Primary Aspects of Paper Writing

B N Basu

bnbasu.india@gmail.com

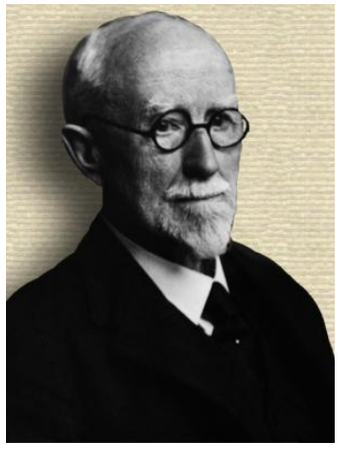
Website: www.bnbasu.com

Superannuated from:
Department of Electronics Engineering
Indian Institute of Technology, Banaras Hindu University
Varanasi-221005, Uttar Pradesh, India

Distinguished Professor (Adjunct)
SKFGI, Mankundu-712139, West Bengal, India

I thank Ms. I Suryarajitha, a Ph.D. student of Prof. M. V. Kartikeyan, for formatting this presentation

“Was there ever a more horrible blasphemy than the statement that all the knowledge of God is confined to this or that book? How dare men call God infinite, and yet try to compress Him within the covers of a little book!”
— Swami Vivekananda (Raja-Yoga)



“There is only one nature — the division into science and engineering is a human imposition, not a natural one. Indeed, the division is a human failure; it reflects our limited capacity to comprehend the whole.”

— Sir William Cecil Dampier

“To see what is general in what is particular, and what is permanent in what is transitory, is the aim of scientific thought.”

— Alfred North Whitehead

Refer to my book: Technical Writing (Prentice-Hall of India, Delhi, 2007).

The book is dedicated to Dr. SSS Agarwala, Ex-Scientist, CSIR-Pilani.

The 'Foreword' of the book is written by Professor SC Dutta Roy, Ex-Professor, IIT-Delhi.

Issues of Concern

- Why to publish papers?
- Joint authorship
- Title (Specificity)
- Abstract (Showcase)
- Indexing terms/ Keywords
- Introductory through Concluding Sections
- Simplicity of presentation
- Conciseness and Gunning fog index
- Clear statement of the problem
- Novelty of the work
- Results and Validation
- Referencing of previous work
- Expectation of the journal
- Paper elements and their order
- The English of the paper
- Honesty and Plagiarism

Motivation / Why should we write a paper?

- **Publish or Perish: It's Not Just for Academics Anymore — Harlan Howe, Jr**

Microwave Journal, September 1999, under the column 'Special Report'

- **Measurement of accomplishment**
- **Dissemination of information**
- **Record of culmination of work**
- **National and international recognition**
- **Strengthening of curriculum vitae**
- **Avoidance of work to be languished in note books**
- **Getting the work checked and validated**
- **Benefiting from reviewers' comments free of cost**

Reply of the Author to the Reviewer's Points

- **Reviewer's point #7: The equivalent circuit analysis of the helical slow-wave structure ignoring the structure loss has been used by the authors giving no reason as to why they have used it when the simpler electromagnetic field analysis is available.**
- **Reply to point #7: In the equivalent circuit analysis of the lossless structure, at a time half the number of electromagnetic boundary conditions used in the field analysis are required to be used to find the line parameter L and, similarly, half the number of electromagnetic boundary conditions to find the line parameter C. Further, besides finding the dispersion relation of the structure from the transmission line equation $\beta^2 = \omega^2 LC$, the equivalent circuit analysis yields the characteristic impedance $Z_0 = (L/C)^{1/2}$ of the structure, a parameter of relevance to impedance matching the structure with the RF input and output couplers of the structure, which cannot be done by the field analysis of the structure.**

Reply of the Author to the Reviewer's Points

Kindly see the highlighted portion of the third paragraph section II in the revised manuscript.

Sincere thanks to the reviewer for helping us to improve our manuscript addressing this point.

- **Reply to point #7 by the author(s) is satisfactory. However, the reply remains incomplete unless the content of the reply is incorporated in the text of the modified manuscript and the reply mentions the paragraph number and section number where it can be found in the modified manuscript.**

Expectation of a journal from the author

- Title reflecting specificity of the work
- Abstract showcasing the work
- Introductory section/Introduction
- Concluding section/Conclusion
- Sections between introductory and concluding sections

- Novelty of the work vis-á-vis previously reported work in the introductory section
- Plan and Scope of the work at the end of the introductory section
- Theory/Analysis/Synthesis/Experiment/Simulation in appropriate sections
- Presentation of results/Figure quality/Captions to figures
- Validation of results
- Presentation/Language and the English of the paper

The journal editor would like to know from the reviewers if

- ✓ Subject matter dealt with is appropriate to the scope of the journal
- ✓ Work reported is original, important, useful, novel, timely, not of minor value, and of great interest to most
- ✓ Title is suitable
- ✓ Abstract is adequate
- ✓ References are adequate and of proper context/ Prior art is adequately referenced
- ✓ Work is an improvement over the earlier work
- ✓ Work is validated
- ✓ Quality of presentation is high
- ✓ Manuscript length is appropriate
- ✓ Figures and their captions are clear
- ✓ Tables and their headings are clear
- ✓ English is satisfactory using correct, clear, and succinct or concise language
- ✓ Paper is recommended with the remark that it may be published without revision/ with optional revision/ with mandatory revision/with mandatory major revision or as a brief or that it may be rejected

Review Formats

A typical ScholarOne format for review

Information contained in a manuscript under review is confidential and must not be shared with others, or used to advance your research or financial interest. Your participation in the review process signifies your compliance with confidentiality. Please check that all relevant prior work is properly and completely cited. Plagiarism is unacceptable.

Clarity of Presentation

- ✓ **Is the work clearly presented?**
- ✓ **Is the paper well organized and clearly written?**
- ✓ **Is the English satisfactory?**
- ✓ **Is prior art adequately referenced?**

Review Formats

Recommendation:

- ✓ Publish as is
- ✓ Accept subject to optional revisions
- ✓ Mandatory revisions required
- ✓ Reject
- ✓ Submit to another journal

Comments

Confidential Recommendation for Editor:

Recommendation to Author(s):

Please do not identify yourself or your institution. A copy of your recommendation will be sent to the author(s).

Technical Content of Paper

- What is the technical quality of the Manuscript?
- Length in relation to technical impact
- Interest to T-ED Readers (check as many as apply):

- Important
- Useful
- Novel
- Timely
- Of minor value

- Of great interest to most
- Of great interest to few
- Of little interest to any
- Of interest to most
- Of interest to some

Technical Content of Paper

- **Recommendation**
  - **ACCEPT Optional Revisions**
  - **ACCEPT Conditionally with Mandatory Revisions**
  - **RECOMMEND for Publication**
  - **REJECTED-Major Revisions**
  - **REJECTED-Technical Content**
  - **REJECT-Re-Submit as a Brief**
  - **This paper should be submitted to another Journal**
- **Would you be willing to review a revision of this manuscript?**
  - **Yes**
  - **No**

Technical Content of Paper

- Confidential Comments to the Editor
- Comments to the Author
  - Text must be entered into this box. If you do not have any comments, enter “No comments”. If you have attached a file, enter “see attached file”. Please do not identify yourself or your institution.
  - Attach a File
  - Files attached
  - No files have been uploaded.

Another format for review

Yes/No

1. **Subject matter appropriate to scope of TPS?**
2. **Sufficient new technical/physics advances (original work)?**
3. **Proper context with related work / adequate references? ***
4. **Appropriate quality of presentation? ****
5. **Suitable title?**
6. **Adequate abstract?**
7. **Should manuscript be shortened?**
8. **Clear figures with captions?**
9. **English satisfactory? *****

Another format for review

** Does the reference list appear to be appropriate? Are the references too one-dimensional, i.e. directed only towards the authors' research or research at the authors' institutions? Do the references provide sufficient background references to allow the reader to place the paper in context with previous and current work?

** Is the manuscript well organized and presented in a clear and logical manner, with inclusion of adequate physical explanations and discussions?

*** How well the paper is written? Is the English grammar and word usage acceptable?

Overall rating of paper: Excellent, Very good, Good, Fair, Reject

Order of elements of a paper

1. Title of the paper on the title page
2. Name(s) of author(s) and affiliation(s) on the title page of the manuscript
3. Abstract on the title page of the manuscript
4. Keywords on the title page of the manuscript
5. List of Symbols (if any)
6. Paper sections: first (introductory) through end (concluding) sections
7. Appendices
8. Acknowledgment
9. References

Joint authorship

- **Name(s) and Affiliations(s) of authors(s)**
  - ✓ **Multiple authored paper: Name and affiliation of each author of a paper should be provided according to the format of the journal concerned**
  - ✓ **For an author who has taken leave from his or her parent organization to work at another organization from which the work has been reported, the names of both the organizations should be mentioned**
  - ✓ **Email address of the author in the case of a single-authored paper and Email address of the communicating author in the case of a multiple-authored paper**
- **Corresponding author could be any one of the contributing authors and need not necessarily be the first author, in the case of a multiple-authored paper**
- **It is the responsibility of the corresponding author to certify the endorsements of his co-authors in copyright declaration form of the journal**

Order of authors

- Order of authors to be decided irrespective of the hierarchy of the contributors
- First author: the primary progenitor of the work and who has done most of the work
- Terminal spot in the list of authors: to be reserved for the team leader
- Co-authors: Contributors should be able to explain the content of the paper in general and his or her specific contribution in particular.

Genuine authorship

- ✓ **A genuine contributor should not be excluded from the authorship.**
- ✓ **You cannot appease such a contributor by merely substituting his or her due credit of authorship by some other reward like monetary benefit or by putting his or name in 'Acknowledgment'.**
- ✓ **Avoid 'backdoor entry' into the list of authors**
- ✓ **Someone who has not made any direct and significant contribution to your work should not be one of the authors simply because he or she is a member of your team.**
- ✓ **'Laundry list of authors' should be avoided.**
- ✓ **A person by virtue of being the head of an institution, holding the chair of a department or being an influential person should not by default become a co-author.**

Title of a paper

- To reflect the true content of the work
- To convey the right and concise message as in a cablegram
- To reflect as much information as possible regarding its content
- Not to be too long
- Abbreviations to be avoided
- To go for a hanging title for more information about the content
- Word order of the title to choose to provide the specificity of the content
- To be finalized after completing the most of the writing of the paper

An example of how to modify the title in steps for adding more and more information …..

Specificity versus length of the title …..

EXTRA DIMENSION

Studies on electromagnetic structures for microwave tubes (TITLE STARTED WITH)

Studies on electromagnetic structures for traveling-wave tubes

Studies on slow-wave structures for traveling-wave tubes

Studies on helical slow-wave structures for traveling -wave tubes"

Studies on inhomogeneously loaded helical slow-wave structures for travelling-wave tubes

Analysis of inhomogeneously loaded helical slow-wave structures for travelling-wave tubes

Field analysis of inhomogeneously loaded helical slow-wave structures for travelling-wave tubes

Field analysis of inhomogeneously loaded helical slow-wave structures for broadband traveling-wave tubes (FINALIZED TITLE)

Field analysis of inhomogeneously loaded helical slow-wave structures for broadband traveling-wave tubes (FINALIZED TITLE)

Information content:

Nature of study: Analysis; Type of analysis: Field analysis; Electromagnetic structure analyzed: Slow-wave structure; Type of the slow-wave structure analyzed: Helical; Special effects studied: Inhomogeneous loading of the structure; Specific performance: Wide bandwidth of the device; Specific device: Traveling-wave tube

Example of how to change the word order for the shift in emphasis

- "Field analysis of inhomogeneously loaded helical slow-wave structures for broadband travelling-wave tubes"
- "Broadbanding a travelling-wave tube by inhomogeneously loaded helical slow-wave structures: a study by field analysis"
- Emphasis is shifted from the analysis to the improvement in the performance (bandwidth) of the device
- "Synthesis of electron guns for linear beam microwave tubes by conformal mapping of electrode shapes"
- "Conformal mapping of electrode shapes for the synthesis of electron guns for linear beam microwave tubes"
- Emphasis is shifted from the technique of synthesis to the function of the technique

Hanging title for more information

"Broadbanding a travelling-wave tube by inhomogeneously loaded helical slow-wave structures—a study by field analysis"

or

"Broadbanding a travelling-wave tube by inhomogeneously loaded helical slow-wave structures: a study by field analysis"

First part: Technique of implementing performance improvement

Second part: Nature of study

Indexing terms/Keywords

- **Categorization to classify a paper with respect to its field and scope**

- **Usually, four to five terms to be provided judiciously to identify the category of the paper**

- **Helpful to the editor of the concerned journal/ abstracting journals/ Internet sites for placing the abstract of the paper in appropriate locations**

Abstract

To ‘showcase’ the work and to be taken as a mini-version of your paper in a concise form

To be either ‘indicative’ giving a first-hand information regarding what the work is about, or ‘informative’ giving somewhat more details of the work restricting to the length limit

To encapsulate as much details as possible of the work restricting to the length limit

Statement of the problem

Originality, novelty, validation, and improvement over previous work

Importance and applications of the work

Approach to solving the problem/ methods

Critical and principal findings or results with quantitative input and output parameters

Abstract

- **To be read 'verbatim' independently of the rest of the paper in secondary organs/ abstracting journals and Internet cites**
- **To be self-contained**
- **To avoid the abbreviations which are unpopular in the readership of the concerned journal**
- **To cite a reference, where absolutely necessary, with full details and not merely by reference number such as [15] or name and year such as Dutta et al. (1993)**
- **To cite a reference in the abstract giving the full details such as:**

S. K. Datta and B. N. Basu, "Control of IM3 distortion in helix TWTs by harmonic injection — an Eulerian hydrodynamic analysis," *IEEE Trans. Electron Dev.*, vol. ED-48, pp. 62-67, 2001.

Abstract

The analytically calculated dispersion diagram of an overmoded 9-period V-band slow-wave structure (SWS) designed to operate in a high-order transverse-magnetic TM_{03} waveguide mode of a backward-traveling electromagnetic wave [7] is re-examined using the two-dimensional (2D) Poisson SuperFish code allowing to precisely calculate spatial patterns of electric field vectors, wavenumbers and characteristic frequencies of all azimuthally-symmetric TM0nl cavity modes that exist in a closed SWS, where n and l are the radial and axial indices of TM0nl cavity modes, respectively [28]. It is shown that the analytically calculated higher-order TM_{0n} waveguide modes of the open SWS are actually not pure TM0n modes, but fascinating combinations of selected portions of the modes with selected portions of all possible lower-order $TM_{0(n-j)}$ waveguide modes, where j=1 … (n-1). An analytically calculated TM_{03} waveguide mode, therefore, turns out to be in fact a combination of three different TM_{0n} waveguide modes sequentially identified by numerically calculated TM_{0nl} cavity modes: (i) TM_{031} mode with l=0 … 4, (ii) TM_{011} mode with l=13 … 11, and (iii) TM_{021} mode with l=8 … 9.

Abstract

The analytically calculated dispersion diagram of an overmoded 9-period V-band slow-wave structure (SWS) designed to operate in a high-order transverse-magnetic TM_{03} waveguide mode of a backward-traveling electromagnetic wave [Ye et al., Phys. Plasmas, 22, 063104 (2015)] is re-examined using the two-dimensional (2D) Poisson SuperFish code allowing to precisely calculate spatial patterns of electric field vectors, wavenumbers and characteristic frequencies of all azimuthally-symmetric TM0nl cavity modes that exist in a closed SWS, where n and l are the radial and axial indices of TM0nl cavity modes, respectively [Main et al., IEEE Trans. Plasma Sci., Vol. 22, No. 5, Oct. 1994, p. 566]. It is shown that the analytically calculated higher-order TM_{0n} waveguide modes of the open SWS are actually not pure TM0n modes, but fascinating combinations of selected portions of the modes with selected portions of all possible lower-order $TM_{0(n-j)}$ waveguide modes, where j=1 … (n-1). An analytically calculated TM_{03} waveguide mode, therefore, turns out to be in fact a combination of three different TM_{0n} waveguide modes sequentially identified by numerically calculated TM_{0nl} cavity modes: (i) TM_{031} mode with l=0 … 4, (ii) TM_{011} mode with l=13 … 11, and (iii) TM_{021} mode with l=8 … 9.

Abstract

To write the work done mostly in past tense remembering that past tense is used in abstracts, literature survey, and own methods, results and findings

In general, when writing an abstract, you should use the simple present tense when stating facts and explaining the implications of your results. Use the simple past tense when describing your methodology and specific findings from your study. Either of these two tenses can be used when writing about the purpose of your study. Finally, you can use the present perfect tense or the present perfect progressive tense when explaining the background or rationale of your study.
https://www.magnumproofreading.com/post/using-the-present-tense-and-past-tense-when-writing-an-abstract#

Abstract

Abstract: The manuscript presents the performance improvement study of a spatial harmonic magnetron (SHM), using 'thermally assisted-Secondary Electron Emission' (T-SEE) cold cathode. A 28-vane, mm-wave SHM with a operating frequency of 136 GHz has been investigated using 3D Particle-in-Cell (PIC) code CST Particle studio using the proposed cathode. The simulated output power of 4.69 kW has been achieved at a reduced anode voltage of 11.0 kV and the corresponding electronic efficiency is found to be 5.61%. The selection of suitable operating point has been also investigated for the optimum bean-wave interaction. The selection of operating point is based on different operating parameters such as oscillation start up time and power build up rate. The effect of primary current on the output performance and mode build-up rate has been also studied.

Reviewer's suggestion:

The abstract of the paper mentioning the work done by the authors may be judiciously written in past tense. For instance, 'has been' may be replaced with 'was' at relevant places.

Introductory section

- ✓ May or may not have a heading according to the style of the journal
- ✓ To write such as to attract readers and arouse interest in the work and create the so-called "first impression" in the mind of readers
- ✓ To make a good beginning to ensure a good ending as well
- ✓ To write it, better after writing most of the manuscript of the paper, so that none of the salient features, issues and aspects of the work are missed in the section
- ✓ To introduce the subject with a literature survey describing the previous work
- ✓ To point out the merit of your work vis-à-vis the limitations of the previous work
- ✓ To highlight in what respects your work is different from and an improvement over the previous work
- ✓ To state the problem

  "A problem well stated is a problem half-solved"

  To clearly state the problem, that is, state what you are going to do and in what manner (methodology)

  To mention whether the work is theoretical, simulation based, or experimental

  To mention the assumptions made in the theory

- ✓ To explain the plan and scope of the work at the end of the section

Introductory section

- ✓ To introduce the subject with a literature survey describing the previous work
- ✓ To point out the merit of your work vis-à-vis the limitations of the previous work
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Concluding section

- ✓ **Just as "well begun" amounts to "half done", remember that "all is well that ends well".**
- ✓ **Conclude your work on a positive note conveying the salient features of you work and highlighting your findings and accomplishments.**
- ✓ **Summarize the work clearly and concisely and interpret the major findings leading to a definite conclusion.**
- ✓ **Satisfy the reader who may be eager to know what the work has led to without going through core sections of the paper.**
- ✓ **Mention to what extent you could reach the goal that was already set by you in the plan and scope of your work in the introductory chapter of your thesis or in the introductory section of your paper.**
- ✓ **Discuss the limitations of the work and the scope for**

Equations and Mathematical Expressions

- ✓ **Put a mathematical expression anywhere within a sentence treating it as part of the sentence.**
- ✓ **State a mathematical expression, if it is long, at the end of a phrase or a sentence.**
- ✓ **Treat the mathematical function as a clause, the variable or parameter as a noun, the operator as the conjunction, and the equation as a clause or a sentence, the equal sign "="standing for the verb "is" or the phrase "equal to".**
- ✓ **Number an equation if it is to be recalled.**
- ✓ **Number equations serially as (1), (2), (3), ……**
- ✓ **Punctuate a mathematical statement.**
- ✓ **Treat the equation number itself as the appropriate punctuation mark.**
- ✓ **Mark the end of the statement by a full stop at its end, following the equation number if the equation is put at the end of a sentence.**

Equations and Mathematical Expressions

- ✓ **Treat an equation number as the punctuation mark such as comma when the equation is placed within a statement**
- ✓ **Explain a symbol immediately after the first time it appears in the manuscript**
- ✓ **Prepare a checklist of symbols to ensure that all the symbols have been explained.**
- ✓ **Avoid duplication in explaining symbols in the text however mentioning, if required, where the explanation can be found in the text**
- ✓ **Provide separately a list of symbols with their meaning, if required.**

Equations and Mathematical Expressions

- ✓ **Set mathematical expression using solidii, if at all to to be put within a text without assigning separate line(s) for it**

Do not typeset as

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Typeset as

$$x = [-b \pm (b^2 - 4ac)^{1/2}] / 2a$$

Equations and Mathematical Expressions

- ✓ **Try using indices of power instead of radical signs**

  Type $x^{1/2}$ **instead of** $\sqrt{x}$

  Type $x^{1/3}$ **instead of** $\sqrt[3]{x}$

- ✓ **Avoid a reduction in the size of the symbol of the superscript with the exponential function**

  Type $\exp x$ **instead of** e^{x}

  Type $\exp x^2$ **instead of** e^{x^2}

- ✓ **Put the unit with or without a space with a numeral: 20kV (without space) or 20 kV (with space)**

- ✓ **Put the unit only with the last number: write "10, 20, and 30 kV" instead of "10 kV, 20 kV, and 30 kV"; and write "between 10 and 20 GHz" instead of "between 10 GHz and 20 GHz"**

Equations and Mathematical Expressions

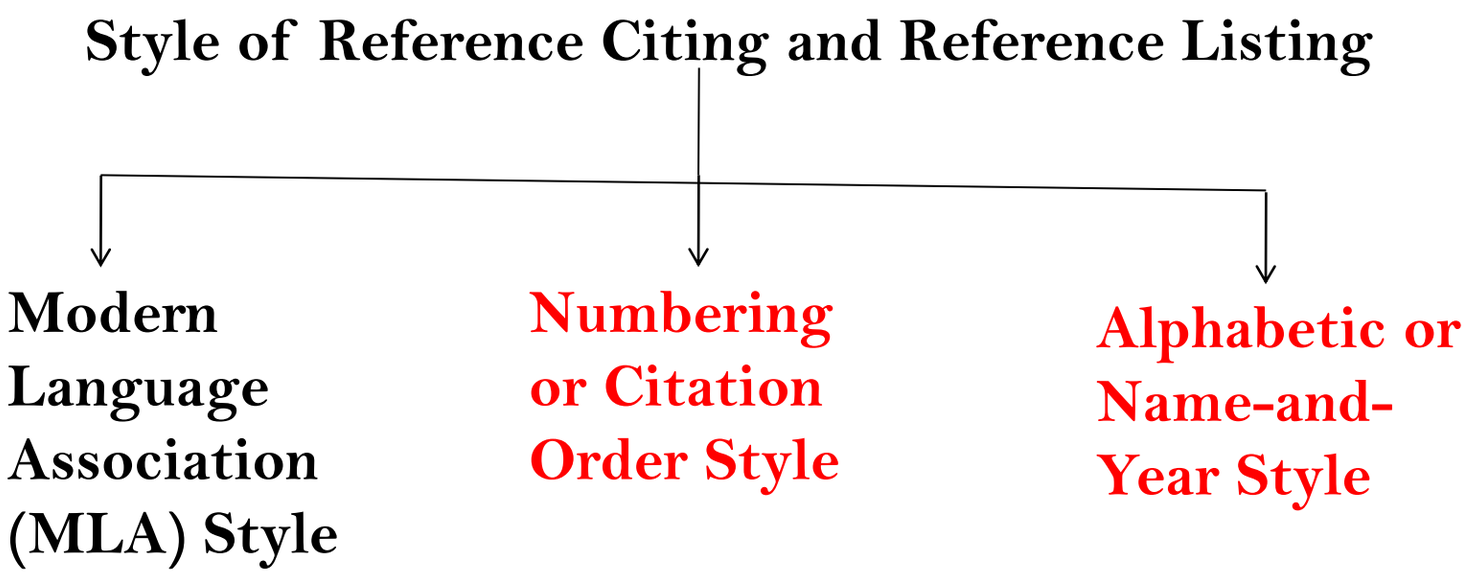
- **Follow some basic conventions in writing numbers or digits**
  - ✓ **Insert "0" (zero) to the left of the decimal point, while writing digits between –1 and + 1, in order to avoid a naked decimal point that could otherwise be overlooked by readers**
  - ✓ **Insert separate numbers of more than four digits into groups of three on either side of the decimal point, separated by a space**
  - ✓ **Write "–0.123 456" instead of "–.123456"**
  - ✓ **Do not insert comma into a number of more than three digits, as done in some countries to represent currency in banks or to substitute for a decimal point**
  - ✓ **Do not write "1,000"**
  - ✓ **Avoid beginning a sentence with a digit number**
  - ✓ **Write "Four boundary conditions are required to solve the problem" instead of "4 boundary conditions are required to solve the problem".**

References

- Acknowledgement of work on which your work is based (no research work can be said to be independent of previous work and experience)
- Starting point in the evolution of the work
- Literature survey
- Avoidance of developing false opinion about the pioneer or originator of the work
- Unfair not to cite the actual contributors
- Omission of references to the previous work is unethical amounting to academic dishonesty and plagiarism as well as an offence to intellectual property of others
- State-of-the-art mentioning in what respect your work is different from and superior to previous work
- Referencing from easily available sources
- Avoidance of too much self referencing

References

- **Evidentiary support/proof and validity of the problem undertaken**
- **Concise writing (reduction of the length of the paper)**
- **Avoidance of duplication of documentation**
- **Validation of work by comparison**
- **Shifting of the onus for the accuracy of information to already vetted references**



"To see what is general in what is particular, and what is permanent in what is transitory, is the aim of scientific thought."

— Alfred North Whitehead

Two popular styles of reference listing

Numbering or Citation Order Style

Sequential numbering of references, say, within square brackets such as [1], [2], etc. both in the text as well as in the list of references appended at the end of the text

Alphabetic or Name-and-Year Style

Characterized by the listing of references in alphabetical order of authors at the end of the text, and the parenthetical citation of the year of documentation/ publication of the source in the text

List of references should, in general, provide three pieces of information:

- ✓ **Protocol or service**
- ✓ **Location where to find the item**
- ✓ **Item to be retrieved**

Numbering or Citation Order style

- ✓ **To sequentially number the references in order of their first appearances: [1], [2], etc. and not (1), (2), etc.**
- ✓ **To put a group of references in the text as: (i) [8], [9], [11], [12] (ii) [8,9,11,12] (iii) [8]-[11] (iv) [8-11] (v) [8]-[10], [13], [16], etc.**
- ✓ **May have to replace [8]-[11] or [8-11] by the superscript style $^{8\text{-}11}$ or $^{[8]\text{-}[11]}$ or $^{[8\text{-}11]}$ according to the prescribed instruction of the concerned journal**
- ✓ **To check, before putting a reference number in the text, say, [47], that each of the preceding reference numbers, from [1] to [46], have already been referred to**
- ✓ **To be careful about the sequence while inserting or deleting a reference in the case of large number of references cited**
- ✓ **In this style, usually, no immediate information is available from the text (without going through the list of references) about the name(s) of the author(s) or about when was the work referred to carried out.**
- ✓ **Construct the relevant statement suitably if you wish to highlight the authors.**

Example: Wang and Carter [13], [14] experimentally characterized the helical slow-wave structure by the non-resonant perturbation technique [4]-[7].

Listing of sources in the numbering or citation order style

[1] E. F. Belohoubek, "Helix support structures for ultra-wide-band traveling-wave tubes," *RCA Rev.*, vol.26, pp. 106-117, Mar. 1965.

[2] .....

[3] .....

[4] .....

[5[.....

[6] C. Y. Chen, "Characteristics of vane-loaded helix slow-wave structure," *NTG Fachberichte: Elektronenroehren*, no. 85, pp. 27-31, May 1983.

[7] .....

[8] .....

[9] .....

[10] P. Galuppi and M. D. Salvatore, "Evaluation of three techniques of controlling phase velocity dispersion in helix TWTs," in *Proc. Int. Conf. Microwave Tubes in Systems: Problems and Prospects*, Oct. 1984, pp. 59-62.

[11] .....

[12] .....

[14] .....

[15] .....

[16] D. T. Swift-Hook, "Dispersion curve for a helix in glass tube," *Proc. IEEE*, vol. 105b, pp. 747-755, Dec. 1958.

Alphabetic or name-and-year style

- ✓ To list the references in alphabetical order of authors at the end of the text, and make parenthetical citation of the year of documentation/publication of the source in the text
- ✓ To obtain first hand information about (i) the authors to which the reference is due and (ii) the period of the work under reference, without going through the list of references
- ✓ To cite a single-authored source, for instance, as: "Sinha (1980) considered ….."
- ✓ To cite a double-authored source, for instance, as : "Sinha and Basu (1983) analyzed ….."
- ✓ To cite a multiple-authored source, for instance, as: "Wang *et al.* (1985) measured the dispersion characteristics ….."
- ✓ (In the above reference taken from a paper, the first author was Wang. The names and initials of all the authors of the paper were provided in the list of references)

Alphabetic or name-and-year style

- ✓ **To cite more than one reference due to a single author or a group of authors in the same year, for instance, as "Ghosh and Sinha (1999a)", "Ghosh and Sinha (1999b)", etc.**
- ✓ **To be in a position to insert or delete a reference in the case of a large number of references cited, without requiring to care about the sequence, which is an advantage over the numbering or citation order style**
- ✓ **To cite a group of references, for instance, as: "Small disturbances in a beam-plasma system are amplified as the beam drifts through the plasma (Boyd *et al.* 1958, Gould and Trivelpiece 1958, and Bogdanov *et al.* 1959)."**

Listing of sources in the alphabetic or name-and-year style

Allen, M. A., Biechler, C. S., Chorney, P., and Maddix, H.S., 1963, *Appl. Phys. Lett.*, 3, 30.

……..

Bogdanov, E. V., Kislov, V. J., and Tchernov, Z. S., 1959, *Proc. Symp. on Millimeter Waves*, Vol. 9 (Brooklyn, N. Y.: Polytechnic Press), p. 57.

Boyd, G. D, Field, L.M., and Gould, R.W., 1958, *Phys. Rev*. 109, 1393.

……..

Gould, R., W., and Trivelpiece, A. W., 1958, *Proc. Symp. on Electron. Waveguide* 5, Vol. 8 (Brooklyn, N. Y.: Polytechnic Press), p. 215.

……..

Ruthberg, S., 1946, *Phys. Rev.*, 70, 112.

Judicious choice as to where to put the reference in the text

- ✓ To cite the reference at the end of a sentence, for instance, as: "Harmonic generation and intermodulation distortion in traveling-wave tubes can be studied by nonlinear Lagrangian analysis [21]"
- ✓ To cite the reference at the end of an appropriate phrase of relevance, for instance, as: "Recently, we reported the nonlinear hydrodynamic analysis of a helix TWT for studying harmonic generation and saturation effects in the device [8]-[11] by extending earlier work of Paschke [12]-[14] to the case of a TWT"
- ✓ To cite more than one references without taking care to bifurcate the references to distinguish more than one concept, for instance, as: "Inhomogeneous and anisotropic loading of the structure may control the shape of the dispersion characteristics of a helical slow-wave structure for widening the bandwidth of a TWT [23]-[29]"
- ✓ To cite more than one references with due care to bifurcate the references to distinguish more than one concept, for instance, as: "Inhomogeneous loading [23]-[27] and anisotropic loading [28], [29] of the structure may control the shape of the dispersion characteristics of a helical slow-wave structure for widening the bandwidth of a TWT."
- ✓ To highlight either the author(s) to whom the source of reference is due or the source itself, for instance, as: "Sinha and Ghosh (1997) analyzed the vane-loaded helix by the equivalent circuit approach" or "Sinha and Ghosh [23] analyzed the vane-loaded helix by the equivalent circuit approach," and as "The analysis of the vane-loaded helix by the equivalent circuit approach was given in [12]."

Miscellaneous examples of references

Types of sources or items: single or multiple-authored book, edited book or monograph, article/paper/chapter contribution in a monograph, paper published in a journal, paper accepted for publication, paper in press, paper presented at conferences/published in conference proceedings, technical report, user manual, Internet source, private communication, unpublished work, patent, etc.

[1] B. N. Basu, *Electromagnetic Theory and Applications in Beam-Wave Electronics*, Singapore: World Scientific, 1996, p. 161.

[2] *Ibid*, p. 249.

[3] J. L. Eaves and E. K. Reedy, *Principle of Modern Radar*, New York: D. Van Nostrand, 1987.

[4] C. J. Edgcombe, Ed., *Gyrotron Oscillators: Their Principles and Practice*, London: Taylor & Francis, 1993.

[5] S. Ghosh, P. K. Jain, and B. N. Basu, "Analytical exploration of new tapered-geometry dielectric-supported helix slow-wave structures for broadband TWT's," in *Electromagnetic Waves Monograph Ser: Progr. Electromag. Res. (PIER)*, vol. 15, J. A. Kong, Ed., Cambridge, MA: EMW Publishing, pp. 63-85, 1997.

Miscellaneous examples of references

[6] J. Roth, "Chemical sputtering," in *Sputtering by particle bombardment*, R. Behrisch, Ed., Berline: Springer-Verlag, p. 91, 1981.

[7] S. K. Datta and B. N. Basu, "Control of IM3 distortion in helix TWTs by harmonic injection — an Eulerian hydrodynamic analysis," *IEEE Trans. Electron Dev.*, vol. ED-48, pp. 62-67, 2001.

[8] S. S. Jung, Y. D. Joo, S. Ghosh, B. N. Basu, and G. S. Park, "Synthesis of dielectric helix-supports for wideband traveling-wave tubes," *Microwave Opt. Technol Lett*, vol. 32, No. 3, February 5, pp. 231-235, 2002.

[9] S. J. Rao, P. K. Jain, and B. N. Basu, "Two-stage dielectric loading for broadbanding a gyro-TWT," *IEEE Trans. Electron Dev. Lett*, vol. ED-17, pp. 303-305, 1996.

[10] ————————, "Broadbanding of gyro-TWT by dispersion shaping through dielectric loading," *IEEE Trans. Electron Dev.*, vol. ED-43, pp. 2290-2299, 1996.

[11] S. S. Jung, C. W. Baik, S. T. Han, S. G. Jeon, H. J. Ha, A. V. Soukhov, B. Jia, G. S. Park, H. S. Kim, H. S. Uhm, and B. N. Basu, "Wideband semi-vane and heavily dielectric loaded helix traveling-wave tubes," *IEEE Trans. Plasma Sci.*, 2002 **(Accepted for publication)**.

Miscellaneous examples of references

[12] Z. Duan, Y. Gong, W. Wang, B. N. Basu, and Y. Wei, "Accurate Tape Analysis of the Attenuator-Coated Helical Slow Wave structure," *IEEE Trans. Electron Dev.*, 2006 **(In press)**.

[13] K. Amboss, "The current art of millimeter-wave solid state and tube type power sources," *Conf. Proc., Military Microwaves*, MM-80, London, pp. 520-546, 1980.

[14] J. L. Putz and M. J. Cascone, "Effective use of dispersion shaping in broadband helix TWT circuits," *International Electron Devices Meeting Tech. Dig.*, New York, pp. 422-427, 1979.

[15] T. S. LaFrance, "Internal type 'O' traveling-wave tube attenuator program," Tech. Rep. AFML-TR-65-268, Air Force Materials Laboratory, Wright-Patterson Air Force Base, OH, 1965.

[16] M. Thumm, "State-of-the-Art of High Power Gyro-Devices and Free-Electron Masers: Update 1955," FZKA Report 5728, Institut fr Technische Physik, Karlsruhe, 1996.

[17] *User Manual*: *Ansoft High Frequency Structure Simulator*, version 9.2, Pittsburgh, PA: Ansoft Corporation.

[18] *MATLAB*: *The Language of Technical Computing*, User's Guide, Natick, MA: The MathWorks (www.mathworks.com).

Miscellaneous examples of references

[19] Available: www.ansoft.com/products/hf/hfss.

[20] C. Pierce, Hughes Electron Dynamics, private communication, 1998.

[21] J. G. Keller, Hughes Electron Dynamics, unpublished work, 1997.

[22] G. Brandli and M. Dick, "Alternating current fed power supply," U. S. Patent 4084217, Nov. 4, 1978.

Simple and concise presentation

"The man of science appears to be the only man who has something to say just now, and the only man who does not know how to say it."

— James M. Barrie

"Beauty of style and harmony and good rhythm depend on simplicity."

— Plato

"The simplest statements evoke the most wisdom; verbose language and fancy technical words are used to convey shallow thought."— R. A. Day

"A short saying often contains much wisdom."—Sophocies

Avoid hard words, "circumlocution" or "gobbledygook"

"A man of true science uses but few hard words and those only when none other will answer his purpose; whereas the smatterer of science thinks that by mouthing hard words he understands hard things."— Herman Melville

Ampersand and Contractions

The ampersand "&" is a shorthand symbol for "and." However, "&" must be avoided in the text of the paper to mean "and".

Similarly, one must avoid in the text the contractions: "I'm" for "I am"; "it's" for "it is"; "they're" for "they are"; "we've" for "we have"; "isn't" for "is not", "don't" for "do not"; "doesn't" for "does not"; "wasn't" for "was not"; etc.

Let us be simple and concise

If

1+1=2

Conveys the meaning and serves the purpose, let us NOT go for

$$1+\ln\left[\lim_{z\to\infty}(1+\frac{1}{z})^2\right]=\sum_{n=0}^{\infty}\frac{\cosh(y)\sqrt{1-\tanh^2(y)}}{2^n}!!!$$

Courtesy: unknown source

"I would have written a shorter letter, but I did not have the time."

The above message, from Blaise Pascal, was also echoed by many other thinkers: Saint Augustine, Pearl Buck, Pliny T. Elder, Ezra Pound, Mark Twain and Oscar Wilde, to mention a few (<https://en.wikiquote.org/wiki/Blaise_Pascal>; https://people.sc.fsu.edu/~jburkardt/f_src/quote/my_quotes.txt>).

Use small sentences and simple words to prevent the text from becoming unclear, hazy, or 'foggy'.

Use complex sentences with subordinate clauses sparingly and only when it becomes unavoidable to express, without an interruption, complex ideas requiring several qualifications, provisos, and conditions.

Judge you yourself if you are foggy. Check the 'FOG INDEX' of your write-up.

Gunning for index

"The Gunning fog index *F*, named after Robert Gunning, is a measure of how easily a particular text can be read and understood by its readers. It measures the number of years of education that a reader hypothetically needs to understand a paragraph or a text." It is computed from the formula:

$$F = 0.4\,(W_{\text{sentence}} + P_{100\ \text{words}})$$

W_{sentence} = Average number of words per sentence

$P_{100\ \text{words}}$ = Average number of polysyllables per 100 words of text

The empirical factor 0.4 corresponds approximately to *F* equalling the number of years of education a reader must have in order to become capable to read a document easily (A polysyllable is a word with three or more syllables)

The formula implies that short sentences written in plain English achieve a better score than long sentences written in complicated language.

The fog index *F*=9 would indicate a 9th grade reading level, *F*=12 would indicate a 12th grade reading level.

The acceptable range of fog index is 10<F<15.

Gunning for index

Original text

The approach that is followed to appreciate the effects of tapering the structure parameters (Section II-A) on the gain-frequency response of a disc-loaded gyro-TWT is to substitute the axial propagation constant from the solution of the cold (beam-absent) dispersion relation of a disc-loaded waveguide [13] (Section II-B) into the gyro-TWT gain equation, the latter obtained by interpreting the hot (beam-present) dispersion relation of the device [10], [13] (Section II-C), taking care to profile the magnetic field and beam parameters synchronous with the chosen scheme of tapering the structure parameters (Section II-D).

Modified text

The following approach is followed to appreciate the effects of tapering the structure parameters (Section II-A) on the gain-frequency response of a disc-loaded gyro-TWT. First, the hot (beam-present) dispersion relation of a gyro-TWT is interpreted to obtain the gain equation of the device [10], [13] (Section II-C). Then the axial propagation constant from the solution of the cold (beam-absent) dispersion relation of a disc-loaded waveguide [13] (Section II-B) is substituted into the gain equation. Care is taken to profile the magnetic field and beam parameters synchronously with the chosen scheme of tapering the structure parameters (Section II-D).

Gunning for index

Construction	Sentences	Words	Polysyllables	W_{sentence}	$P_{\text{100 words}}$	F
Original	1	91	24	91	26	**46**
Modified	4	97	26	24	26	**20**

$$F = 0.4\ (W_{\text{sentence}} + P_{\text{100 words}})$$

$$F = 0.4\ (91+26) = 46\ \text{(Original)}$$

$$F = 0.4(24+26) = 20\ \text{(Modified)}$$

Gunning for index

Original text

"The Institute takes pride in its eco-system that aims to groom incoming students into academically strong yet well-rounded personality based professionals who could adapt themselves to the challenges posed by the ever-changing world and working environments."

Word count = 36;
Number of sentences = 1
$W_{sentence}$ = Average number of words per sentence = 36
Number of polysyllables = 8
$P_{100\ words}$ = Average number of polysyllables per 100 words of text = 22

$$F = 0.4\ (W_{sentence} + P_{100\ words}) = 0.4\ (36 + 22) = 23$$

Gunning for index

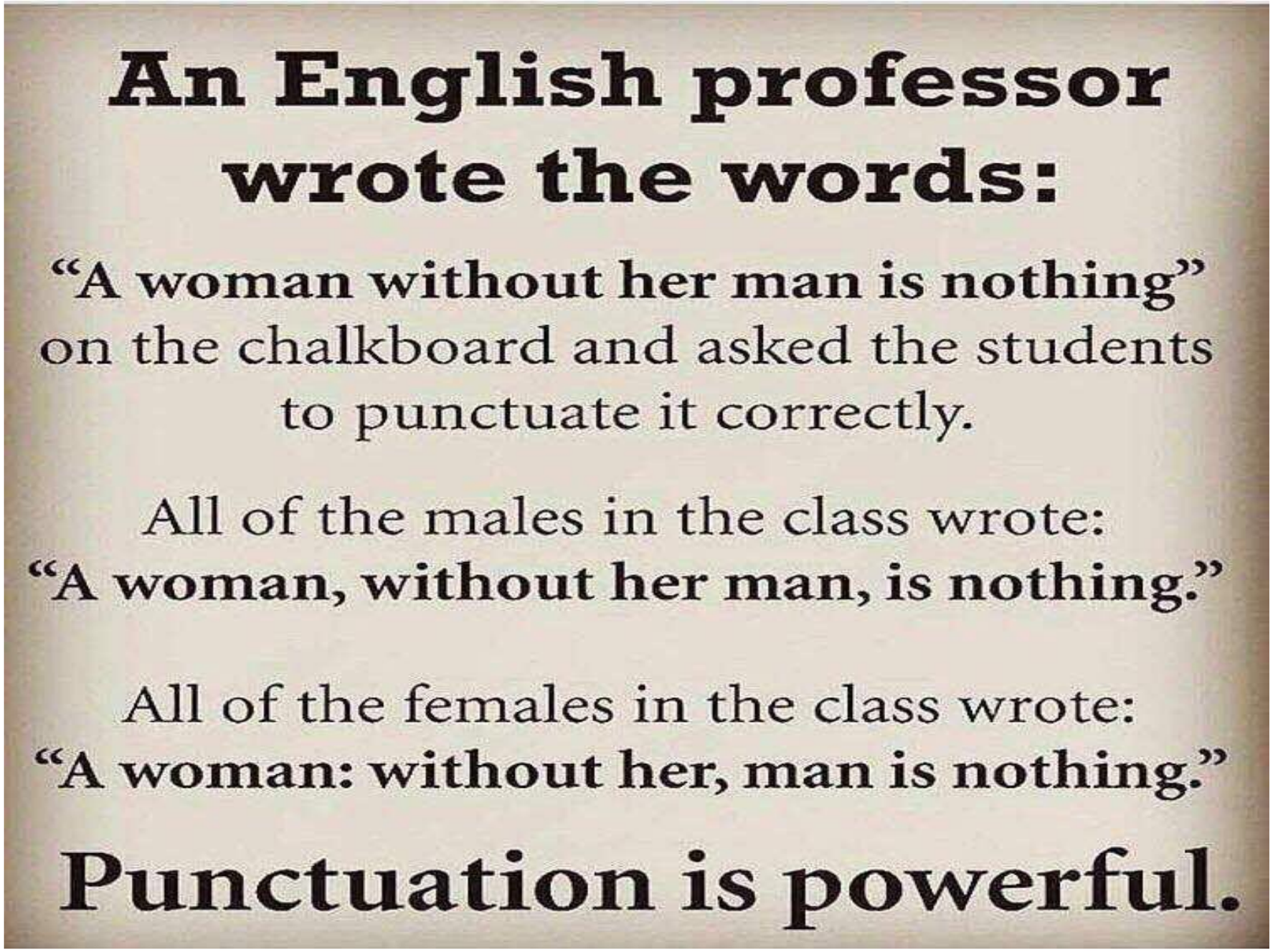
Modified text

"The Institute takes pride in its ecosystem. It aims at groom incoming students into academically strong and yet well-rounded, personality-based professionals. This would enable students adapt themselves to the challenges posed by the ever-changing world and working environments."

Word count = 38
Number of sentences = 3
$W_{sentence}$ = Average number of words per sentence = 13
Number of polysyllables = 10
$P_{100\ words}$ = Average number of polysyllables per 100 words of text = 26

$$F = 0.4\ (W_{sentence} + P_{100\ words}) = 0.4\ (13 + 26) = 16$$

ENGLISH GRAMMAR


An English professor wrote the words:
"A woman without her man is nothing"
on the chalkboard and asked the students to punctuate it correctly.
All of the males in the class wrote:
"A woman, without her man, is nothing."
All of the females in the class wrote:
"A woman: without her, man is nothing."
Punctuation is powerful.

Ethics/Plagiarism

Ethics/Plagiarism

- ✓ Original work to report
- ✓ Clarity in writing from which the readers to know what is your own work and what is others' work on which probably your work is based
- ✓ Citation of source references to others' work
- ✓ Statements verbatim from others to be put within quotation marks along with source references
- ✓ Restraint from writing socially sensitive areas
- ✓ Restraint from promoting equipment/instrument/product of a particular make
- ✓ Avoidance of copyright infringement
- ✓ Avoidance of plagiarism

Ethics/Plagiarism

Jean Hollis Weber, "Ethics in scientific and technical communication," *WISENET Journal*, vol. 38, July 1995, pp. 2-4.

- **"That 'Honesty is the Best Policy' is true for a technical writer as well."**
- **"The practice of honesty should be followed irrespective of legality."**
- **"A practice that comes within the purview of dishonesty but not punishable under law today" may become illegal someday.**
- **The legality of 'Slavery' in USA and that of 'Sati Daha Pratha' are no longer legal now. "If one wants to beat one's wife, one has to go for honeymoon in a country where wife-beating is not illegal." (True for husband-beating as well)**
- **"The law is often well behind the times."**
- **"If a certain act of plagiarism is not illegal, it can be made illegal by interpreting it, for instance, as the copyright violation."**
- **"The authors should disclose business-sensitive information only after taking due permission of their employers and clients."**
- **An honest and true leader making no direct contribution to a work done by his or her colleagues or subordinates should not take the credit of doing work by dint of being in the helm of an organization.**

Reviewer's responsibility

The reviewers' identity needs to be rendered anonymous in Comments to the Author in the Review Form of the journal.

The comments/opinions of the reviewers should be accessible to nobody else other than the editors and the authors.

In the single-bounded review, the reviewers know the identity of the authors but the authors do not know the identity of the reviewers.

In the double-blinded review, neither the reviewers know the identity of the authors nor the authors know the identity of the reviewers.

An example of academic honesty

One of our papers (first-authored by Dr. SK Datta, our student, now at DRDO-MTRDC) was accepted for publication in IEEE Transactions on Electron Devices.

After acceptance of the paper, Dr. Datta withdrew the paper since he had detected that he had by mistake taken the distributed loss 'per unit length' of the structure in his calculation instead of the loss of the 'whole length' of the structure.

He sent a new paper based on his new calculation. The publication was delayed by almost a year!

S. K. Datta, P. K. Jain, M. D. Raj Narayan, and B. N. Basu. Nonlinear Eulerian hydrodynamical analysis of helix traveling-wave tubes for harmonic generation and its control. *IEEE Trans. Electron Devices* 46, 420-426 (1999).

Joint authorship of a paper: some ethical issues

- ✓ **Names and Affiliations of authors to be provided**
- ✓ **Multiple-authored paper: Name and affiliation of each author of a paper should be provided according to the format of the journal concerned.**
- ✓ **For an author who has taken leave from his or her parent organization to work at another organization from which the work has been reported, the names of both the organizations should be mentioned.**
- ✓ **Email address of the author in the case of a single-authored paper and Email address of the communicating author in the case of a multiple-authored paper**
- ✓ **Corresponding author could be any one of the contributing authors and need not necessarily be the first author, in the case of a multiple-authored paper.**
- ✓ **It is the responsibility of the corresponding author to certify the endorsements of his co-authors in copyright declaration form of the journal.**

Joint authorship of a paper: some ethical issues

- ✓ **Order of authors: to be decided irrespective of the hierarchy of the contributors**
- ✓ **First author: the primary progenitor of the work and who has done most of the work**
- ✓ **Terminal spot in the list of authors: to be reserved for the team leader**
- ✓ **Co-authors: Contributors should be able to explain the content of the paper in general and his or her specific contribution in particular.**
- ✓ **Genuine authorship**

  A genuine contributor not to be excluded from authorship

  You cannot appease such a contributor by merely substituting his or her due credit of authorship by some other reward like monetary benefit or by putting his or her name in 'Acknowledgment'.

- ✓ **Avoid *'backdoor entry'* into the list of authors**
- ✓ **Someone who has not made any direct and significant contribution to your work should not be one of the authors simply because he or she is a member of your team.**
- ✓ ***'Laundry list of authors'* should be avoided.**
- ✓ ***A person by virtue of being the head* of an institution and holding the chair of a department or being an influential person *should not by default become a co-author.***

A wrong style of spotting your supervisor

N. B. Chakrabarti and B. N. Basu, "Third-order saturation effects in a longitudinal beam-plasma system in the one-dimensional case," *Indian J. Pure & Appl. Phys.* 11, 235-237 (1973). (N. B. Chakrabarti was the supervisor).

S. S. Jung, Y. D. Joo, S. Ghosh, B. N. Basu, and G. S. Park, "Synthesis of dielectric helix supports for wideband traveling-wave tubes," *Microwave and Optical Technology Letters* 32, 231-235 (2002). (B. N. Basu was the supervisor).

Corrected in a subsequent paper

S. S. Jung, A. V. Soukov, B. Jia, G. S. Park, and B. N. Basu, "Efficiency enhancement and harmonic reduction of wideband helix traveling-wave tubes with positive phase velocity tapering," *Japanese J. Appl. Phys.* Part 1, 41 (#6A), 4007-4013, Jun (2002). (B. N. Basu was the supervisor).

The editor prevented us from committing an unpardonable blunder!

S. J. Rao, S. Ghosh, P. K. Jain, and B. N. Basu, "Nonresonant perturbation measurements on dispersion and interaction impedance characteristics of helical slow-wave structures," *IEEE Trans. Microwave Th. & Tech.* 45, 1585-1594 (1997).

The name of S. Ghosh was added in the 'revised' manuscript following the editor's feedback!

The coauthor is a coauthor. You can not deprive a coauthor by excluding him or her from the co-authorship and appeasing by money or acknowledgement.

An example of unethical approach to become a coauthor of research papers

In an extreme, a technician responsible for doing the regular job of chemical and 'ultrasond' cleaning of mechanical parts of electronic devices in a national research lab started non-cooperating with the scientists of the lab since his or her name had not been included as the coauthor of all the research papers from the lab.

Giving the recognition to a true contributor!

The coauthor is a coauthor. You can not deprive a coauthor by excluding him or her from co-authorship and appeasing by money or acknowledgement.

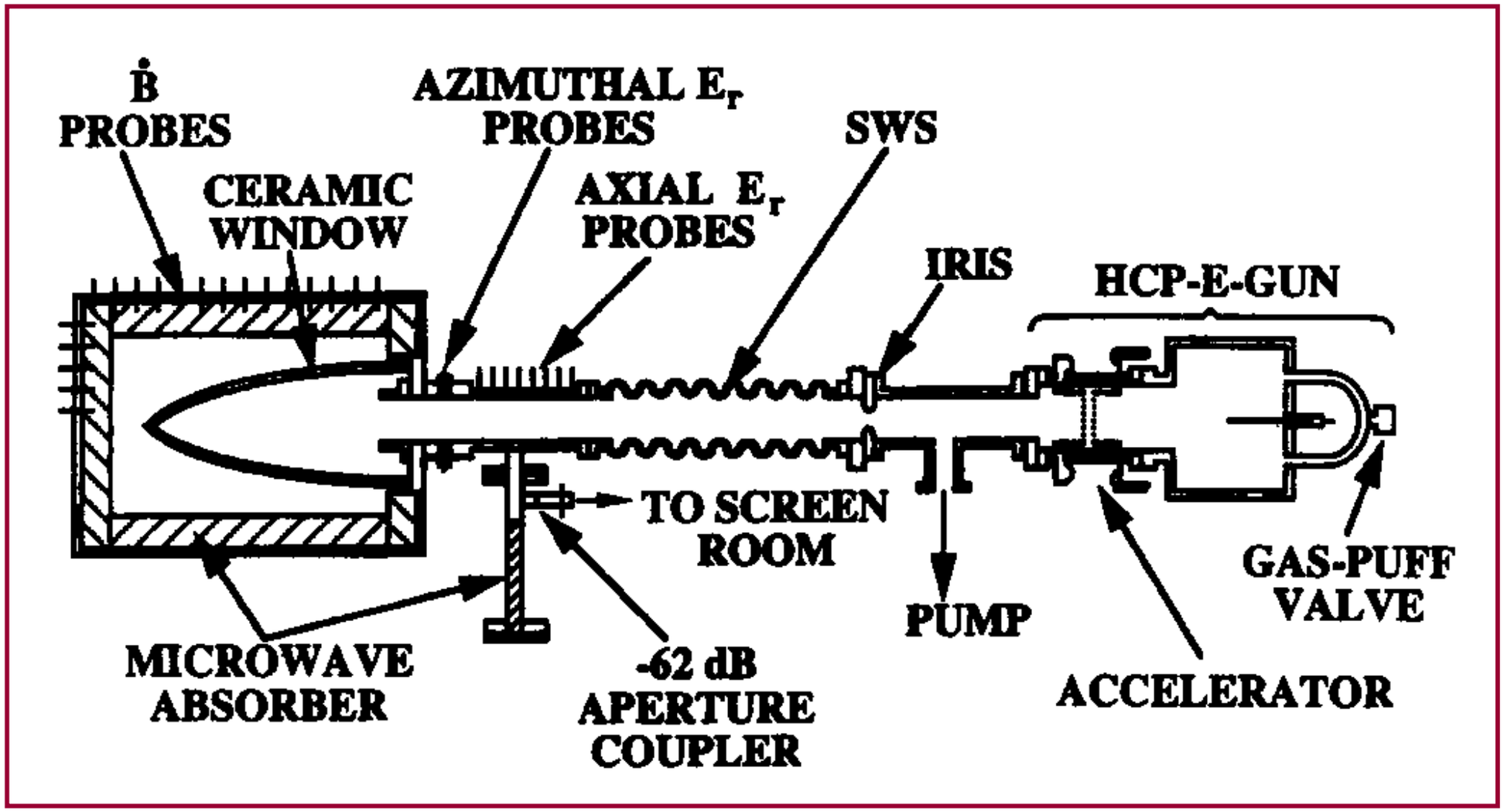
This happened in 2006! Dr. Zhaoyun Duan, then unknown to me, asked me through 'email' to clarify some of the points of one of my published papers. Subsequently, he wrote a paper. I appreciated that he had given me due recognition as one of his coauthors of the following paper:

Z. Duan, Y. Gong, W. Wang, B. N. Basu and Y. Wei,
"Accurate tape analysis of the attenuator-coated helical slow-wave structure," *IEEE Trans. Electron Devices*, 53, 903-909 (2006).

Dr. Duan and his colleagues were from the University of Electronic Science and Technology of China, Chengdu, whom I had not seen before!

I met Dr. Duan for the first time five years later in 2011!

Rippled-walled pasotron (plasma-assisted slow-wave oscillator)



Pasotron schematic (Hughes make: JM Butler, RL Eisenhart, and AJ Schneider, *IEEE MTTT-S Digest*, 511-513 (1992)

Citation of a source in a viewgraph/ppt

Effect of plasma filing a typical gyrotron

Parameters	Without plasma	With plasma
Power	100-200MW	~10W
Beam Current	1-3kA	~10kA
Frequency	35GHz	35GHz
Beam Voltage	0.60-1.35MW	0.60-1.35MW
Plasma Density	—	$>10^{13}$ cm^{-3}

(From the lecture note of Udit N Pal of CSIR-CEERi, Pilani)

Citation of a source in a viewgraph/ppt

Plagiarism

https://en.wikipedia.org/wiki/Plagiarism

Plagiarism is derived from Latin *plagium* (kidnapping)/*plagiarius* (kidnapper)
to denote stealing someone else's work
(“pioneered by the Roman poet Martial, who complained that another poet had ‘kidnapped his verses’.”

https://smallseotools.com/plagiarism-checker/

“Most of the plagiarism detector tools work on the same plagiarism test principle and basically function very much the same as Google or any other search engine works to find the matching words or phrases in other sources and provides the best results, sometimes along with the plagiarism checker .”

“Some institutions use plagiarism detection software to uncover potential plagiarism and to deter students from plagiarizing.”

Plagiarism

https://en.wikipedia.org/wiki/Plagiarism

"Plagiarism is the 'wrongful appropriation' and 'stealing and publication' of another author's 'language, thoughts, ideas, or expressions' and the representation of them as one's own original work."

"Plagiarism is considered academic dishonesty and a breach of journalistic ethics. It is subject to sanctions like penalties, suspension, and even expulsion."

"Plagiarism is not defined or punished by law, but rather by institutions (including professional associations, educational institutions, and commercial entities, such as publishing companies)."

At the end of this presentation, I will give an example of plagiarism from a Notice of Violation of IEEE Publication Principles

Plagiarism

Paulo C. Dias, Ana Sofia C. Bastos, "Plagiarism phenomenon in European countries: Results from *GENIUS* project," *Procedia - Social and Behavioral Sciences* 116, (2014) 2526 – 2531.

"Students are confused about what kind of behaviors are accounted as plagiarism, expressing their lack of awareness about it, difficulties in referencing skills and its consequences in students' plagiarism knowledge. So, to handle plagiarism, detection software is being used."

Plagiarism

(1) Dupli Checker

- ✓ **It is free of charge**
- ✓ **You can either copy and paste your text in the field and then check it for plagiarisms, or upload a Docx or Text file from your computer before checking.**
- ✓ **For unregistered users a search per day is allowed.**

(2) Copyleaks

- ✓ **The platform provides the business section to publishers and the education section to students.**
- ✓ **The content in various file formats and all Unicode languages can be scanned.**
- ✓ **The API tool can be used to search for plagiarized eLearning content all over the Internet.**
- ✓ **You can check plagiarisms while you are writing a document on MS Word with the help of a mobile app along with an MS Office add-on.**
- ✓ **An account needs to be created for free-of-charge searching of the plagiarized eLearning content, though, however, only the first 10 pages are free.**

Plagiarism

(3) PaperRater

- ✓ **Over 140 countries use this multi-purpose free plagiarism detection tool.**
- ✓ **It is featured by three tools for proofreader and grammar checker, vocabulary builder, and plagiarism checker**
- ✓ **Result report, however, cannot be stored.**

(4) Plagiarisma

- ✓ **Basic and easy-to-use, multi-purpose plagiarism detection tool that is used by students, teachers, writers, as well as various members of the literary industry**
- ✓ **More than 190 languages can be supported.**
- ✓ **The text can be copied, pasted or typed in the appropriate field, and a URL can be provided or a file can be uploaded from the computer.**
- ✓ **The files such as TXT, HTML, RTF, DOC, DOCX, XLS, XLSX, PDF, ODT, EPUB, FB2, PDB can be supported.**
- ✓ **It has the limitation of a limited number of plagiarism checks.**

Plagiarism

(5) Plagiarism Checker

- ✓ **It is a user-friendly and entirely free plagiarism detection tool to check If others have plagiarized your online content by clicking "For authors" option to check whether they have plagiarized your content and posted it on the Internet.**
- ✓ **It is entirely online requiring no downloads, however, supported by only**
- ✓ **Google or Yahoo browsers.**

(6) Plagium

- ✓ **It is a free tool that is easy to use with the copy-paste text feature.**
- ✓ **It is provided with different levels of search: quick search and deep search.**
- ✓ **You need to sign up, upload your file, get it checked, and receive a usage report.**

Plagiarism

(7) PlagScan

- ✓ **It is a tool for both individuals and businesses to check texts against online content, scientific journals and the user's documents**
- ✓ **It has no subscription fee for private users.**
- ✓ **It is fully online requiring no download.**
- ✓ **There are three ways to check by**
  - **(i) directly pasting your text into the appropriate field,**
  - **(ii) importing the file from the web by entering its URL at the indicated area or uploading it from a cloud storage area such as Dropbox, Google Drive, or OneDrive, and**
  - **(iii) uploading a file from your desktop.**
- ✓ **It can be integrated into Content Management System (CMS) and Learning Management System (LMS).**
- ✓ **It has however a relatively complicated interface.**

Plagiarism

(8) PlagTracker

- ✓ **It is a free tool that that searches both websites and academic databases by copying and pasting text, or file uploading.**
- ✓ **It can address several user groups: students, teachers, publishers and site owners.**
- ✓ **It provides information to a user as to what parts need to be cited and a list of sources to be used.**
- ✓ **You can check eLearning content in English, French, Spanish, German, Romanian and Italian.**
- ✓ **No File Upload in Free Version is however provided.**

Plagiarism

(9) Quetext

- ✓ **It is entirely free requiring no subscriptions.**
- ✓ **It has unlimited usage requiring no account, registration or downloads.**
- ✓ **It has the basic layout and functional interface that checks against the Internet, as well as various databases.**
- ✓ **The users, however, cannot upload files and can only copy and paste text in the designated area.**

(10) Viper

- ✓ **It is a hundred percent free tool with user-friendly interface.**
- ✓ **It has extensive plagiarism check range which is capable of checking your document against more than 10 billion online resources including journals, books and websites.**
- ✓ **However, its target group is limited to the students for the evaluation of student papers.**

Plagiarism

Some other plagiarism tools in continuation:

(11) Turnitin plagiarism checker

(12) https://crosscheck.ithenticate.com/en us/login

(13) iThenticate

(14) Copyscape

(15) Grammarly

(16) URKUND (UGC recommended)

Plagiarism

https://www.**hindustantimes**.com/education/teachers-to-lose-jobs-students-their-registrations-if-found-guilty-of-plagiarism/story-mb4ux5npLseZNTIGQYzkGP.html

"Student researchers who plagiarise may lose their registration and teachers who do so could lose their jobs with the University Grants Commission (UGC) approving a draft regulation on plagiarism which will be notified after approval by the Human Resource Development Ministry."

"The UGC has approved the UGC (Promotion of Academic Integrity and Prevention of Plagiarism in Higher Education Institutions) regulations 2018 in its meeting held on March 20. Hindustan Times has seen the minutes of the meeting."

"The law prescribes graded punishment for plagiarism."

Plagiarism

https://www.**hindustantimes**.com/education/teachers-to-lose-jobs-students-their-registrations-if-found-guilty-of-plagiarism/story-mb4ux5npLseZNTIGQYzkGP.html

"The draft rules for students states that in non-core areas, plagiarism of up to 10% would not invite any penalty while that of between 10% and 40% would mean the students will have to submit a revised research paper within six months."
"In case the similarities are between 40% and 60%, students will be debarred from submitting a revised paper for one year. A student's registration for a programme will be cancelled if the similarities are above 60%."

Plagiarism

https://www.hindustantimes.com/education/teachers-to-lose-jobs-students-their-registrations-if-found-guilty-of-plagiarism/story-mb4ux5npLseZNTIGQYzkGP.html

"Teachers whose academic and research papers have similarities ranging from 10% to 40% with other papers will be asked to withdraw the manuscript. In case the similarities are between 40% and 60%, they will not be allowed to supervise new Masters/MPhil/PhD students for two years and will also l be denied the right to one annual increment."

"In case of repeat plagiarism of over 60% similarity, the faculty members will be suspended, even dismissed."

Plagiarism

““I am all for checking plagiarism which is indeed a problem in India within academia. We have very lax standards on this count and that is what seems to have prompted government to propose such a law. It would have been better if universities had strong internal mechanisms as in so many other countries,” said Dinesh Singh, former vice-chancellor of Delhi University.

India has been witness to several plagiarism charges against central university vice-chancellors and teachers in the past few years. Pondicherry University V-C Chandra Krishnamurthy quit in 2016 after a prolonged stand-off with the HRD ministry, following allegations that she plagiarized large parts of a book mentioned in her resume. The most celebrated case is that of BS Rajput, the VC of Kuamon University, who was a serial plagiarist; eventually, seven Stanford University professors wrote to then President APJ Abdul Kalam about him.”

Plagiarism

"According to UGC, all higher educational institutions will have to develop a policy on plagiarism and get it approved by relevant statutory bodies and display it on their websites. In September last year, UGC formed a committee and sought public feedback on a proposed plagiarism policy."

However, the UGC has yet to make any announcement of its policy of punishing the plagiarism based on the above reported in the Website of Hindusthan Times.

Plagiarism

Plagiarism labelled against Sarvepalli Radhakrishnan

Professor Jadunath Sinha: "Indian Psychology of Perception" (Thesis submitted to Calcutta University in 1922 for the award of Premchand Roychand Studentship)

Professor Sarvepalli Radhakrishnan: "Indian Philosophy" (Volume 2, Chapter: 'Yoga Sutra of Patanjali')

Plagiarism

"In January 1929, one Jadunath Sinha, then a little known young Lecturer of Philosophy in the Meerut College, having a brilliant academic track record, created a sensation in the literary world by accusing Dr. Radhakrishnan of plagiarizing extensively from the first two parts of his thesis titled 'Indian Psychology of Perception, Vol I & Vol II, which were submitted by him to the Calcutta University (CU) for the coveted Premchand Roychand Studentship (PRS) of 1922. While Jadunath Sinha had submitted the Vol. I of his thesis in 1922, he submitted Vol. II of the thesis in 1923. The piracy has been made from these two parts of his thesis."

Notice of Violation of IEEE Publication Principles

"Analysis of the Dispersion Characteristics of Gyro-TWT with Axially Periodic Dielectricand Metal Loading" by Wang Hui, Li Hongfu, Luo Yong, Zhang Tingwei, and Li Hao in the 33rd International Conference on Infrared, Millimeter and Terahertz Waves, (IRMMWTHz), September 2008."

"After careful and considered review of the content and authorship of this paper by a duly constituted expert committee, this paper has been found to be in violation of IEEE's Publication Principles."

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"Due to the nature of this violation, reasonable effort should be made to remove all past references to this paper, and future references should be made to the following article:

"Modelling of Axially Periodic Circular Waveguide with Combined Dielectric and Metal Loading" by Vishal Kesari, P K Jain and B N Basu in the Journal of Physics D: Applied Physics (38) 2005, pp. 3523–3529."

B. N. Basu, *Technical Writing*, New Delhi:

Prentice-Hall of India, 2007

CONTENTS

MODEL QUESTIONS
(bnbasu.india@gmail.com)

1) Explain the following: (a) “Avoid ‘suspense’ that has no room in technical writing”…. “Reading a scientific story isn’t the same as reading a detective story.” …. “We want to know from the start that the butler did it.” (b) On concise writing Pascal said, “I would have written a shorter letter, but I did not have the time.” (c) “Write what you say.” ….. “Good written English nearly is the same as good spoken English.”
2) (a) Define the Gunning fog index and discuss its role in technical writing. (b) (i) Calculate the fog index of the following text and (ii) hence modify it to reduce its fog index.
3) “If you are an aspiring student, we welcome you to take a good look at our website to know more about what the Institute has to offer and preferably consider visiting the campus for getting to know it even better by getting the first hand feel of its ambience and interacting with faculty and students so that you could take a well-informed decision.”
4) Write a paragraph containing at least four sentences. Calculate its fog index. Modify the paragraph reducing the number of sentences though without sacrificing its content. Calculate the fog index of the modified paragraph. Discuss on the values of the fog indices of the original and modified paragraphs.

5) (a) What does the journal editor normally expect from you in your paper? (b) What are the usual elements and their order in a paper?
6) Discuss the various issues related to joint authorship of a paper?
7) (a) What are the various points and issues to be addressed in the title of a paper? (b) Write a fictitious title of a paper of short length and show how you could modify it step by step to add more and more specificities of the content of the work while taking due care that the title does not become too long. (c) Give an example of a title to show how you could change its word order to shift the emphasis from one aspect of the content of the paper to another.
8) What are the points and issues to be addressed in (a) Abstract, (b) Introductory section, and (c) Concluding section of a journal paper?
9) (a) What is the role of References in a paper? (b) Discuss the numbering or citation order style and the alphabetic or name-and-year style of references in a paper and their relative advantages. (c) Enumerate the various elements of information to be provided with reference to a book and a paper to be put in the list of references in a paper.

Thank You!