **FONT**

**5.2.1 REGULAR TEXT** - Times Roman 12 pts. and normal print.

|  |  |  |
| --- | --- | --- |
| **5.2.2** | **CHAPTER HEADING** | **-** Times Roman 14 pts., bold print and all capitals. |
| **5.2.3** | **SECTION HEADINGS** | **-** Times Roman 12 pts., bold print and all capitals |
| **5.2.4 SUBSECTION HEADINGS -** Times Roman 12 pts., bold print and leading | | |
| capitals. ie. Only first letter in each word should be in capital | | |
| **5.2.5** | **SPECIAL TEXT** | - Italics/Superscript /Subscript/Special symbols, etc., |
| as per necessity. Special text may include footnotes, endnotes, physical or chemical | | |
| symbols, mathematical notations, etc. | | |
| **5.2.6** | **REFERENCES** | - Same font as regular text. Serial number and all |

authors' names to be in bold print. Journal names and book titles should be in italics.

1. **PARAGRAPH SPACING**

Use 6 pts before & 6 pts after paragraphs.

All paragraphs in the seminar/project report should be left justified completely, from the first line to the last line.

Use 1.5 spacing between the regular text and quotations.

1. Provide double spaces between:
   1. Chapter title and first sentence of a chapter,
2. Use single spacing
   1. in footnotes and endnotes for text.
   2. in explanatory notes for tables and figures.
   3. in text corresponding to bullets, listings, and quotations in the main body of seminar/project report .
3. Use single space in references and double space between references.

**7** **JUSTIFICATION**

The text should be fully justified

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **8** | **MARGINS** |  |  |  |
| The margins for the regular text are as follows: | | | |  |
|  | LEFT | = | 1.50" |  |
|  | RIGHT | = | 1.00" |  |
|  | TOP | = | 1.00" | | |
|  | BOTTOM | = 1.00" | |  |

**9** **TABLES**

All tables should have sharp lines, drawn in black ink, to separate rows/columns as and when necessary.

Tables should follow immediately after they are referred to for the first time in the text. Splitting of paragraphs, for including tables on a page, should be avoided. Provide double spaces on the top and the bottom of all tables to separate them from the regular text, wherever applicable.

The title of the table etc. should be placed on the top of the table

The title should be centered with respect to the table. The titles must be in the same font as the regular text and should be single spaced. The title format is given below: Table<blank><chapter number>.<serial number><left indent><table title>.

**10** **FIGURES**

All figures, drawings, and graphs should be drawn in black ink with sharp lines and adequate contrast between different plots if more than one plot is present in the same graph.

The title of the figure etc. should be placed on the bottom of the figure.

Figures should follow immediately after they are referred to for the first time in the text. Splitting of paragraphs, for including figures on a page, should be avoided. Provide double spaces on the top and the bottom of all figures to separate them from the regular text, wherever applicable. Figures should be centered with respect to the figure. The titles must be in the same font as the regular text and should be single spaced. The title format is given below:

1. Fig. <blank><chapter number>.<serial number> <left indent><figure titlers published, based on the report ( if any)

**~~Annexure1~~**

**PROJECT TITLE** <Font Size 16><1.5 line spacing>

*A PROJECT REPORT*<Font Size 14><Italic>

*submitted to*

### **JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY**

**KAKINADA** <Font Size 14><Bold>

*in partial fulfillment for the award of the degree of* <Font Size 14><Italic>

**BACHELOR OF TECHNOLOGY** <Font Size 16><Bold

*By* <Font Size 14><Italic>

**NAMES OF STUDENTS**<Font Size 14>Bold**ROLLNO**

*UNDER THE ESTEEMED GUIDANCE OF*

**GUIDE NAME**<Font Size 14><Bold>

**DESIGNATION**<Font Size 12><Bold>



**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**<Font Size 2><Bold>

**ANDHRA LOYOLA INSTITUTE OF ENGINEERING AND TECHNOLOGY**<Font Size 16><Bold>

(Affiliated to JNTU KAKINADA)

Vijayawada**.**<Font Size 12><Bold>

**JULY 2021**

**WIFI-ACESS MANAGER**

*A PROJECT REPORT*

*submitted to*

### **JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY**

**KAKINADA**

*in partial fulfillment for the award of the degree of*

**BACHELOR OF TECHNOLOGY**

*By*

**K.ANUSHA PALLAVI 11X41A0576**

**K.ANUSHA PALLAVI 11X41A0576**

**K.ANUSHA PALLAVI 11X41A0576**

**K.ANUSHA PALLAVI 11X41A0576**

*UNDER THE ESTEEMED GUIDANCE OF*

**DR. CH RAJENDRA BABU**

**PROFESSOR**



**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**ANDHRA LOYOLA INSTITUTE OF ENGINEERING AND TECHNOLOGY**

(Affiliated to JNTU KAKINADA)

Vijayawada.

**JULY 2021**

**Annexure 2.**

**CERTIFICATE**

This is to certify that the project report entitled “**TITLE OF PROJECT WORK**” submitted by **NAMES OF STUDENTS** to the JNTU KAKINADA in partial fulfillment for the award of Degree of Bachelor of Technology in Computer Science and Engineering is a bonafide work carried out by them under my supervision during the year 2018-2019.

**(Name of the GUIDE) (Name of the HOD)**

**Designation Head of the CSE Department**

**ACKNOWLEDGEMENT**

One page maximum. Times New Roman and Font Size 12

Annexure 3.

**ABSTRACT**

The Online Comprehensive Performance Analysis Test is providing the information and conducting mock tests for GRE and CAT. This facilitates the user by providing the levels of difficulty to improve their performance. The information about the GRE and CAT is given here and by using this project the user will get the patterns and strategies about the GRE and CAT. The registration details also provided in this site for both GRE and CAT to make the user feel easy to know about how to apply for GRE and CAT, give the information about what are the requirements to apply GRE and CAT.

Annexure 4

**CONTENTS**

**Title** **Page**

**LIST OF TABLES** i

**LIST OF FIGURES** ii

**ABBREVIATIONS…………………………………………………………………** iii

**NOMENCLATURE** iv

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  2. s 5

**CHAPTER 2 SYSTEM REQUIREMENT SPECIFICATION**

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2.2 Design 9

2.2.1 Effect 9

2.3 Model 25

...........................................................................................................................................

……………………………………………………………………………………………

……………………………………………………………………………………………

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**CHAPTER 7 FUTURE SCOPE**

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Annexure 5.

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3.2 Values 57

4.1 Specifications. 90

4.2 Detailsr 90

4.3 Boundary and Initial Conditions 94

4.4 Study 99

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4.2 95

4.3 95

4.4 95

4.5 96

4.6 96

4.7 97

4.8 97

4.9 97

4.11 98

4.12 99

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Annexure 7 |  |
|  |  | **ABBREVIATIONS** | |
| ATDC | After Top Dead Center | | |
| BDC |  | | |
| BTDC |  | | |
| CA |  | | |
| CAD |  | | |
|  |  | | |
|  |  | | |
|  |  | | |
|  |  | | |

Annexure 9

**CHAPTER 1**

**INTRODUCTION**

The Online Comprehensive Performance Analysis Test is providing the information and conducting mock tests for GRE and CAT. This facilitates the user by providing the levels of difficulty to improve their performance. The information about the GRE and CAT is given here and by using this project the user will get the patterns and strategies about the GRE and CAT. The registration details also provided in this site for both GRE and CAT to make the user feel easy to know about how to apply for GRE and CAT, give the information about what are the requirements to applyGRE and CAT.

………………………………………………………………………………………………

……………………………………………………………………………………

**SOFTWARE SPECIFICATIONS**

* Operating system : Windows 2000/XP/Vista.
* Coding Language : ASP.Net with VB.
* Data Base : SQL Server 200**5**
* Model Design: Rational rose
* IDE : Visual Studio

**MINIMUM HARDWARE SPECIFICATIONS**

* Processor : Pentium 4.0(1.6 GHz)
* Memory :  256 MB RAM
* Hard Disk : 25 GB

Annexure 10

**REFERENCES**

**Abraham, J., F.V. Bracco, and R.D. Reitz (1985)** Comparison of Omputed andMeasured Premixed Charge Engine Combustion. *Combustion and Flame, Vol. 60, 309 –* *322.*

**Affes, H., N. Trigui., D. Smith, and V. Griaznov (1998)** Shape Optimization of ICEngine Ports and Chambers. *SAE Paper No.980127.*

**Anderson, J.D. (1995)** *Computational Fluid Dynamics.*McGraw Hill, Singapore 1995.

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**Arcoumanis, C., J.H. Whitelaw, W. Hentschel, K.P. Schindler (1994)** Flow andCombustion in a Transparent 1.9 Litre Direct Injection Diesel Engine. *Proc. Instn. Mech.* *Engrs., Vol. 208.*

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**Babu, S.S., P.I. Haneef, P.A. Lakshminarayanan, P. Deshpande, N. Bhalla, P. Sagar, and J. Sekar (2005)** Two Methods for Improving Torque of a Diesel Engine in the LowSpeed Range. *SAE Paper No. 2005-26-001.*

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**Barths, H., C. Hasse, and N. Peters (2000)** Computational Fluid Dynamics Modeling ofNon-Premixed Combustion in Direct Injection Diesel Engines. *Proceedings of the IMechE* *Volume 1, Journal of Engine Research.*

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**Beard, O. C and M. Miche (2003)** Improved Modeling of DI Diesel Engines Using SubGrid Description of Spray and Combustion. *SAE Paper No. 2003-01-0008.*