EXERCISES

I. Match the following items and the text. They refer to preparing and sending the paper.

1. Choice of the journal …….
2. Guidelines ……
3. Length of the paper ……
4 . Cover letter …….
5. Declaration …….
6. Confirmation of receipt …….
7. Review process …….

a) The usual length of a paper is about 6,000 to 9,000 words, i.e., about 6 to 9 pages (however, mathematics papers can be longer). Do not exceed this figure because some journals may return the paper for shortening. One journal page = 1,000 words.

b) The journal´s editor will confirm that the contribution has been received and will forward it to a reviewer who will then judge the quality of the paper and often also your English.

c) Almost all journals now appear also in electronic form. Your supervisor will know which journal in your field is the most suitable for you. You can also find one when searching for papers by keywords. However, not all the papers you find in this way give the name of the journal.

d) All journals inform about their publication policy on their web pages. They give detailed information to authors on how to prepare a paper for submission and even offer a form/template for electronic submission.

e) Some journals will publish a paper only if a statement is attached saying that the paper presents an original contribution to the researched problem and that the facts have not been published elsewhere. (See Exercise XXXIV.)

f) To submit the paper, check if the journal accepts papers only in electronic form (which is becoming prevailing practice) or if a hard copy is to be sent as well. It is polite to accompany the paper with a short cover letter (sometimes a blank space is left on the submission form). (See also Guidelines for Academic Writing: How to write a formal letter).

g) After the paper has been peer-reviewed, you will most probably be asked to revise some sections or parts and to work on your English, i.e. correct language errors, change some formulations or even the style, as required by the journal. When you have done that, send the paper back and wait for the announcement that it has been accepted for publication.

Title

II. What errors can you find in the following titles?

1. Water-Cooled Nuclear Power Plants Aren´t the Solution.

2. The Burn-up Calculations of the Dukovany and Temelín Nuclear Power Plant Fuel for the Independent State Monitoring System in the Czech Republic.

3. Why Are The Wavelength And Delivery Systems The Most Important Factors In using A Dental Hard-Tissue Laser?

Ad 1. ……

Ad 2. ……

AD 3. ……

Author´s /Authors´ names and Affiliations

III. Choose a topic from your present research on which you would like to write a paper. Think about what you would like to call it and whom you would like to have as co-authors/a co-author. Following the advice given above, give the title of your paper, authors´ names and affiliations, and contact address.

Abstract

IV. Fill in verbs in the tense and voice (active/passive) appropriate in the given context.

1. Dynamic Behavior of the Doubly Fed Induction Generator during Three-Phase Voltage Dips

The use of doubly fed induction generators (DFIGs) in large wind turbines …….. (become) quite common over the last few years. These machines …….. (provide) variable speed and …….. (drive) with a power converter which is sized for a small percentage of the turbine-rated power. A drawback of the DFIG …….. (be) that it …….. (be) very sensitive to grid disturbances, especially to voltage dips. However, the operation of this machine in these situations …….. only …….. (study) in the literature by means of simulations. This paper …….. (develop) a theoretical analysis of the dynamic behavior of the induction machine during three-phase voltage dips. The proposed analysis …….. (contribute) to understanding the causes of the problem and …….. (represent) a very useful tool to improve the existing solutions and propose new alternatives. Experimental results …….. (be) in good agreement with those obtained theoretically and …….. (validate) the proposed analysis.

(From IEEE Transactions on Energy Conversion, vol. 22, no. 3, Sept. 2007, p. 709)

2. Phthalocynanine Layers for Humidity Detection

This study …….. (deal) with research into different types of phthalocynanines for humidity detection. Thin layers of various phthalocynanines …….. (expose) to water vapours and their electrical properties …….. (measure). Potentially suitable materials …….. (deposit) on the substrates with interdigital electrodes. Subsequently, impedance-humidity characteristics …….. (measure). Comparison of these materials, their features and responses to humidity …….. (discuss) in more detail.

(Abstract by a PhD student)

V. Read the following abstract.

a) In which parts of the paper could the sentences listed below (1-4) be used?

Output and Efficiency of the Closed-Cycle Gas Turbine

The paper considers the closed-cycle gas turbine plant from the educational aspect of knowledge and understanding. The special qualitative features of the T-s diagram are discussed and a quantitative treatment of a simple model is presented. A new expression for the maximum efficiency is given and interesting aspects of the results are discussed. Technical and educational conclusions are drawn from the work.

(Used with the publisher´s permission)

a)

1. The paper considers ... ……
2. The special qualitative features … ……
3. A new expression for … ……
4. Technical and educational aspects … ……

b) Add keywords to the abstract.

……

c) Read the title and the abstract once more. Does the title convey well the content of the abstract? Try to reformulate it.

……

VI. Study the following text.

A systematic modelling and simulation approach for JIT performance optimisation

Robust computer-aided simulation and modelling tools help to visualise, analyse and optimise complex production processes with a reasonable amount of time and investment. A review of the literature shows that simulation and modelling have not been extensively applied in just-in-time (JIT) manufacturing environments. Also there remains a lack of a comprehensive mechanism to identify the most significant JIT drivers for the purpose of system process optimisation. The prime objective of this study is to close this gap by applying computer based simulation tools and linear mathematical modelling to identify the impact of selected key JIT parameters on performance in an automotive component—manufacturing environment. Research shows that variables such as inconsistent task distribution, variation on operator performance, misconception of total quality management philosophy and lack of set-up time elimination plans disrupt ideal JIT production. In this study, ProModel simulation and modelling software is used to model and simulate different experimental scenarios in order to understand and quantify the impact of selected input key JIT variables on objective functions (i.e. process time and takt time). The outcome is a robust mathematical model that highlights the significance of JIT drivers in the manually operated mixed-model assembly lines.

(From Robotics and Computer-Integrated Manufacturing, vol. 24, 2008, p. 735)

Which lines describe

1. the topic

……

2. the background

……

3. the method(s) and approach

……

4. the results

……

5. the conclusion

……

Give the numbers of the lines and the first words of the first sentence(s).

VII. The paragraphs in the following abstract have been scrambled.
i. Rearrange them so that they form a cohesive text.
ii. Suggest a title and keywords.

a) Here, we focused on developing a method to detect a person trying to illegally cross the border by hiding in a car.

b) Due to the high sensitivity of the pressure sensor, consideration was given to the effect of external disturbances such as ground vibration and wind force acting on the car.

c) The proposed method is based on pneumatics. A silicon tube (inner diameter 4mm) with one end plugged by a highly sensitive pressure sensor and the other end capped is sandwiched between two rigid boards and placed on the ground at the entrance gate of the border.

d) This paper describes a novel method for detecting the presence of a person hiding in a car. One of the important strategies of homeland security is border control. In particular, strict and effective monitoring to control illegal immigration is a key strategy for maintaining public safety and a healthy local economy, and is essential for preventing the entry of terrorists.

e) Here, we propose a heartbeat detection filter robust against disturbances but sensitive to the heartbeat signal and an index to discriminate between the presence and non-presence of a person, and we present the experimental results obtained using the proposed method under various disturbance conditions.

f) When one wheel of the car is on the board and the engine is stopped, the pressure sensor can detect human vital signs such as heartbeat, which cannot be concealed.

(From IEEE Sensors Journal, vol. 11, no. 9, Sept. 2011, p. 1872)

i. 1. ….. 2. ….. 3. ….. 4. ….. 5. ….. 6. …..

ii. ……

……

VIII. Imagine you are someone interested in renewable energy sources, especially wind power. Read the following abstract written by a student and say whether you would/would not like to read the whole paper and why. Is there any information you miss? Comparison of the Abstract with the Conclusion might be helpful.

Abstract

Wind power plants must provide the same power quality as other power plants. Special attention is paid to the requirement of supplied energy stability because wind power plants are connected to the grid. It is very important to understand the sources of disturbances that affect power quality. The main parameters monitored are frequency and voltage, which have to be kept as stable as possible. The current and power can also be measured. However, the relationship between voltage quality and energy quality is unknown.

Now read the conclusion.

Conclusion

From the measurements described above it is obvious that the wind turbine operation agrees with the EN 50160 standard. The only problem arose with flicker as the measured data were not realistic. Consequently, flicker will have to be measured again. All the other parameters did, however, meet the standard.

……
……

IX. In which parts of the abstract can you find the following phrases?

a) Quite recently, considerable attention has been paid to ……
b) X was computed with the finite difference formula ……
c) The results show clearly that ……..
d) The issues related to …….. are briefly addressed ……
e) X is in very good agreement with ……..
f) The comparison of numerical results with …… confirms that ……
g) The paper summarizes our knowledge of ……..
h) Progress has been made towards understanding …….
i) Nevertheless, more experimental data are required.
j) This paper presents ……
k) The technique applied has confirmed that ……..
l) X and Y were compared.
m) It can be concluded that ……..

1. topic and background **…….**
2. method and approach **…….**
3. results **……**
4. conclusion **…….**

X. Choose a paper from a journal in your field. Distribute copies of the abstract to the class. Say whether you find it well-written or not quite satisfactory. Give reasons.
Take into account both the content and wording.

XI. Use the topic of your Master Thesis (even if written in Czech), and think of two sentences introducing the problem, two sentences saying how you solved it, two giving the results and one drawing the conclusion. Try to formulate them in English, paying attention to grammar. Make use of the phrases presented in Guidelines for Academic Writing: How to write a paper (Useful phrases). Now compare your English abstract with the one from your Thesis. What have you found? How many words have you used? **Add keywords.**

XII. Use the abstract you have prepared in Ex. VIII. and develop each part to obtain about 200 words.

XIII. Write an abstract on the research project you are now involved in.

1. State the motivation, the topic, its background and importance (2 sentences).
2. State the purpose of your research (1 sentence)
3. Describe the method of addressing the issue (2 sentences)
4. Present the results (2 sentences)
5. Draw conclusions from the results (1 sentence)

Finally, count the number of words you have used. Are you within the usual abstract word limit? If not, extend the abstract by using supporting facts.
Add keywords.

Sections of the paper
Introduction

XIV. Fill the gaps with the appropriate tense and voice of the verbs given in capitals.

1. Currently, there ……. a growing interest to develop technology that …… objects to become interactive with digital services accessible on the Internet. BE, ALLOW
2. Traditionally, physicians …… palpation to detect breast cancer. USE
3. Simulation results …… in Section III. PRESENT
4. A discrete model ……. by X et al. in 1990 [4]. OBTAIN
5. Many researchers …….. to find a solution to this problem [4] – [8] but without success so far. TRY
6. There ……. a growing interest in the development and application of renewable energy sources over the last decade. BE
7. Coal-fired plants …… to vary their outputs in response to changing electricity demand. OBLIGE (now)
8. This paper …….. as follows. ORGANIZE
9. X [4] …….. that low development and maintenance costs have led to the increasing popularity of component-based development. ARGUE
10. Induction motors …….. as a universally accepted choice in industrial applications. REGARD
11. The implementation of information systems …… increasingly …….. in significant impacts upon the host organization´s culture. RESULT
12. The paper …… the difference in specific spectra of the PPG signal between pre-alcohol and post-alcohol intake states. INVESTIGATE

XV. Complete the texts with the appropriate forms of the verbs given below.

1.

include be develop reach devote

Considerable efforts …… to studying the scheduling problem of energy storage devices. Promising results …….. in most studies in terms of electricity savings. These approaches …….. the decomposition technique [3], dynamic programming [4], Lagrange relaxation [5], and nonlinear programming [6]. Although the features of these scheduling methods …….. different, they …… in order to reduce their computation time or memory requirements.
(From IEEE transactions on Energy Conversion, vol. 22, No. 3, Sept. 2007, p. 774)

2.

present develop achieve describe show prove be (2x)

The prototype which …… is fully …….. in this paper. The last section …….. the experimental results, which …… good agreement with the computed values.

The study …… that this series DESM …… an interesting solution for widening the motor speed range with an improved efficiency: a speed increase of 2.8 ……., while for the surface PM synchronous motor it …… less than 2.
(From IEEE Transactions on Energy Conversion, vol. 22, no. 3, Sept. 2007, p. 656)

3.

investigate fall propose

For this reason, several alternative approaches for the implementation of the PSM …… [2]. In general, these techniques …… under three major groups: angle rotation [3]-[8], ROM compression [9]-[14], and polynomial interpolation methods [15]-[25]. The use of nonlinear DACs [26]-[32] and the application of delta-sigma techniques [33]-[37] …… also …….. in literature.
(From IEEE Transactions on Circuits and Systems, I: Regular Papers, vol. 58., no. 10, Oct. 2011, p. 2409)

4.

be concerned be (2x) take place

Calculus of integer orders …….. once the basic essential mathematical tool for analysis, synthesis, response behavior, theorems, and many novel applications for any dynamical system from 1695 until 1960. However, these integer values …… a very narrow subset of the real orders, and so during the last five decades, a dramatic shift …….. and many scientific researchers …… instead with fractional calculus.
(From IEEE Transactions on Circuits and Systems, I: Regular Papers, vol. 58, no. 10, Oct. 2011, p. 2388)

5.

operate reach be consider

Wind energy …… now …….. as an actual alternative to the conventional and pollutant energy sources such as oil, gas, and coal. Global wind power …… 47 GW in 2004 with a 20% growth in this year [1]. Due to their advantageous characteristics, most of the grid connected wind turbines …….. at a variable speed [2]. Among the different alternatives to obtain variable speed, the doubly fed induction generator (DFIG) …… the most used.
(From IEEE Transactions on Energy Conversion, vol. 22, no. 3, Sept. 2007, p. 709)

XVI. Read carefully the following introduction. Find all the verbs and explain the use of different tenses in each sentence (stated fact, general objective, dated fact, gradual change, particular part of the research).

To understand the text correctly, it is important to know that the year of its publication was 2003.

Diffusing the Internet in the Arab World: The Role of
Social Norms and Technological Culturation

1. The regional setting is dynamic. 2. Internet use and the general demand for information technology (IT) hardware and services in the Middle East are growing, with a projected market value of 8.9 billion dollars by 2005 [1]. 3. Egypt, Saudi Arabia and the United Arab Emirates (UAE) accounted for about 59% of 2001 demand and as much as 64% of the future forecast. 4. In 2001, the launching of Egypt´s first free Internet service provider Noor

illustrated wide commitment to market opportunities. 5. It is no wonder that the Internet and burgeoning world of e-commerce and Net-enhancement are viewed as engines of economic growth for Egypt in the 21st century, and why Arab countries such as Egypt are exemplars of how to leapfrog [2] into the IT era [3]. 6. While it is easy to ride this wave of enthusiasm for innovations such as the Internet, failing to understand the factors that influence diffusion at the micro level is still a threat. 7. Past experience shows that technology diffusion is not a straightforward process [4]. 8. Based on prior theoretical work, our field study gathered quantitative and qualitative data from Arab knowledge workers and top and middle-level managers, nearly all of whom were Internet-savvy. 9. We examine the acceptance of the Internet by the respondents themselves as well as their perceptions of organizational acceptance.
(From IEEE Transactions on Engineering Management vol. 50, No. 1, Feb. 2003, p. 45)

1. is	stated fact
2.	…….
3.	…….
4.	…….
5.	……
6.	……
7.	…….
8.	…….
9.	…….

XVII. Fill in verbs from the list below. Sometimes more than one verb is appropriate. Check whether you understand all the verbs.

deal	**play**	**do**	**perform**	**appear**	**find**	**take**
address	**investigate**	**propose**	**concentrate**	**devote**	**gain**	**become**
focus	**lack**	**obtain**	**pay**	**carry out**	**arrive**	**study**

1. Experimentation has always …… an important role.
2. Ceramic materials have been …… in importance in recent years.
3. A great effort has been …… to …
4. Considerable attention has been …… to ...
5. Much research has been …… out on …
6. This issue has been widely …… for several years.
7. Much research on … has been …… by X and Y.
8. In recent years, research on … has …….. very popular.
9. Current research is …… on …
10. Several publications on ... have …… in recent years.
11. Researchers from the Škoda Research Institute have …… various methods for … .
12. Only very few publications can be …….. in the literature that …
13. However, very few publications have …….. into account the fact that …
14. There are still some interesting and relevant issues to be ……..
15. However, studies on … are still ……..
16. The results …….. by X suggest that …

17. Our team has …… at the conclusion that …
18. The paper I am going to review …….. with …
19. Our study is …….. with …

XVIII. Choose a paper from a journal in your field. Distribute copies of the introduction to the class. Say whether you find it well-written or not quite satisfactory. Give reasons. Take into acount both the content and wording.

XIX. Write ten sentences in English to highlight the main points of the Introduction section of your Master thesis.

Body/Core of the paper
Materials and Methods/Methods of Approach

XX. Underline the verb forms (with the exception of infinitives and past participles) in the following extracts and explain the use of tenses.

1.

The resonators were initially exposed to 1500 sccm dry air at 35°C for over six hours to drive off H2O from the substrate surfaces. Following this, the flow rate was reduced to 100 sccm and the humidity was increased by 825 ppm every 60 minutes, for seven hours. The results of this experiment are depicted in Fig. 4.

With the initial application of 825 ppm humid air, the normal frequency shift of the pure SH-SAW resonator is 11.9 ppm. For each subsequent 825 increase in humidity thereafter, the normalized frequency shift changes by less than 5.1 ppm.

(From IEEE Sensors Journal, vol. 11, no. 9, Sept. 2011, p. 1772)

2.

Fig. 4 shows the sensing device used in the verification experiments. Forty-eight rectangular shaped spacers with dimensions 400x30x10 mm are set on the base board. The spacers are made of a soft, sponge type material. Six silicon tubes, each with a pressure sensor, are set among the spacers. The tubes cover the entire area of the board and are compressed by vertical and horizontal forces, as shown in the front view in Fig. 1. …. A low frequency microphone (…….) was selected as the highly sensitive pressure sensor.

(From IEEE Sensors Journal, vol.11,no. 9,Sept. 2011, p. 1874)

3.

However, this method is not easy to implement as the average wind power …. has to be predicted ahead of time. Unless the prediction is accurate, the wind can accelerate or decelerate the turbine outside its stable operating range. The constant power strategy is not advised in practice.

(From IEEE Transactions on Energy Conversion, vol. 22, no. 3, Sept. 2007, p. 787)

4.

An Avista Laboratories SR-12 500 W PEM fuel cell was used to obtain data for testing the models. The SR-12 is a self-contained unit with a 48-cell PEM stack in 12 removable cartridges, startup battery, cooling fan, and control hardware. The SR-12 uses high-purity 99.95% hydrogen delivered at 7 psi.

(From IEEE Transactions on Energy Conversion, vol. 22, no. 3, Sept. 2007, p. 750)

XXI. What information did you present in the Materials and Methods section of your Master thesis? How many parts did you divide it into? What tenses would you use if you were to present it in English? Give examples.

Results

XXII. Read the following part of a Results section and comment on the tenses in the numbered sentences.

Development of Sensing Device to Detect Persons Hiding in a Car

1. Fig. 11(a-d) shows the histogram of the index when one person or two persons are (a) in the driver´s seat of the camper, (b) in the assistant driver´s seat, (c) in a seat in the back cabin, and (d) on the roof. 2. Fig. 11(e) is the histogram of the index when no one was in the car and no one was walking near the car, and when many people were walking in the vicinity of the car, as shown in Fig. 11(e). …… . 3. Fig. 11(e) shows the results when no one was in the car and there were either weak or strong disturbance vibrations. 4. The distribution is similar to that shown in Fig. 10 when no one was in the sedan-type car. 5. The most frequent distribution is concentrated around F = 0.015. 6. As can be seen from the histogram in Fig. 11(a)-(e), index F decreases in proportion to the distance between the person´s position and the sensing device board. 7. This is because the signal attenuates in proportion to the distance. 8. However, when a person is in the car, even a slight body movement provides a greater value of index F. 9. Thus, the distribution is more widely spread than when no one is in the car. 10. Even with the difference in histogram distribution due to the different cars and hiding positions, there was still a clear difference in distribution when people were in the car and when no one was in the car. 11. Index F can be used to discriminate between the presence and nonpresence of people in a car being inspected.

(From: IEEE Sensors Journal, vol. 11, No. 9, Oct. 2011, p. 1876)

1. shows, are ……
2. is; was, was walking, were walking ……
3. shows; was, were ……..
4. is; was ……..
5. is concentrated ……
6. can be seen; decreases ……
7. is; attenuates ……..
8. is; provides ……
9. is spread, is ……
10. was, were, was ……..
11. can be used ……..

XXIII. What were the main results of your Master thesis? Summarize them in five to ten sentences.

Discussion

XXIV. Read the extracts from the Discussion below. What is their purpose?

Development of Sensing Device to Detect Persons Hiding in a Car

1. From the histograms in Figs. 9-11, we considered how to set a threshold T_h for judging the presence or non-presence of a person hiding in the car. …….. . For both the sedan and the camper, if index *F* is less than 0.12, there is a 90% probability that no one is hiding in the vehicle.

2. The results do not perfectly discriminate between the presence and non-presence of a person due to the disturbance from the dynamic pressure of wind and ground vibration. If the inspection was conducted in a closed area, the judgment accuracy would be improved. Nonetheless, by identifying the high probability of a concealed person, a more detailed inspection could be carried out, which would make the inspection procedure more efficient.

3. Regarding detection time, the X-ray method requires shorter time than this system, but [6] indicates the danger of using the X-ray method for finding illegal immigrants because of their exposure to X-rays. This system needs more detection time than X-ray because the system requires the drivers and all fellow passengers to get out of the vehicles, but compared with the hands-on searching by border officers, the system can reduce the detection time without the dangers such as the exposure to radiation.

(From IEEE Sensors Journal, vol. 11, no. 9, Sept. 2011, pp. 1876 – 1878)

1. ……..
2. ……
3. ……

XXV. Did you include a separate Discussion section in your Master thesis or did you make it part of the Results section? Give reasons.

Conclusion(s)

XXVI. First read the extracts from the following Introduction. Then study the Conclusion. Compare the extracts with the Conclusion and say whether the Conclusion provides answers to the problem as stated in the Introduction.

Development of Sensing Device to Detect Persons Hiding in a Car

Introduction

Illegal immigration from neighboring countries is a serious problem ……. . Accurate devices to quickly and easily find people hiding in vehicles are necessary to maintain strict border control as well as make the illegal immigration procedure more effective.

Generally, a border officer checks the inside and/or outside of a vehicle to determine if anyone is hiding there. …… . Alternatives to this manual method have been considered, such as the X-ray equipment …… [4] and …… …… [5]. However, these methods require a high initial cost …… . Moreover, the danger of using the X-ray method for finding illegal immigrants is indicated because the illegal immigrants would be exposed to X-rays [6]. A simpler method which uses microvibrations to detect a concealed person has been proposed [7]. We also proposed a similar method ……. [8].These methods, however, are sensitive not only to human microvibrations but also to external disturbances such as ground vibration and wind force acting on the vehicle.

This paper describes a novel pneumatic method that uses silicon air tubes and a low-frequency condenser microphone as a pressure sensor highly sensitive to the heartbeat signals of a person hiding in a vehicle but robust against external disturbances such as

ground vibration and wind force. The validity of the method was verified using an actual van-type camper.

Conclusion

This paper describes a novel method for detecting the presence of a person hiding in a car. This pneumatic method uses silicon tubes and highly sensitive pressure sensors to monitor the vibrations from human vital signs. The employment of a low-frequency condenser microphone as the pressure sensor provides sufficient sensitivity to detect the signals from human vital signs transmitted to one of the wheels of the car. From the filtered sensing signal, an index using the standard deviation of the signal is presented to discriminate between the presence and non-presence of a person in the car. The validity of the proposed method was examined using a sedan-type car and a camper. For both vehicles, when no one was in the car, distribution of the index was concentrated in the low range. For the sedan, the index when a person was in the car, was clearly greater than that when no one was in the car. For the camper with a concealed person, the signal level decreased in proportion to the distance between the position of the person and the sensor location. Furthermore, the body movements of a concealed person enhanced index *F.*

As for our future work, we are considering that we need to use more varied types of vehicles to increase the reliability of the system.

(From IEEE Sensors Journal, vol. 11, no. 9, Sept. 2011, p. 1878)

XXVII. Choose a paper from a journal in your field. Distribute copies of the Conclusion(s)to the class. Say whether you find it well-written or not quite satisfactory. Compare the Conclusion(s) with the Abstract and the Introduction. Does it relate directly to the problems stated in those parts?

XXVIII. Read the English version of the Introduction section in your Master´s thesis. Then formulate the conclusions you arrived at. Summarize them in five to ten sentences and compare them with your Introduction section.

Acknowledgesment(s)

XXIX. Did you thank anyone for assistance or financial support? Formulate the acknowledgement in English.

Nomenclature and Appendices

XXX. Did you add a Appendix to your thesis? Why/Why not?

References

XXXI. Find two journals by different publishers and compare their ways of referencing
a) papers
b) books
c) presentations at conferences
Give examples.

Writing a paper step by step

XXXII. Are you now ready to write a paper on your research? This exercise helps you to revise the paper structure. Below are several extracts from research papers. Can you identify which parts of the paper they come from?

1.
The lesson of these examples for cross-cultural IT management is that the implicit aspects of cultural context reflected in accepted technologies and management practices may or may not carry over successfully to a different cultural context.
(From IEEE Transactions on Engineering Management, vol. 50, no. 1, Feb 2003, p.29)
……
2.
With increased emphasis on nonconventional energy systems and autonomous power generation, a considerable interest has recently been devoted to the development of improved and appropriate generating systems.
(From IEEE Transactions on Energy Conversion, vol. 22, no. 3, Sept. 2007, p. 564)
……..
3.
In order to show the abilities of the software SimRDH, it has been used for simulating different operating modes of a system composed of the two subsystems of Figs. 12 and 13. …….. . During the simulation, the car weight M_c is 630 kg and the counterweight M_p is 350 kg. The other values are given in Table 1.
……..
(From IEEE Transactions on Energy Conversion, vol. 22, no. 3, Sept. 2007, p. 597)
4.
The results for both motors are shown in Figs. 10-12, which show performance comparisons of speed, torque, and efficiency versus input current at 12 V. The figures show that the powder iron motor runs faster, and thus has lower power, torque production, and efficiency than the motor with lamination and wedges.
(From IEEE Transactions on Energy Conversion vol. 22, no. 3, Sept. 2007, p. 611)
……..
5.
To overcome the problem of higher dc-link voltage, Hammond [8] has proposed a new topology, but the transformer design is very complex. To simplify the transformer design, Paice [9] has reported a new topology for 12-pulse and 18-pulse converters. But the THD of ac mains current with this topology is around 8% at full load.
(From IEEE Transactions on Energy Conversion, vol. 22, no. 3, Sept. 2007, p. 637)
……
6.
The literature on integrating technologies such as CBD (……..) would support the view that a key problem at Invebank was their lack of collaborative or open culture [14] - one that encouraged trust and knowledge sharing [20], [45]. We might, therefore, argue that Invebank could usefully develop a unified collaborative culture to break down subcultural barriers. However, we believe that this is naïve, since it oversimplifies the cultural concept, adopting as it does an integrative perspective [29].
(From IEEE Transactions on Engineering Management, vol. 50, no. 1, Feb. 2003, p. 97)
……..
7. The following section reviews the relevant literature, before the research method is discussed in Section III. The research results are presented in Section IV and their importance and implications are assessed in the final sections.
(From IEEE Transactions on Engineering Management, vol. 50, no. 1, Feb. 2003, p. 78)

……..
8.
In-fiber sensors are an effective platform for sensing various physical parameters. ……. . However, in order to use this sensor technology in a real testing environment, the basic technology needs to be refined. The two needed refinements in this technology are temporal stability and packaging that enables the sensor to be durable but still retain its flexibility.
(From IEEE Sensors Journal, vol. 11, no. 9, Sept 2011, p. 2057)
……
9.
This paper presents an application of the "split ADC" [4] – [16] architecture to the problem of calibrating and correcting linearity errors in successive approximation ADCs. Compared with the work in [5], the novel content in this paper is associated with the extension of the split ADC concept to the SAR architecture.
(From IEEE Transactions on Circuits and Systems, vol. 58, no. 10, Oct. 2011, p. 2355)
……
10.
Following the excellent results exhibited by the proposed framework, the question that immediately arises is whether that level of performance can be achieved in all situations. From our experience with many other simulated scenarios that we explored, the answer thereto lies in the spectral leakage caused by the discrete Fourier transform [11], and
…… .
(From IEEE Transactions on Circuits and Systems, vol. 58, no. 10, Oct. 2011, p. 2475)
……..

XXXIII. You know now the structure of the paper and have a detailed list of useful phrases (see How to write a paper: Useful phrases**). Make use of all the knowledge you have acquired so far to write a paper on your current research. The exercises will guide you through the process.**

1.
It is recommended to start by drafting **the Introduction** but to leave the final formulation of your research problem till you have completed the three parts of the body of the paper that follow the Introduction (Materials and Methods, Discussion, Results). That will help you to formulate the problem clearly and precisely as a starting point for its solution. The other parts of the Introduction (background of the problem, state of the art, literature review, framework of the paper) are easier to write. The Introduction should cover half a page.

2.
Now describe the methodology and materials for solving your research problem as formulated in the Introduction. The description should not exceed one page. If the research is experimental, describe the methods and facility/apparatus you used and the experiment as carried out.
If your research involves only mathematical solution, describe the method you used.
This task will cover **the Materials and Methods** section.
Where applicable, use mathematical expressions, graphs, tables, etc.

3.

Describe the results in an objective way, in the form applicable in the follow-up research or in practice. This will be **the Results section.** Include graphs, tables, diagrams, if applicable. Do not exceed one page.

4.

Assess, evaluate and discuss the results obtained on less than one page, giving your personal attitude and opinion. This will be **the Discussion section.**

5.

Now it is time to work on the final formulation of the problem presented in **the Introduction** and also on the Conclusion(s). Make sure that your Introduction covers all the essential points and that your research problem is carefully formulated and gives a clear idea of what is coming next. Summarize the main results and draw conclusions on half a page at most. That will cover the last part of the paper body, **Conclusion(s).**

Remember that the results you obtained and the conclusions you drew must relate directly to the problem formulated in the Introduction.

6.

Write **the Abstract** to your paper, not exceeding 150 words. It should include problem formulation, an account of the methodology/calculations, the results and a conclusion. Add **Keywords/Index terms**

Author Declaration

XXXIV. Your paper is now ready to be submitted to the journal of your choice. Some journals require a statement called Author declaration, in which the authors declare that the paper presents an original contribution to the researched problem and that the facts have not been published elsewhere. Arrange the sentence parts given below to get an example of such a declaration.

1. ……. is original
   ……. for publication in any form
   ……. and is not being considered
   ……. that our paper/manuscript
   ……. we the undersigned declare
   ……. that it has not been published before
2. ……. we further state
   ……. for publication to any other publisher
   ……. that it has not been submitted
3. ……. by all the authors
   ……. we also confirm that
   ……. the manuscript has been read and approved
4. ……. we have followed the regulations concerning intellectual property
   ……. we further confirm that
   ……. and declare that
   ……. all works of other authors in any form (ideas, equations, figures, tables, programs)
   ……. have been properly acknowledged
5. ……. for the editorial process
   ……. is the only contact person
   ……. we understand that
   ……. that the corresponding author

Signed by all authors

Author	Signature	Date