

How to Write a Research Paper 4

(Conclusion, Abstract, Keywords and Title)

Vinh Dinh Nguyen
PhD in Computer Science

Outline

- How to Write Conclusion Section
- How to Write Abstract Section
- How to Write Title Section
- How to Write Keywords Section
- How to Write Cover Letter
- Types of Reviewers
- Case studies for Reviewers' comments

How Do Researcher Spend Their Time



① Abstract

Why you should read this paper



② Introduction

High-level overview of the algorithm



What other researchers did in this field



Detailed description of the algorithm



Training, evaluation, visualization,
comparisons with other papers



Sometimes it's about
next research topics



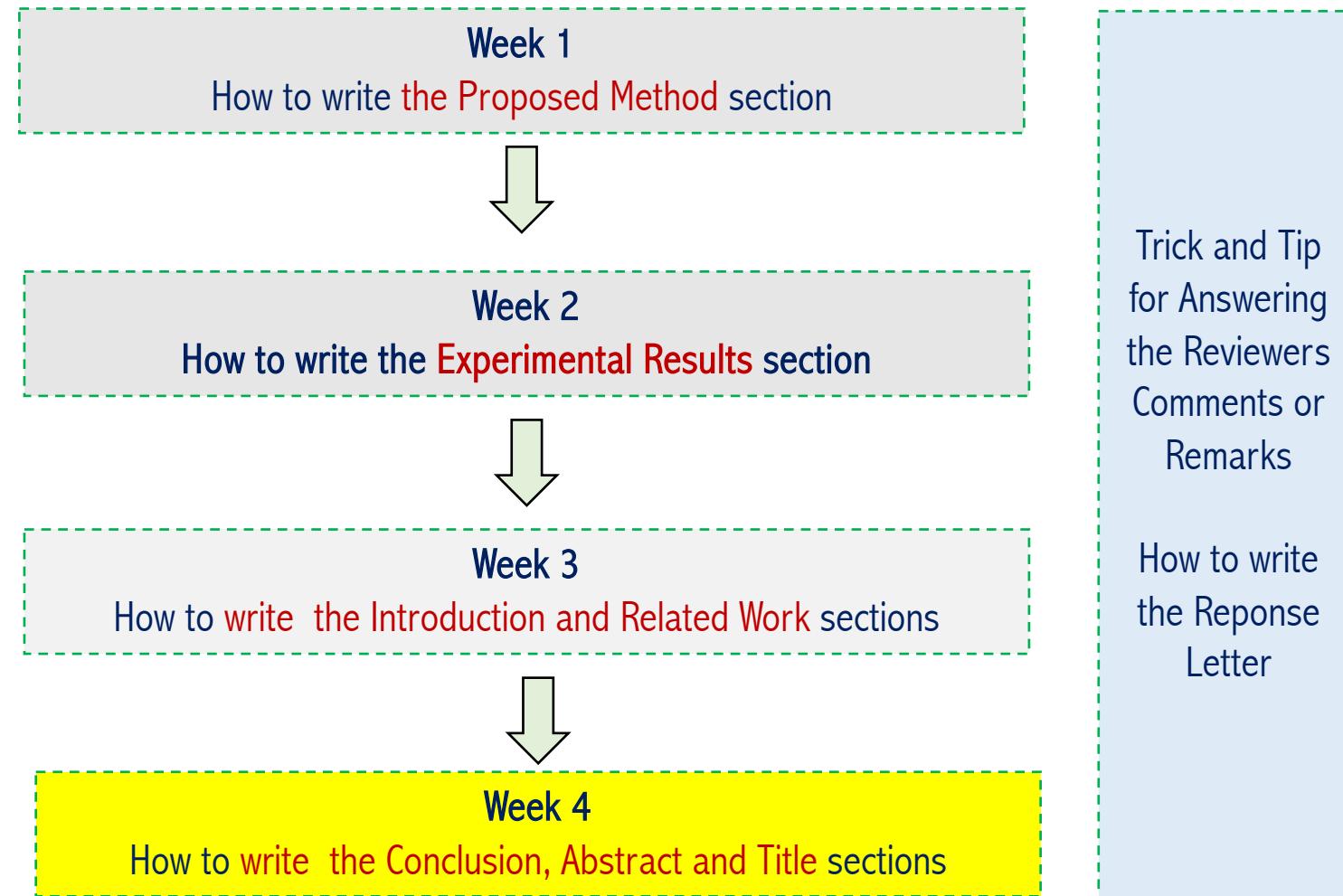
[Links to all papers
that ideas were used](#)

 Read thoughtfully,
maybe several times

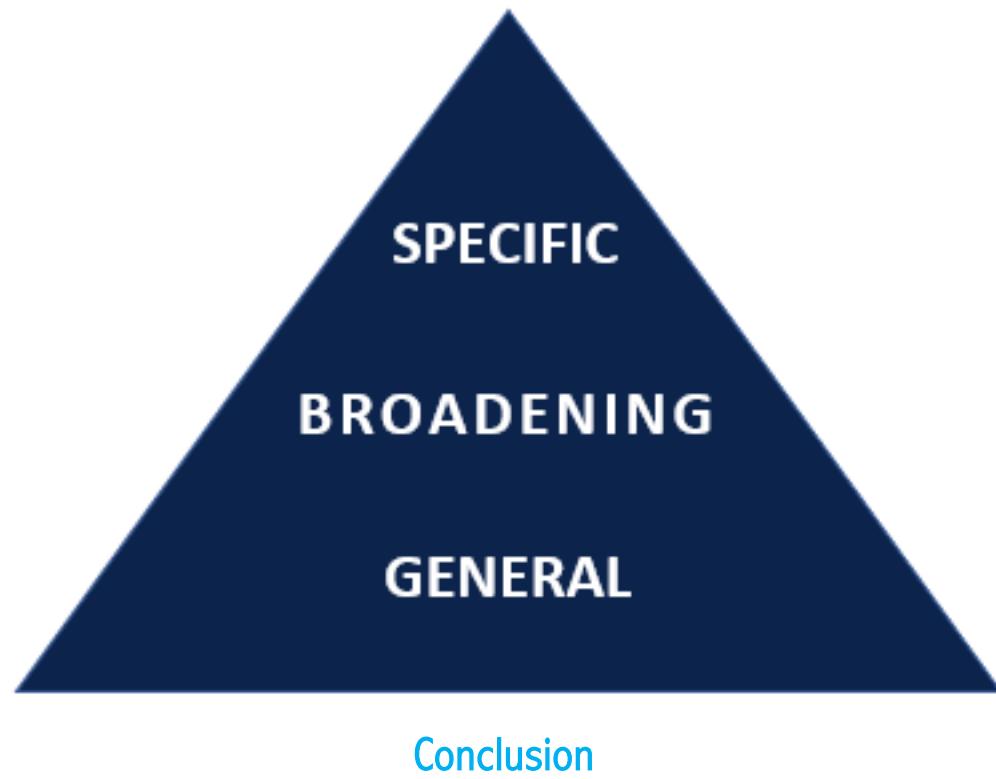
 Look through, read only parts you are interested in

 Feel free to skip completely

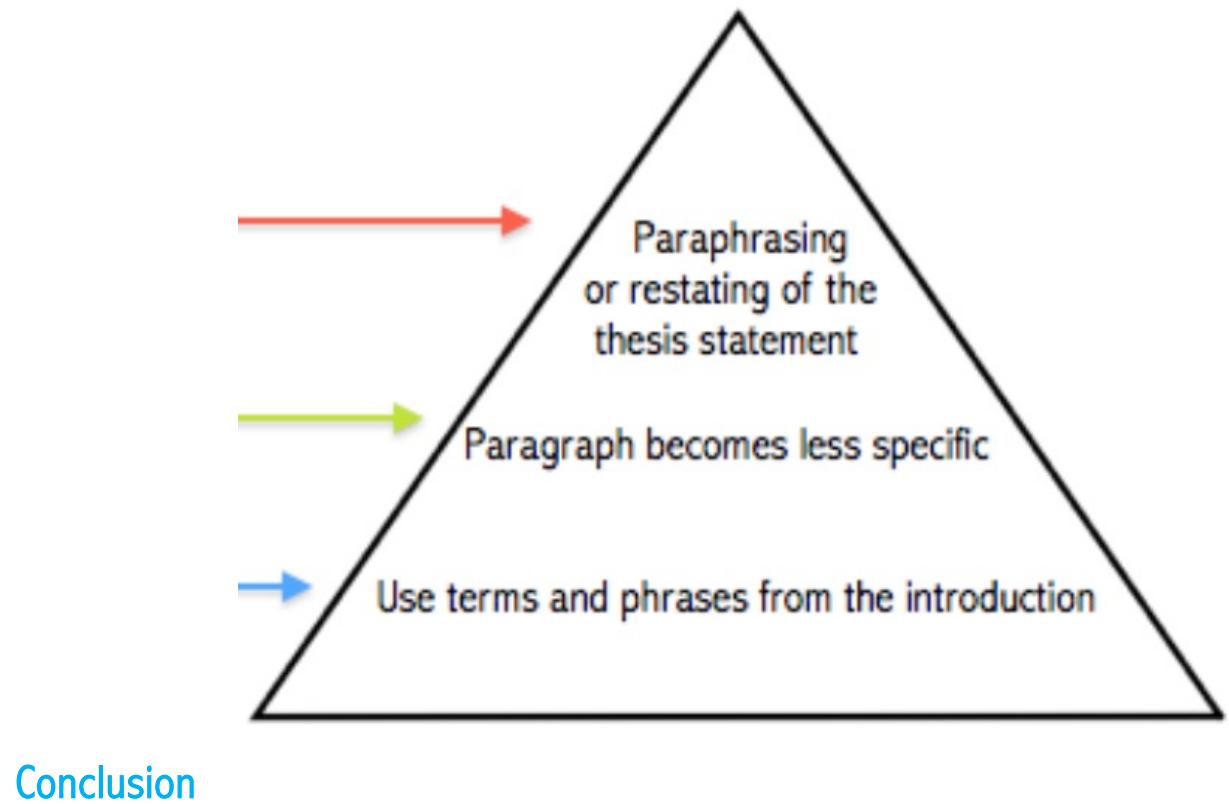
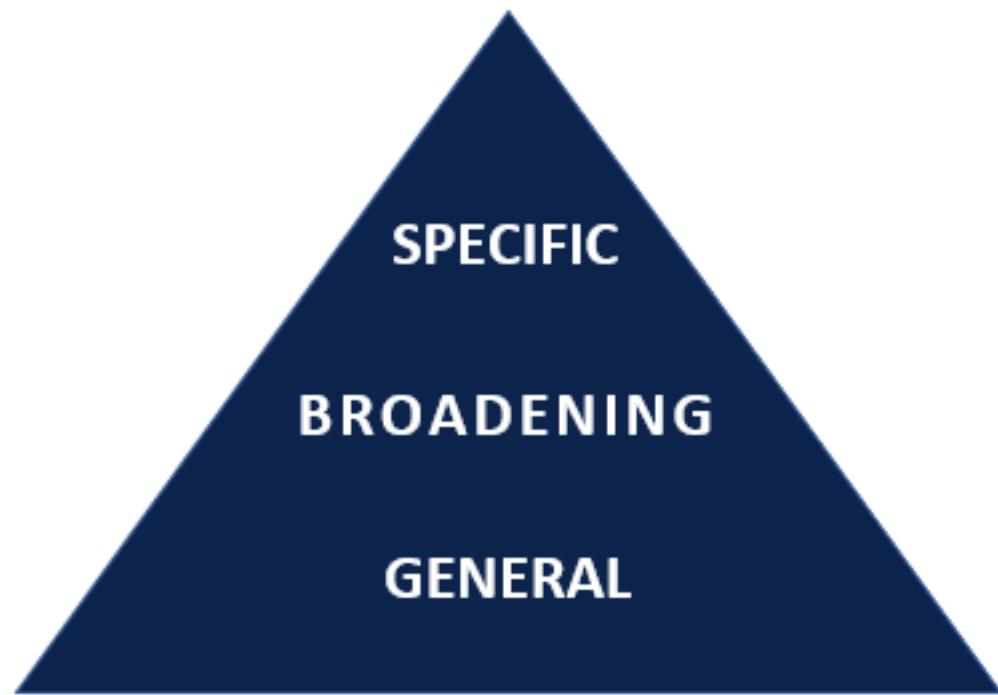
Schedule



Conclusion vs. Introduction



Conclusion vs. Introduction



How to Write a Conclusion

<<Paper' title>>

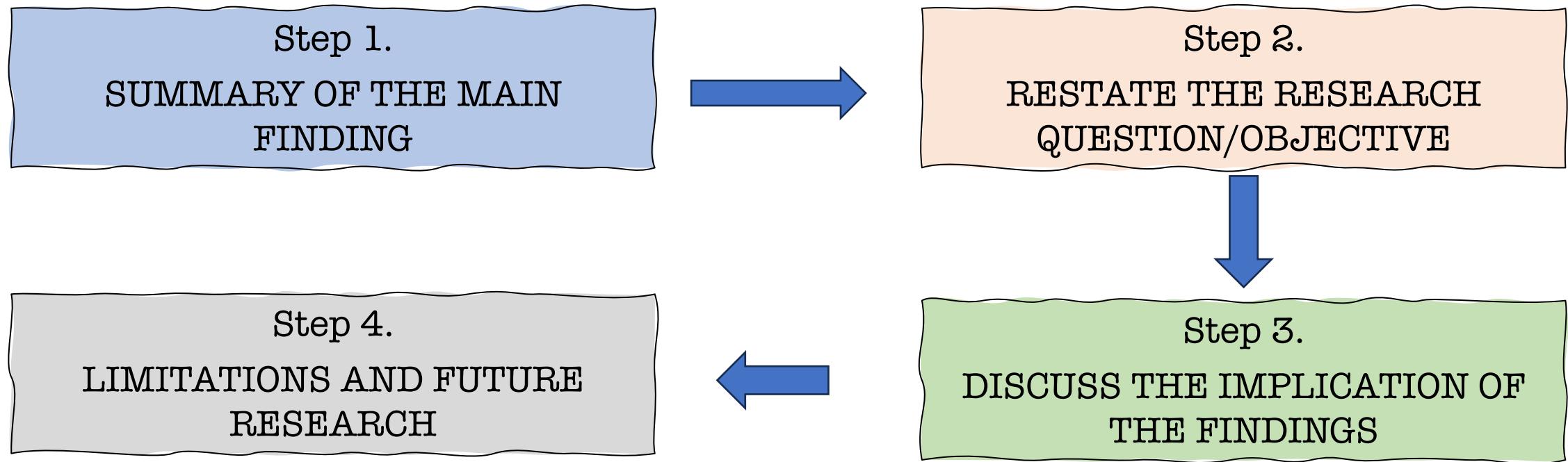
Abstract

Keyword

1. Introduction (done)
2. Related Work (done)
3. Proposed Method (done)
4. Experimental Results (done)
5. Conclusion

References

How to Write a Conclusion



How to Write a Conclusion

Step 1. SUMMARY OF THE MAIN FINDING

- Briefly recap the main points and results of your study. Focus on the key findings that directly address your research questions or hypotheses.
- Avoid introducing new information in the conclusion; it should be a synthesis of what you've already presented.

Example

Most existing local transformations for stereo matching are designed heuristically using expert knowledge. Therefore, they require a lot of time to investigate and design a suitable feature for specific conditions.

How to Write a Conclusion

Step 2. RESTATE THE RESEARCH QUESTION/OBJECTIVE

- Remind the reader of the research questions or objectives that guided your study. Highlight how your findings contribute to addressing these questions.

Example

In this paper, we investigated deep learning to develop a robust stereo data cost that improves the performance of existing stereo matching without requiring much expert knowledge. We hope that this research will provide new insight regarding the benefits of deep learning-based unsupervised approaches for stereo matching. The accuracy of a stereo matching algorithm depends on how much data can be mined in the training process rather than on designing a feature for specific conditions.

How to Write a Conclusion

Step 3. DISCUSS THE IMPLICATION OF THE FINDINGS

- Explain the importance and implications of your results.
- Discuss how your study adds to the existing body of knowledge in the field. Consider the broader implications of your findings and their potential impact on future research, practice, or policy.

Example

The proposed LDE stereo method outperforms dominant stereo methods, including SAD, Census, and ANCC. Based on the robust experiments in both indoor and outdoor conditions, the proposed LDE stereo method has the following advantages.

- LDE is less sensitive to radiometric variations and realistic conditions than the current dominant local pattern methods (LDP or LTrP).
- The performances of conventional stereo matching algorithms, such as BP, SGM, and GC are significantly improved by applying LDE as the data cost in the SGM and global matching models.
- Under normal conditions and conditions with brightness differences, the proposed LDE method offers a better performance than popular stereo data costs such as SAD, Census, and ANCC.
- The proposed LDE method can be applied to improve the performance of current stereo methods under conditions with brightness differences.

How to Write a Conclusion

Step 4. LIMITATIONS AND FUTURE RESEARCH

- Acknowledge any limitations in your study. This demonstrates a thoughtful and realistic approach to your research and shows that you are aware of the constraints of your work.
- Propose possible avenues for future research. Identify areas that could benefit from further investigation based on the gaps or limitations identified in your study.

Example

We also clarify the weakness of the proposed data cost. Currently, parameters ψ and ϕ of the proposed matching cost are selected by performing tests in the large data sets. These parameters should be adaptively tuned based on local region information.

We plan to resolve this shortcoming in future work. We implemented the local census-based FPGA in [41] to obtain real-time processing and good results under realistic conditions. Moreover, the stereo system [41] has been used to develop a successful vehicle detection system [53]. Real-time implementation of the SGM-based LDE matching cost in an FPGA system will be considered in the future work to improve the performance of the vehicle detection system.

Conclusion: All in One

Most existing local transformations for stereo matching are designed heuristically using expert knowledge. Therefore, they require a lot of time to investigate and design a suitable feature for specific conditions.

In this paper, we investigated deep learning to develop a robust stereo data cost that improves the performance of existing stereo matching without requiring much expert knowledge. We hope that this research will provide new insight regarding the benefits of deep learning-based unsupervised approaches for stereo matching. The accuracy of a stereo matching algorithm depends on how much data can be mined in the training process rather than on designing a feature for specific conditions.

The proposed LDE stereo method outperforms dominant stereo methods, including SAD, Census, and ANCC. Based on the robust experiments in both indoor and outdoor conditions, the proposed LDE stereo method has the following advantages.

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Things to Avoid in Conclusion

1. DON'T INTRODUCE NEW INFORMATION

2. DON'T REPEAT INFORMATION

3. DON'T MAKE UNSUPPORT CLAIMS

4. DON'T END ABRUPTLY

Outline

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How to Write Abstract

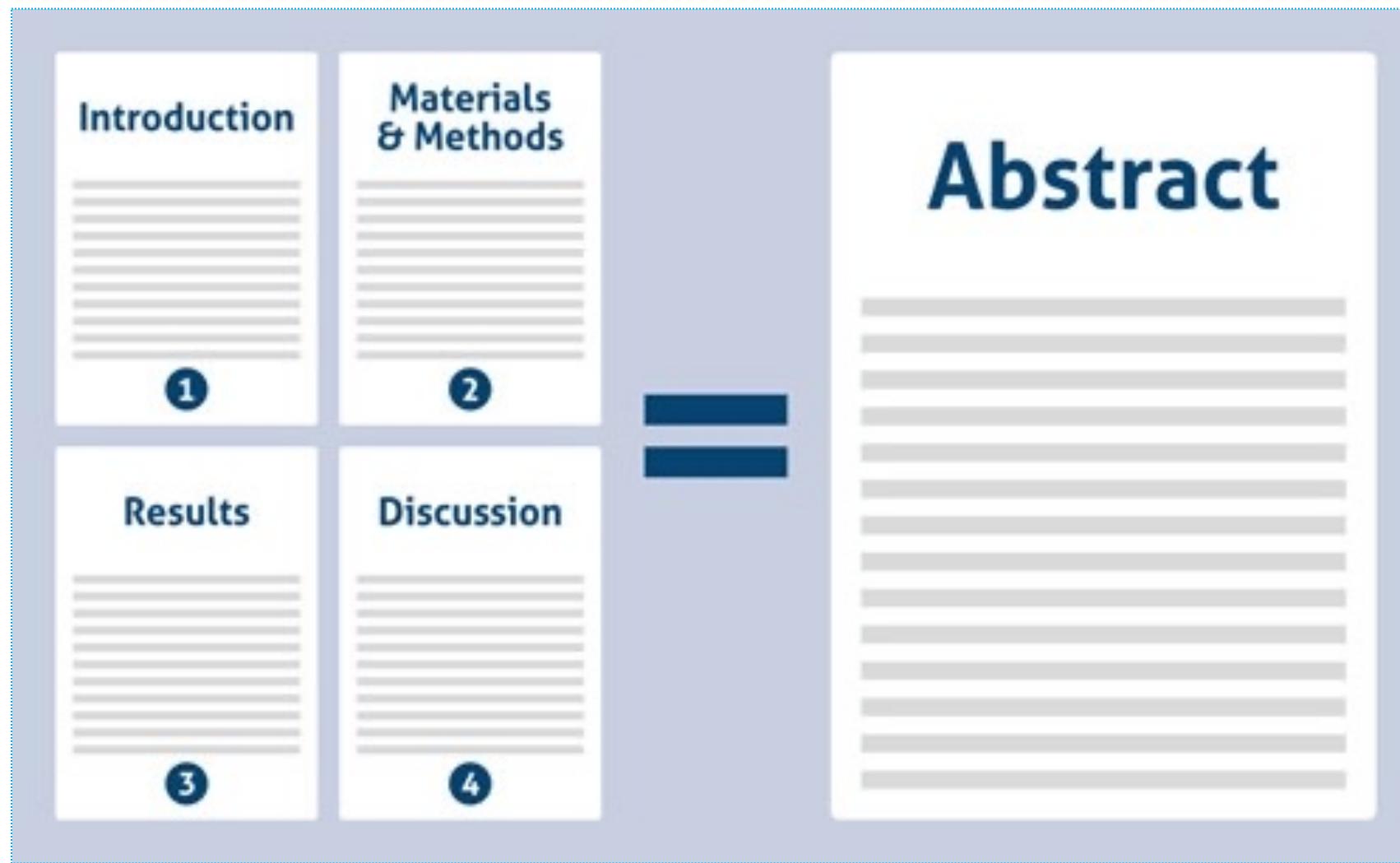
<<Paper' title>>

Abstract

Keyword

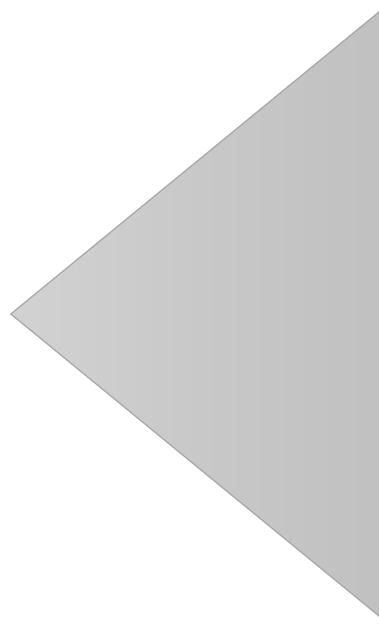
1. Introduction
 2. Related Work
 3. Proposed Method
 4. Experimental Results
 5. Conclusion
- References

How to Write Abstract



How to Write Abstract

ABSTRACT



1. INTRODUCTION

2. PROPOSED METHOD

3. EXPERIMENTAL RESULTS

4. MAIN CONTRIBUTIONS

How to Write Abstract

Abstract

Introduction

Summary

Malaria is a devastating parasitic infectious disease with an enormous impact on public health and economic growth, particularly in Sub-Saharan Africa. Besides advances in anti-malarial drugs and vaccine development, a successful malaria eradication program relies on controlling the mosquito vector. In this study,

Method
(and some intro)

we pursue a novel approach for malaria vector control by inhibiting an enzyme important for ensuring reproductive success of the mosquito *Anopheles gambiae*. The enzyme, *A. gambiae* transglutaminase 3 (AgTG3), catalyzes the cross-linking of its native substrate Plugin, which is then transferred to a female mosquito in a coagulated mass known as the mating plug. Interfering with AgTG3-catalyzed mating plug formation prevents efficient sperm storage, with a direct consequence on fertility. This study demonstrates

Results

that the mutation of a highly conserved cysteine residue in AgTG3 (Cys323) abolishes its cross-linking activity without disrupting other properties of the enzyme such as protein folding and oligomeric assembly. These

Discussion

results suggest that Cys323 is an active site residue and support the design of specific inhibitors targeting this site as a promising strategy to reduce the malaria disease burden worldwide.

Received: Oct 20, 2013; Accepted: Feb 20, 2014;
Published: May 2, 2014

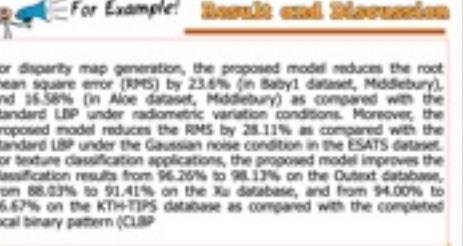
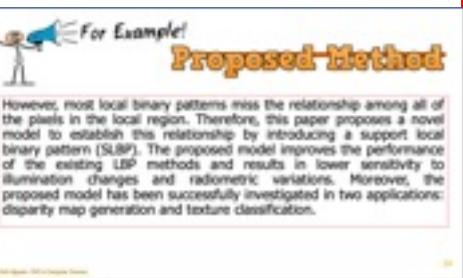


For Example!

The Local Binary Pattern (LBP) and its variants have been widely investigated in image processing and computer vision applications due to their robust ability to capture local image structures and because of their computational simplicity. The existing LBPs extract information by establishing a relationship between the central pixel and its adjacent pixels.

However, most local binary patterns miss the relationship among all of the pixels in the local region. Therefore, this paper proposes a novel model to establish this relationship by introducing a support local binary pattern (SLBP). The proposed model improves the performance of the existing LBP methods and results in lower sensitivity to illumination changes and radiometric variations. Moreover, the proposed model has been successfully investigated in two applications: disparity map generation and texture classification.

For disparity map generation, the proposed model reduces the root mean square error (RMS) by 23.6% (in Baby1 dataset, Middlebury), and 16.58% (in Aloe dataset, Middlebury) as compared with the standard LBP under radiometric variation conditions. Moreover, the proposed model reduces the RMS by 28.11% as compared with the standard LBP under the Gaussian noise condition in the ESATS dataset. For texture classification applications, the proposed model achieves classification results from 96.26% to 98.13% on the Outext database, from 88.05% to 91.71% on the Xu database, and from 94.00% to 96.67% on the KTH-TIPS database as compared with the completed local binary pattern (CLBP).





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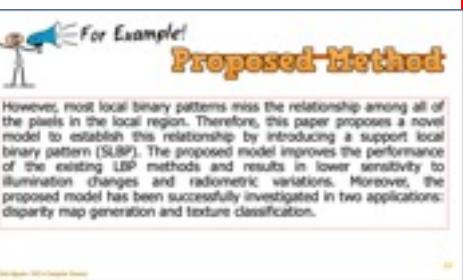


For Example!

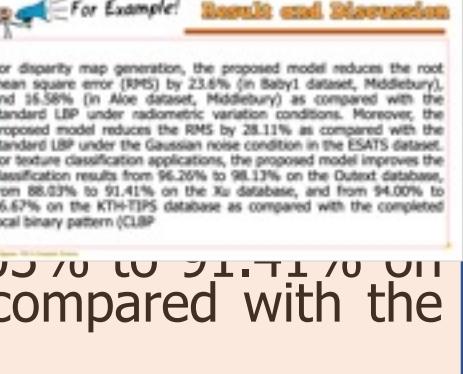
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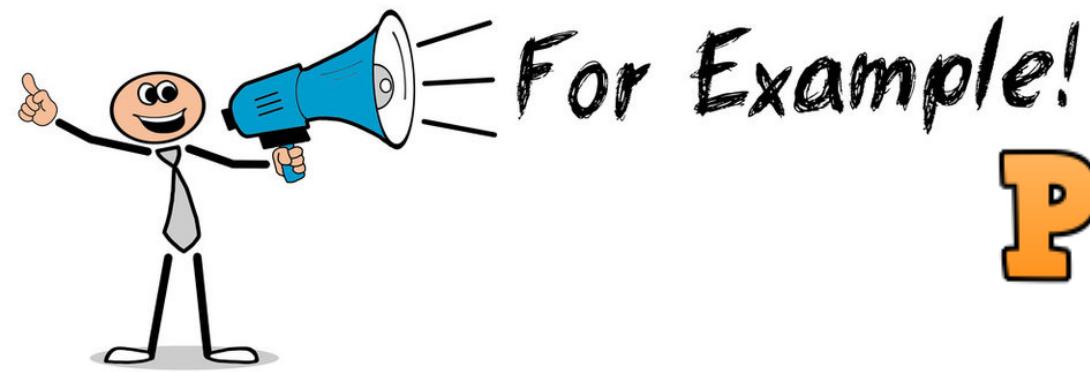


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For Example!

Proposed Method

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For Example!

Results and Discussion

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For Example!

Result and Discussion

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1

- Avoid the direct use of abbreviations, as it will require explanation, which will unnecessarily use up space for other relevant information

2

- Avoid jargon and superfluous vocabulary in the abstract to avoid confusion among the readers

3

- Do not include any references or citations while writing the abstract

4

- Importantly, there should not be any misleading speculations stated in the abstract

Things to Avoid in Abstract

Don't Introduce New Information:

The abstract should not contain information or results that are not presented in the main body of the paper. It's not the place to introduce new data, methods, or findings.

Do not provide detailed information about the research method

Keep the abstract brief and focused. Avoid including excessive details, background information, or data that are not essential to understanding the main findings and conclusions of your study.

Avoid providing citations

Typically, abstracts do not include references. Avoid citing other works or including a list of references in the abstract. Save citations for the main body of the paper.

Don't Use Abbreviations or Acronyms Without Explanation:

If you use abbreviations or acronyms, ensure that you define them in the abstract. Readers should be able to understand your abstract without referring to the full paper.

<<Paper' title>>

Abstract

Keyword

1. Introduction
2. Related Work
3. Proposed Method
4. Experimental Results
5. Conclusion

References

Outline

- How to Write Conclusion Section
- How to Write Abstract Section
- How to Write Title Section
- How to Write Keywords Section
- How to Write Cover Letter
- Types of Reviewers
- Case studies for Reviewers' comments

How to Write Title

Support Local Pattern and Its Application to Disparity Improvement and Texture Classification

Vinh Dinh Nguyen, Dung Duc Nguyen, Thuy Tuong Nguyen, Vinh Quang Dinh and Jae Wook Jeon,
Member, IEEE

How can you come up with the title of this paper



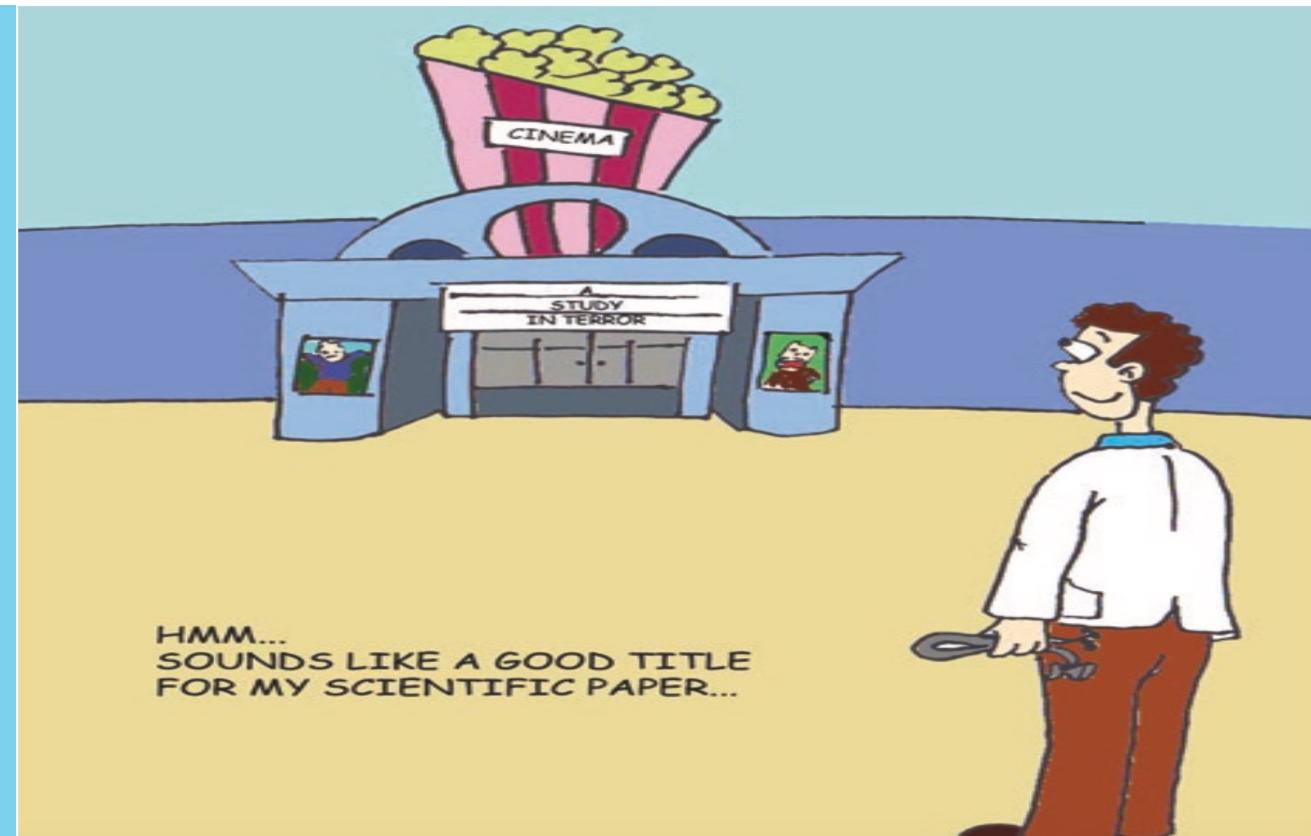
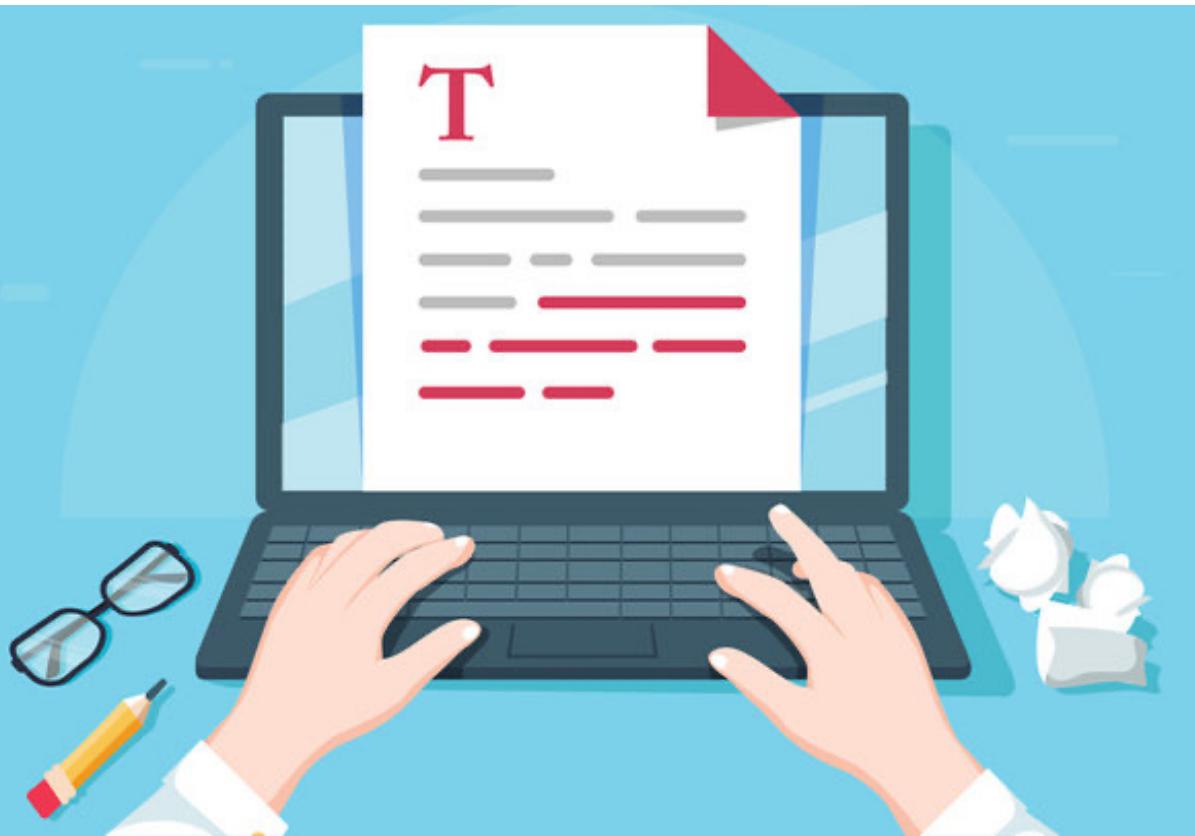
Abstract—The Local Binary Pattern (LBP) and its variants have been widely investigated in many image processing and computer vision applications due to their robust ability to capture local image structures and because of their computational simplicity. The existing LBPs extract local structure information by establishing a relationship between the central pixel and its adjacent pixels. However, most local binary patterns miss the relationship among all of the pixels in the local region. Therefore, this paper proposes a novel model to establish this relationship by introducing a support local binary pattern (SLBP). The proposed model improves the performance of the existing LBP methods and results in lower sensitivity to illumination changes and radiometric variations. Moreover, the proposed model has been successfully investigated in two applications: disparity map generation and texture classification. For disparity map generation, the proposed model reduces the root mean square error (RMS) by 23.6% (in Baby1 dataset, Middlebury), and 16.58% (in Aloe dataset, Middlebury) as compared with the standard LBP under radiometric variation conditions. Moreover, the proposed model reduces the RMS by 28.11% as compared with the standard LBP under the Gaussian noise condition in the ESATS dataset. For texture classification applications, the proposed model improves the classification results from 96.26% to 98.13% on the Outtext database, from 88.03% to 91.41% on

variants into five main categories: multi-scale analysis, handling rotation, handling color, complementary descriptors, and feature selection and learning, as in [3]. Texture classification has been one of the most popular and successful applications that has used LBP during the past few years.

Texture classification is an application that is used to assign an unknown texture to the set of pre-defined textures. The assignment process can be based on the training of VZMR8, VZ_Joint [4] [5], or free training [6]. VZMR8 uses a pre-defined texton library that is constructed from a training set and a set of filter banks in order to classify the unknown texture. A texture data set is divided into two sets, one of which is for a sample model and one that is used for testing during the free training. In conventional LBP [1], a uniform pattern is used to extract the texture information. It achieves very good accuracy in texture classification by combining multiple-scale LBPs, which work well in the case of straight edges or low curvature edges. However, this method is not successful in cases with complicated shapes such as crossing boundaries or corners, as shown in [7]. The Dominant Local

How to Write Title

- Title is the key part of the article which should be designed to engage the readers attention at first sight
- The title of an article should be simple, precise, and catchy.



How to Write Title

Step 1: Ask yourself a few questions about your research paper



“What is your research paper about?”



“My paper studies how to increase the accuracy of disparity estimation and texture classification by using the local pattern approaches.”

How to Write Title

Step 1: Ask yourself a few questions about your research paper



Q

“What method/techniques did I use to perform my study?”



A

“I investigate *local patterns* to for my study”

How to Write Title

Step 1: Ask yourself a few questions about your research paper



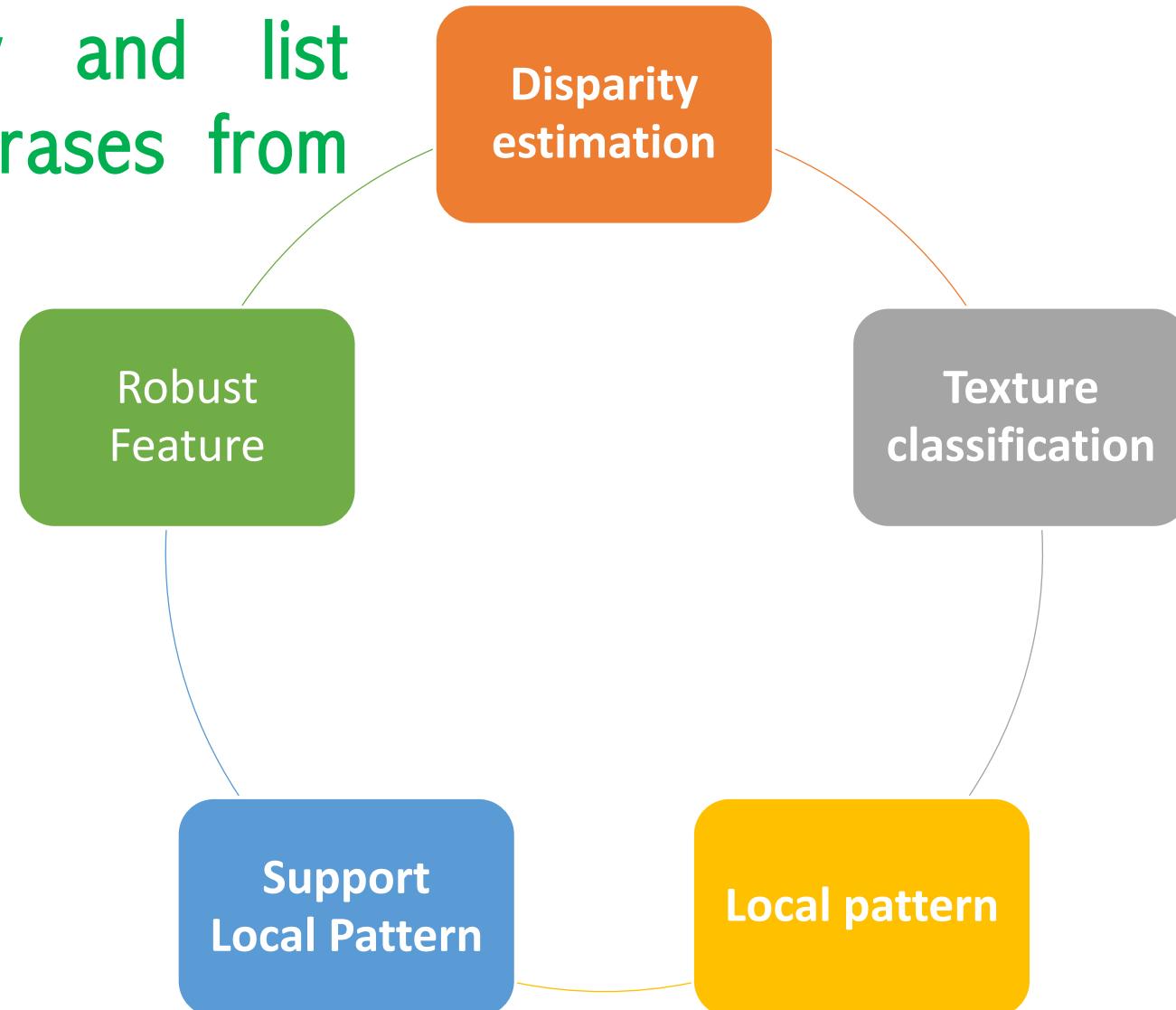
“How were the results?”



“My study revealed that the proposed support local pattern significantly improve the accuracy of disparity estimation and texture classification”

How to Write Title

Step 2: Identify and list keywords and phrases from these responses



How to Write Title

Step 3: Use these keywords to create one long sentence

“This research investigated a support local pattern method by considering the relationship between neighbor pixels. Results indicates the accuracy of disparity estimation and texture classification algorithms are significantly increased”

How to Write Title

Step 4: Create a working title



“This research investigated a support local pattern method by considering the relationship between neighbor pixels. Results indicates the accuracy of disparity estimation and texture classification algorithms are significantly increased”

A support local pattern method by considering the relationship between neighbor pixels. The accuracy of disparity estimation and texture classification algorithms are significantly increased.

How to Write Title

Step 5: Eliminate extra words and phrases to meet word count, place keywords at the beginning and end of your title



Final title: Support local pattern and its application to disparity improvement and classification



<<Paper' title>>

Abstract

Keyword

1. Introduction
 2. Related Work
 3. Proposed Method
 4. Experimental Results
 5. Conclusion
- References

Outline

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HOW TO CHOOSE THE BEST

K₅ E₁ Y₄ W₄ O₁ R₁ D₂ S₁

FOR YOUR RESEARCH PAPER

- Make sure to follow any instructions your target journal provides regarding keywords.
- Think about what terms you would use to search for papers related to your topic
- Keywords should indicate the general subject matter; however, **they should not be too broad**
- Test your keywords before submitting your paper

Outline

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Finalizing the Paper & Writing Cover Letter

Support Local Pattern and Its Application to Disparity Improvement and Texture Classification

Vinh Dinh Nguyen, Dung Duc Nguyen, Thuy Tuong Nguyen, Vinh Quang Dinh and Jae Wook Jeon,
Member, IEEE

Abstract—The Local Binary Pattern (LBP) and its variants have been widely investigated in many image processing and computer vision applications due to their robust ability to capture local image structures and because of their computational simplicity. The existing LBPs extract local structure information by establishing a relationship between the central pixel and its adjacent pixels. However, most local binary patterns miss the relationship among all of the pixels in the local region. Therefore, this paper proposes a novel model to establish this relationship by introducing a support local binary pattern (SLBP). The proposed model improves the performance of the existing LBP methods and results in lower sensitivity to illumination changes and radiometric variations. Moreover, the proposed model has been successfully investigated in two applications: disparity map generation and texture classification. For disparity map generation, the proposed model reduces the root mean square error (RMS) by 23.6% (in Baby1 dataset, Middlebury), and 16.58% (in Aloe dataset, Middlebury) as compared with the standard LBP under radiometric variation conditions. Moreover, the proposed model reduces the RMS by 28.11% as compared with the standard LBP under the Gaussian noise condition in the ESATS dataset. For texture classification applications, the proposed model improves the classification results from 96.26% to 98.13% on the Outtext database, from 88.03% to 91.41% on the Xu database, and from 94.00% to 96.67% on the KTH-TIPS database as compared with the completed local binary pattern (CLBP).

Index Terms—Local Binary Pattern, Local Derivative Pattern, Completed Local Binary Pattern, Support Local Pattern.

Cover Letter (for Journal Submissions)

A cover letter, covering letter, motivation letter, motivational letter or a letter of motivation is a letter of introduction attached to or accompanying another document such as a résumé or a curriculum vitae.

www.aScholarship.com

RESEARCH PAPER STRUCTURE

ABSTRACT

- ▶ Starts with a broader topic, general background
- ▶ Narrows down to the thesis statement
-
- ▶ Provides specific details, evidence, arguments
- ▶ States findings

INTRODUCTION

METHODS

RESULTS

General
Specific

Journal editor's name

Title

Journal Name

Month Date, 2016

Dear Dr. Last Name:

I would like to submit the manuscript entitled “your article’s name” by author names to be considered for publication as xxxxxxxx[[paper type: “an original article”, “a brief communication”, “a case report”]] in the *Journal Name*.

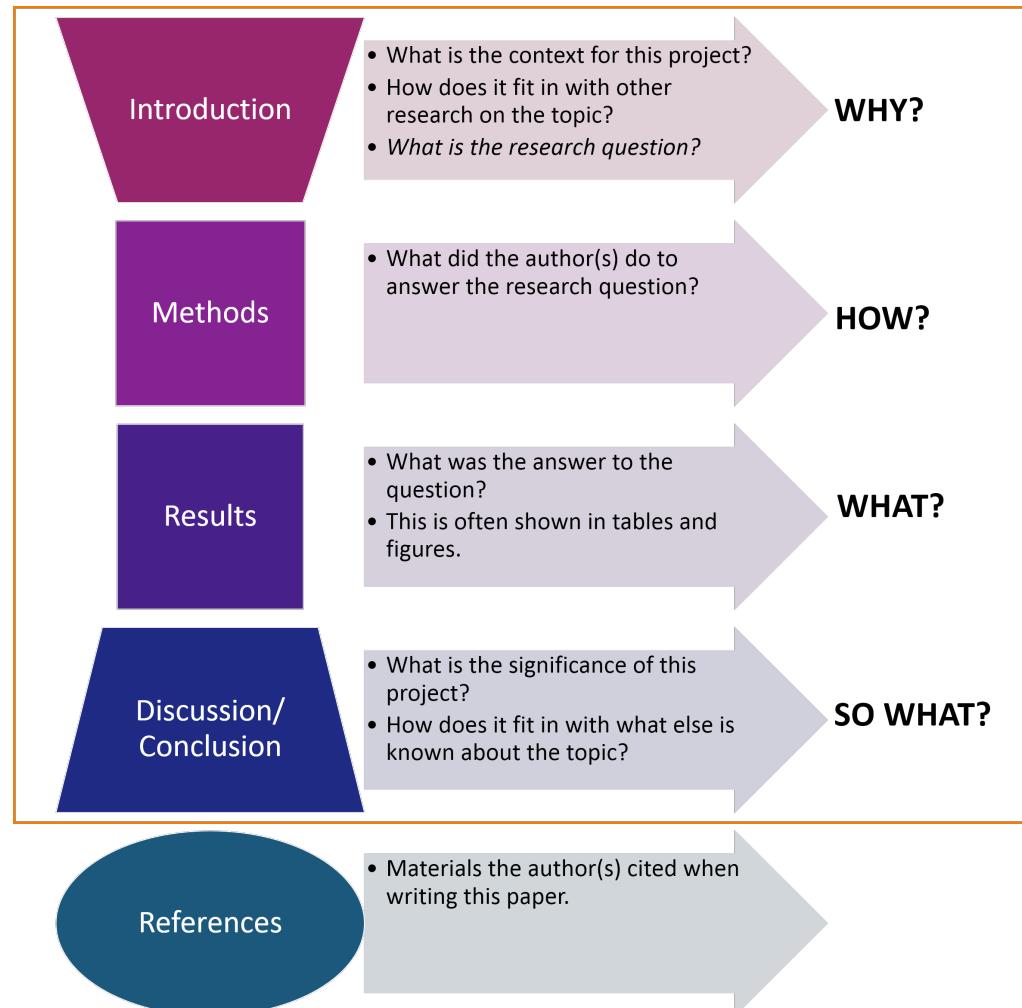
xxxxxxxxx[[Summarize the research problem/gap, your main research findings, and the implications of your findings]]. We believe these findings will be of interest to the readers of your journal.

[[Revise or delete any of the following standard statements used in cover letters]]

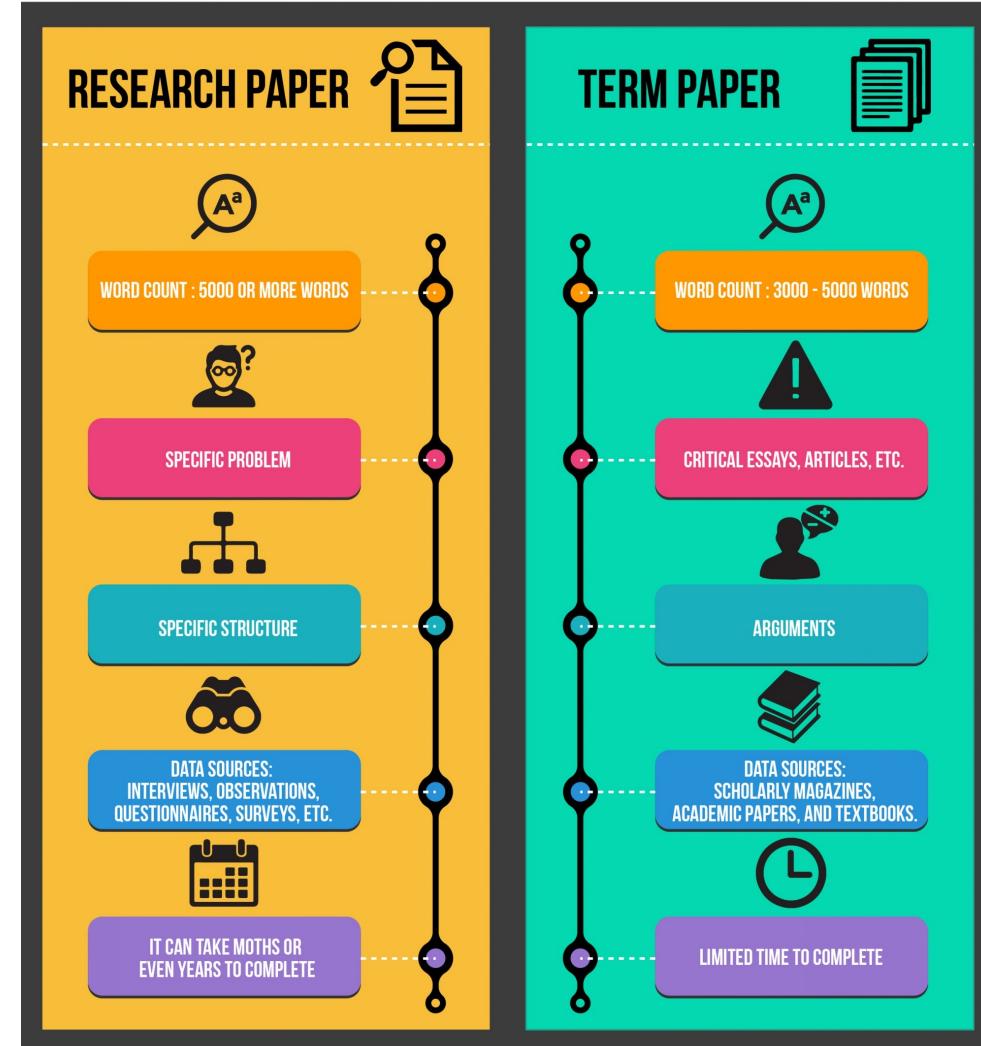
We declare that this manuscript is original, has not been published before and is not currently being considered for publication elsewhere.

We know of no conflicts of interest associated with this publication, and there has been no significant financial support for this work that could have influenced its outcome. As Corresponding Author, I confirm that the manuscript has been read and approved for submission by all the named authors.

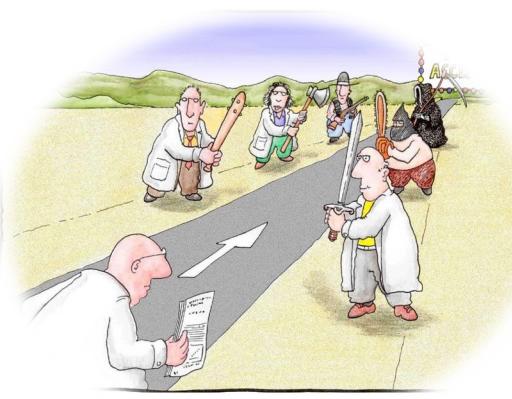
[[Add any other statements/information required by the journal here]]



DIFFERENCE BETWEEN RESEARCH PAPER AND TERM PAPER



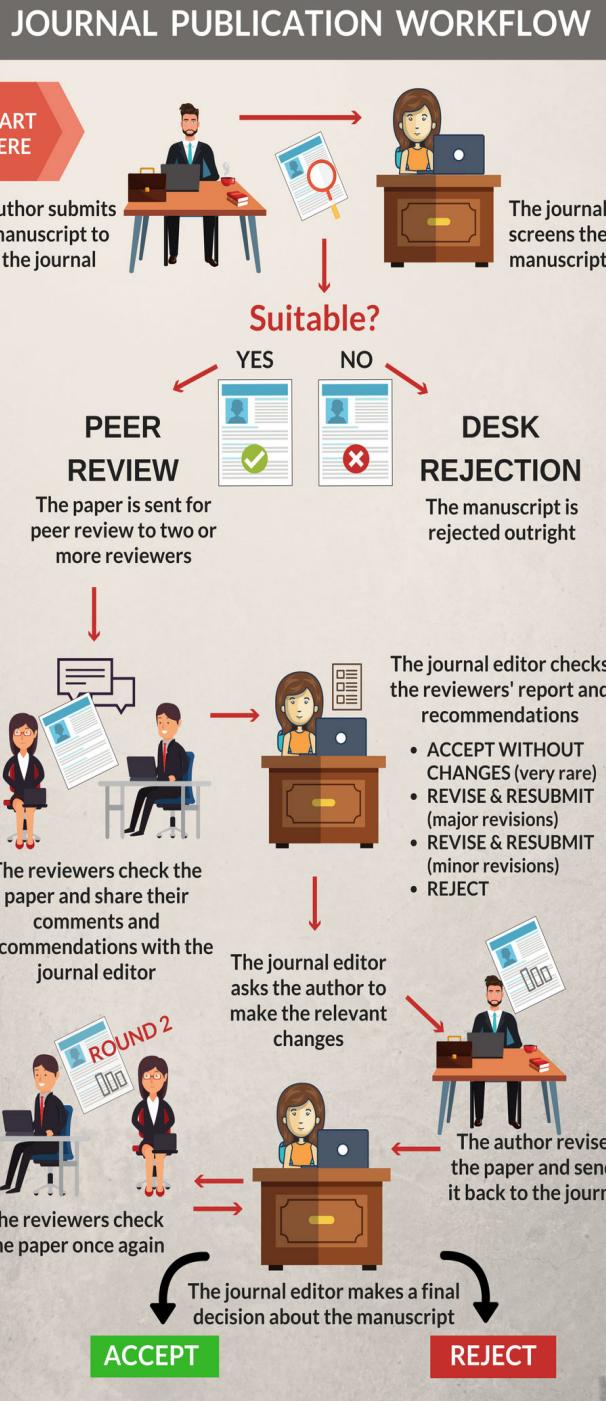
Paper Publishing Process



Most regard the new streamlined peer-review process as quite an improvement.



- Have original research work of current interest.
 - Identify a journal with aims & scope close to your research work.
 - Format manuscript according to the author guideline of targeted journal.
 - Submit your manuscript online by providing complete detail in online submission system.
 - Do not submit manuscript to more than one journal at the same time.
 - Editor will initiate peer-review process for well formatted manuscript within the scope of journal
 - Keep patience and wait for a reply from editor during review process.
- Based on reviewer's recommendation, editor will send you one of the following decision letters-
- **Revision Required:** Revise manuscript as per comment and resubmit.
 - **Decline:** Look at your manuscript and decline reason. Spend plenty of time to improve your overall manuscript and resubmit as a fresh manuscript.
 - **Accepted:** Its time to celebrate, your manuscript will be copyedited by the journal for final publication.
 - You will receive galley proof version for minor proofreading corrections and your paper will be published.
 - It's time to share your published work and cite in other related papers.



How to Write Cover Letter

Journal editor's name

Title

Journal Name

Month Date, 2016

Dear Dr. Last Name:

I would like to submit the manuscript entitled "your article's name" by author names to be considered for publication as xxxxxxxxx[[paper type: "an original article", "a brief communication", "a case report"]]
in the *Journal Name*.

xxxxxxxxx[[Summarize the research problem/gap, your main research findings, and the implications of your findings]]. We believe these findings will be of interest to the readers of your journal.

[[Revise or delete any of the following standard statements used in cover letters]]

We declare that this manuscript is original, has not been published before and is not currently being considered for publication elsewhere.

We know of no conflicts of interest associated with this publication, and there has been no significant financial support for this work that could have influenced its outcome. As Corresponding Author, I confirm that the manuscript has been read and approved for submission by all the named authors.

[[Add any other statements/information required by the journal here.]]

How to Write Cover Letter

Key information to include in your cover letter

1
Address the editor
by their name if you
know it.

3
State that your paper
has not been
published/is not
under consideration
by another journal.

5
Declare any
conflicts of
interest, or
confirm there
are none.

University of Research
Milton Park
Oxfordshire
OX14 1RS
(01234) 567890
a.example@research.edu

1
Dr. Joan Editor, MD
Editor-in-Chief
Science Explained journal

March 3, 2020

Dear Dr. Editor,

We wish to submit an original research article entitled X, Y and Z for consideration by *Science Explained* journal. 2

We confirm that this work is original and has not been published elsewhere, nor is it currently under consideration for publication elsewhere. 3

In this paper, we show that X is equal to Z. This is significant because it is critical to demonstrate the impact of X and Z on Y. 4

Given the increase in X and Z globally, we believe that the findings presented in our paper will appeal to the specific scientists who subscribe to *Science Explained*. Although prior research has identified a few methods that could be used in space exploration, such as X and Y, the applications developed from those findings have been cost-prohibitive and difficult to administer globally. Thus, our findings will allow your readers to understand the factors involved in identifying the onset of X and Y and develop more cost-effective procedures.

We have no conflicts of interest to disclose. 5

Please address all correspondence concerning this manuscript to me at a.example@research.edu.

Thank you for your consideration of this manuscript.

Sincerely,

6
Dr. Anne Example, PhD
Professor, Department of Space Exploration
University of Research

Co-author
Dr. My Friend
Assistant Professor, Department of Space Exploration
University of Research
(01234) 567890
m.friend@research.edu

2
Include your
manuscript's title
and the name of
the journal.

4
Briefly describe your
research. Why is it
important? Why will
readers find it
interesting?

6
Include contact
information for
yourself and
any co-authors.

Remember: Check the specific requirements of your chosen journal to make sure you include everything you need to.



What should my cover letter include?

- Editor's name (you can usually find this on the journal page on [Taylor & Francis Online](#))
- Your manuscript's title
- Name of the journal you are submitting to
- Statement that your paper has not been previously published and is not currently under consideration by another journal
- Brief description of the research you are reporting in your paper, why it is important, and why you think the readers of the journal would be interested in it
- Contact information for you and any [co-authors](#)
- Confirmation that you have no [competing interests](#) to disclose.

Things to Avoid

- Don't copy your abstract into your cover letter, instead explain in your own words the significance of the work, the problem that is being addressed, and why the manuscript belongs in the journal
- Don't use too much jargon or too many acronyms, keep language straightforward and easy to read
- Avoid too much detail – keep your cover letter to a maximum of one page, as an introduction and brief overview
- Avoid any spelling and grammar errors and ensure your letter is thoroughly proofed before submitting

The background of the image shows a wooden desk surface. On the left, a black stethoscope lies across the desk. In the center, there is a white ceramic mug. To the right of the mug, a spiral-bound notebook with light blue grid paper is partially visible. The overall lighting is warm and focused on the central text.

How to Write a

**COVER
LETTER**

for Journal Submission

<https://asiaedit.com/resources/journal-submission-cover-letter/>

Vinh Dinh Nguyen- PhD in Computer Science

Editor's name

Date

Journal name

Cover Letter for Manuscript Submission Journal Name

Main Author Name

Author Affiliation

Job Position

Post Code

Town, Country

Contact Phone Number

Contact E-mail

Dear Editor-in-Chief

Date

Journal Name

I am writing to submit my/our manuscript entitled "Study paper title" to consider publication of the "Journal Name" as practical communication. It describes "Write the objectives of your manuscript here"

As my/our findings could apply in all over the world, they are likely to be a keen interest in the vision of scientists, researchers, clinicians, and students who read your journal on these topics "Pharmacy Practice" or Clinical Pharmacy, or any other specialities"

This manuscript describes recent work and is not under consideration for publication/published by any other journal. All author(s) have approved the manuscript and this submission.

The author(s) certify that there is no conflict of interest with any financial/research/academic organization, with regards to the content/research work discussed in the manuscript.

Thank you for receiving my/our manuscript and considering it for review.

Kindly contact me at the following address for any future correspondence.

Best Regards,

Main Author

Full name

Affiliation

Job Position

Place of Work

Contact Phone/Email

Your name

Corresponding Author(s)

Write other author(s) Name, Affiliation, Position, Contact Details"

Citation: Write the citation of your paper

Main Author Name, (2020) Study Title. Journal Name

Keyword: Write the Keyword(s) of your study paper

Abstract:

Manuscript:

Results: (Tables or/and Graphs)

Citation: References



Cover Letter

Your cover letter

- **Submitting your manuscript**
- **Mentioning your contribution to the journal**
- **Note specific conflicts of interest**

Suggested reviewers

Professor H. D. Schmidt
School of Science and Engineering
Northeast State University
College Park, MI 10000
USA

January 1, 2008

Final approval from all authors

Dear Professor Schmidt,

Enclosed with this letter you will find an electronic submission of a manuscript entitled "Mechano-sorptive creep under compressive loading - a micromechanical model" by John Smith and myself. This is an original paper which has neither previously nor simultaneously in whole or in part been submitted anywhere else. Both authors have read and approved the final version submitted.

Mechano-sorptive is sometimes denoted as accelerated creep. It has been experimentally observed that the creep of paper accelerates if it is subjected to a cyclic moisture content. This is of large practical importance for the paper industry. The present manuscript describes a micromechanical model on the fibre network level that is able to capture the experimentally observed behaviour. In particular, the difference between mechano-sorptive creep in tension and compression is analysed. John Smith is a PhD-student who within a year will present his doctoral thesis. The present paper will be a part of that thesis.

Three potential independent reviewers who have excellent expertise in the area of this paper are:

Dr. Fernandez, Tennessee Tech, email1@university.com
Dr. Chen, University of Maine, email2@university.com
Dr. Singh, Colorado School of Mines, email3@university.com

I would very much appreciate if you would consider the manuscript for publication in the International Journal of Science.

Explanation of importance of research

Very truly yours,

A. Professor

57



Step 1: Address the recipient professionally

✗ *Dear Sir/Madam,*

✗ *Hello,*

✓ *Dear Dr Huang,*

✓ *Dear Mr Horton:*

✓ *Dear Ms Li*

✓ *Dear Editor-in-Chief:* *(use the editor's title only if you can't find the name of the editor)*

Step 2: State the manuscript essentials (e.g., title & type)

- ✓ I am writing to submit my paper, "Title of your manuscript," to Journal Name as an Original Article.
- ✓ On behalf of my co-authors, I am submitting the attached Brief Communication, 'Title of your manuscript', to Journal Name for fast-track consideration for the upcoming special issue on X.
- ✓ My co-authors and I were pleased to receive your favourable response of 1 April 2021 to our pre-submission enquiry regarding a state-of-the-art review on X. Accordingly, we would like to submit the enclosed manuscript, 'Title of your manuscript', for consideration for publication as a Review Article in Journal Name.

Omitting any of the key pieces of information (i.e., article name, article type, journal name) or sounding informal or too pushy can result in a poor opening.

✗ Please consider my article for publication in your journal!

✗ I'd be glad if you'd accept our paper for publication in Journal Name

Step 3: Summarize your study

- You can highlight the novelty of your study, innovation of your approach, or strength of your conclusions

✓ Our 2-year trial of Z for X among Y shows that delaying Z administration to bedtime doubles its efficacy. This shift in timing is a simple, safe, and cost-effective way to increase drug efficacy and reduce X prevalence. The results are robust and applicable worldwide, given the strong study design (randomised cross-over trial of 1 million patients in 5 continents), and would be immediately useful for health care professionals who read Journal Name.

✗ X is a horrendous affliction affecting half of Y. Currently, the most common treatment regimen for X is Z, but it is sadly only of 50% clinical efficaciousness. This milestone clinical investigation aimed to achieve a massive reduction in morbidity and mortality by effecting a great improvement in the effectiveness of Z as treatment of X among Y. Utilising a groundbreaking chronotherapeutic modality approach, we carefully designed a randomised cross-over trial...

Step 4: Meet journal-specific requirements

- Authorship
- Funding, conflicts of interest
- Ethical approval for experiments involving humans or animals
- Clinical trial registration
- Data availability or sharing
- If all authors are willing to transfer copyright to the journal if the manuscript is accepted

Step 4: Meet journal-specific requirements

- Some journals ask you to state if your manuscript has been previously rejected by another journal, in which case past review reports should be enclosed, along with a point-by-point response. Some journals ask for:
 - ❑ Names and affiliations of all the authors of the submitted manuscript
 - ❑ Word count and number of tables and figures
 - ❑ Number and size of supplementary files
 - ❑ If the authors are willing to pay for colour-page charges
 - ❑ Suggestions of images for cover art

Step 5: Include standard declarations

- Statement clarifying that all of the authors agree with the decision to submit the manuscript to the target journal:
 - All authors have read and approved the manuscript and have agreed to submit it to *Journal Name*.
- Statement of originality and exclusive submission to the journal:
 - The manuscript has not been previously published and is not being considered by another journal for publication.
- Declarations associated with obtaining permission to use copyrighted material:
 - Our manuscript includes a figure published by Chan et al. (2020). We have obtained the necessary permission to reproduce the figure in our manuscript.
- Who the Corresponding Author is:
 - Please note that I am the designated Corresponding Author for this submission.

Finally, professionally thank the editor for reviewing your submission, without being too flattering or sounding insincere.

✓ We thank you for considering our submission and we look forward to hearing from you.

Step 6: Sign off professionally

Yours sincerely,

[First and Last Name of Corresponding Author]

Job title

Department of _____

University of _____

University address

Fax:

Phone:

Email:

How to handle Reviewers' comment

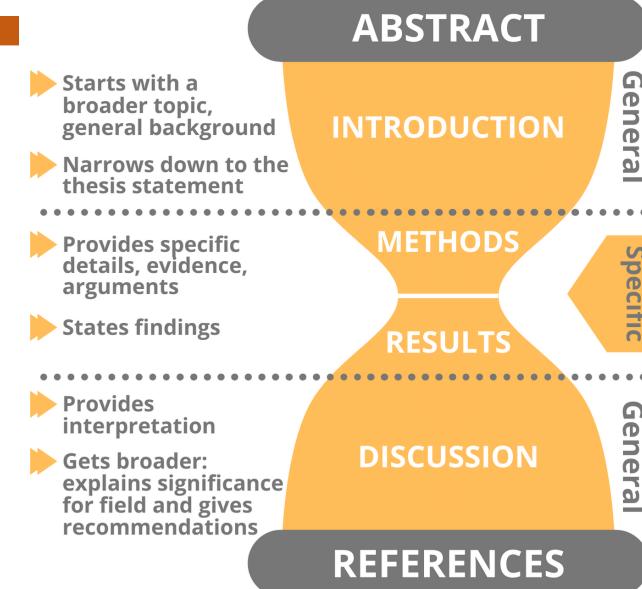


Your method is not new

Your contribution is not enough

Performance comparison with SOTA methods

final round

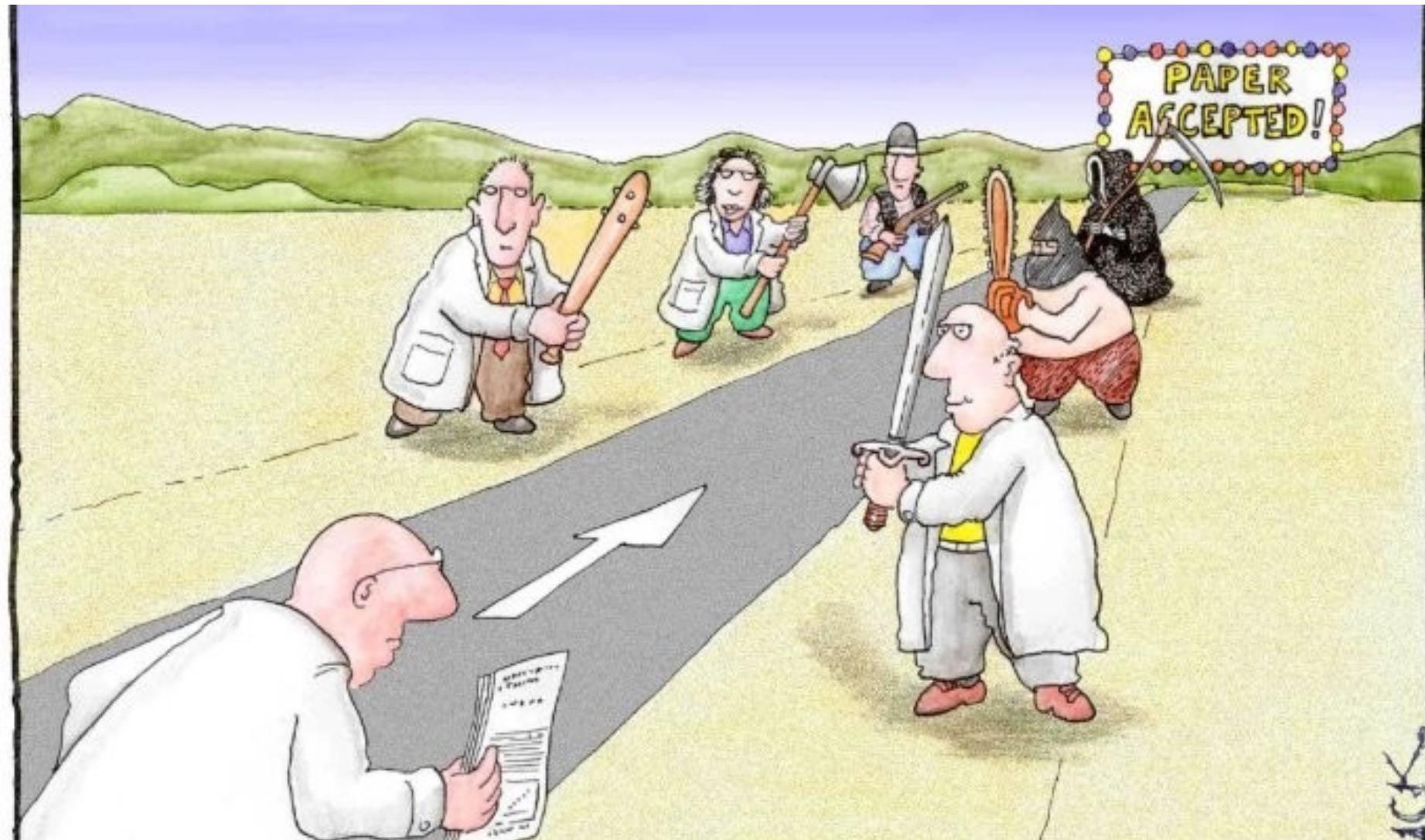


VERY IMPORTANT

Outline

- How to Write Conclusion Section
- How to Write Abstract Section
- How to Write Title Section
- How to Write Keywords Section
- How to Write Cover Letter
- Types of Reviewers
- Case studies for Reviewers' comments

How to Handel Reviewer's Comments





7 Common types of peer review

1 Single Blind Peer Review

Authors don't know who the reviewers are. But the reviewers are aware of the authors' identity when they decide to accept or reject the document for review as well as throughout the review process.



2 Double Blind Peer Review

The journal editor does not reveal the reviewers' credentials to the authors and vice-versa. So both parties are not aware of each other's identity. All indicators of identity such as names, affiliations, etc. are removed.



3 Open Peer Review

The authors and peer reviewers both know each other's identities. This system allows the peer reviewers' comments as well as the authors' responses to be published along with the final manuscript.



4

Collaborative Peer Review

This type of peer review occurs on a platform provided by the journal where authors & reviewers can discuss how the paper can be improved. Often, reviewers' identities are concealed from authors but may be revealed at the time of publication.



5

Third-Party Peer Review

Authors get their manuscripts reviewed by an independent peer review service before they approach any journal. Based on the reviews, they make changes to the paper and then submit it to the journal.



6

Post-Publication Peer Review

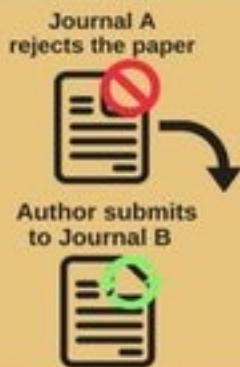
The journal provides a platform such as a discussion forum for the post-publication commenting. Once the published paper is available on the platform, anyone who reads it can post their comments or views about the paper.



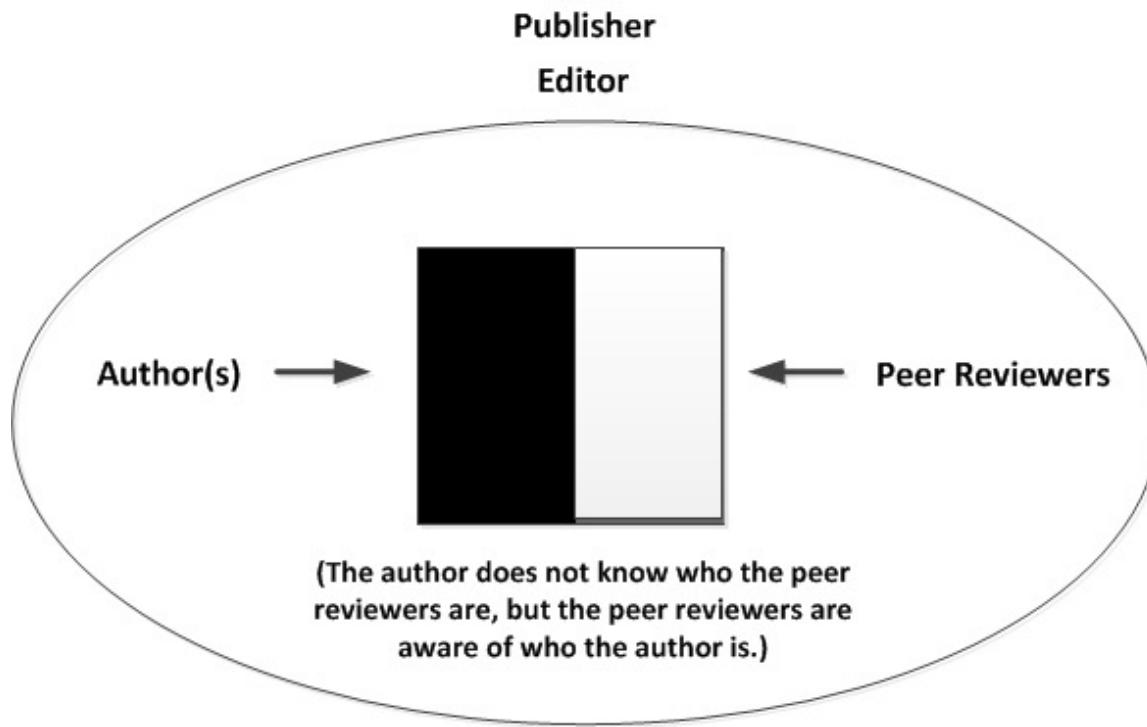
7

Cascading Peer Review

When a manuscript is rejected after review because it is of low priority for the journal at the moment or because it is not interesting for the journal's target readers, the journal may suggest that the author/s submit the manuscript to an alternate journal along with the reviews. Often, the new journal is part of the publisher's portfolio.



Single Blind Peer Review



Single-Blind Peer Review



Double Blind Peer Review



Types of Reviewers

The NINE types of reviewers

Pedant

- Be sure to include the Confection in the way of Truffles, Tarts, HCl, Pipes - No OH etc...
- ⊕ finds and corrects every single minor mistake in the manuscript.
 - ⊖ Great at policing errors. Can't see the wood for the trees. Sometimes misses the big scientific findings altogether.

Hijacker

- In order to properly demonstrate what the authors claim, they will need to...
- ⊕ thoroughly understands and embodies the story.
 - ⊖ tries to get you to do all the experiments they would have done in your place.

Bitter lemon

- The images shown here are embarrassingly poor. And again no quantitation.
- ⊕ gives you a horror story to share with friends?
 - ⊖ taking out personal frustrations rather than reviewing your paper.

Stream-of-consciousness

- I was sort surprised at what the authors were claiming here.
- ⊕ fast and impersonistic feedback.
 - ⊖ unstructured and often riddled with typos.

Assassin

- This needs shiny work.
- ⊕ quickly and efficiently kill your competitor's papers.
 - ⊖ quickly and efficiently kill your papers.

Last-minuter

- I only have a few points to raise.
- ⊕ short reviews that can be addressed easily.
 - ⊖ doesn't expand the time to properly assess the paper.

Big thinker

- The implications of this work are potentially transformative for the field.
- ⊕ sometimes finds significance that you didn't realize.
 - ⊖ provides no technical or in-depth feedback whatsoever.

Sycophant

- The shiny一面 of the quality that's always associated with this group.
- ⊕ generates, possibly over-generous feedback.
 - ⊖ may feel you owe them something.

Unicorn

- I have a few suggestions that the authors may wish to implement.
- ⊕ wise, temperate and balanced assessment of your work.
 - ⊖ overly concerned.

Oliver
Hedger
2019

Pedant



Finds and corrects every single minor mistake in the manuscript. Great at policing errors.



Can't see the wood for the trees. Sometimes misses the big scientific blunders altogether.

- Pedants in general are younger than other reviewers, and their level of detail reflects their closer proximity to the bench



Stream-of-consciousness



Fast and impressionistic feedback



- Unstructured and often riddled with typos

You get their opinion on the manuscript, almost in real time!

Stream - of - consciousness

I was at it surprised
at what the authors
we're claiming
here.



⊕ fast and impressionistic feedback.

Broad brushstrokes/Big thinker



Sometimes finds significance that you didn't realize was there.



- Provides no technical or in-depth feedback whatsoever



① sometimes finds signifi-

Hijacker



Thoroughly understands and critiques the story.



Tries to get you to do all the experiments they would have done in your place.



Assassin

"I feel this story needs more work in order to be acceptable"



Quietly and efficiently kills your competitors' papers



Quietly and efficiently kills your papers.



Sycophant

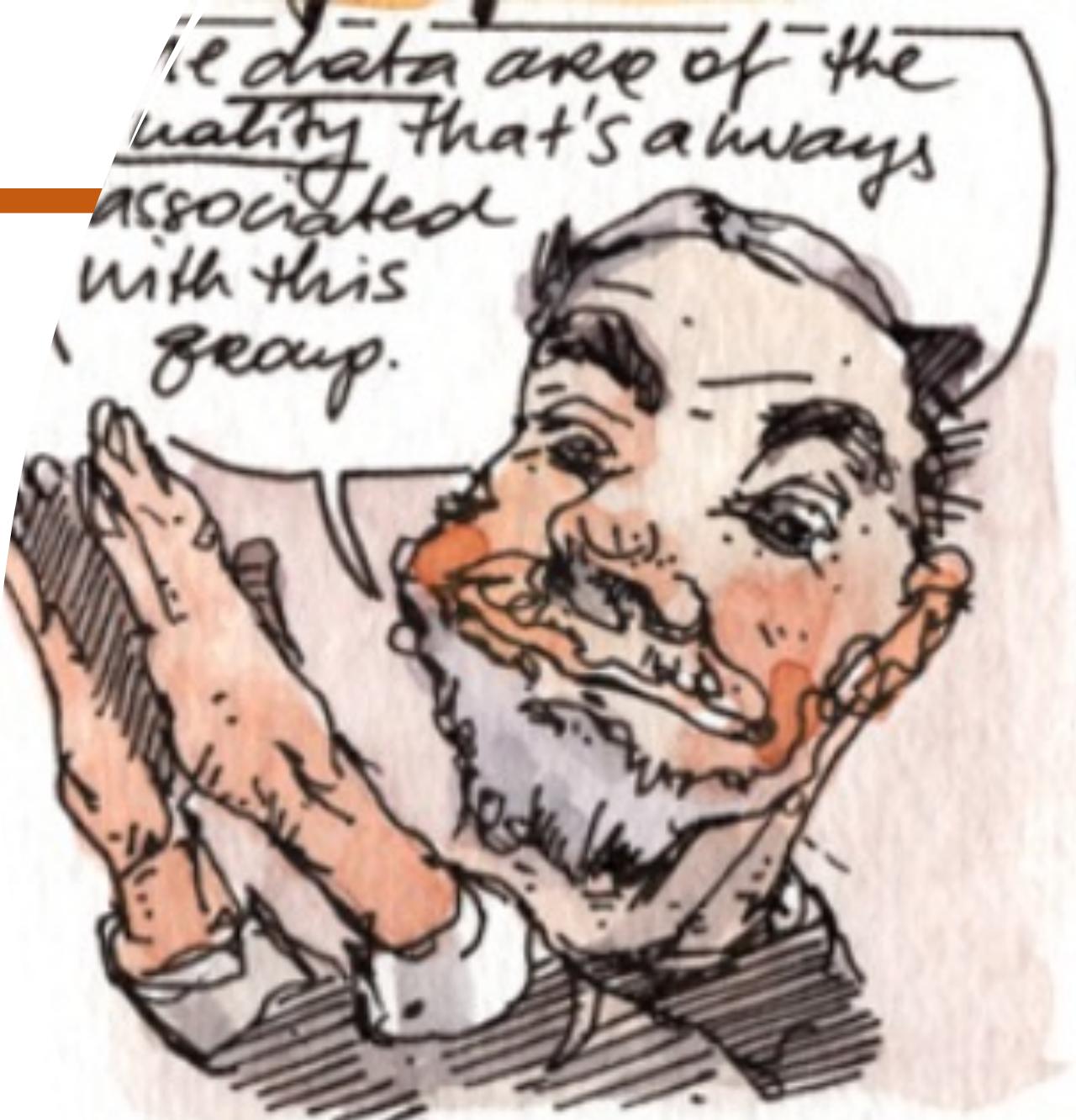
“The data are of the quality that’s always associated with this group.”



Generous, possibly over-generous feedback.



May feel you owe them something.



④ Generous, possibly

Bitter lemon

- *The images shown here are embarrassingly poor. And again no quantitation.”*



Gives you a horror story to share with friends?



Taking out personal frustrations rather than actually reviewing your paper.

Bitter lemon

The images shown here are embarrassingly poor.
And again no quantitation.



⊕ Gives you a horror

Last-minuter

"I only have a few points to raise."

 Good Short reviews that can be addressed easily.

 Bad Doesn't expend the time to properly assess the paper.



Unicorn

"I have a few suggestions that the authors may wish to implement."



Wise, temperate, constructively critical, and gives a balanced assessment of your work.



Rarely encountered.



Outline

- How to Write Conclusion Section
- How to Write Abstract Section
- How to Write Title Section
- How to Write Keywords Section
- How to Write Cover Letter
- Types of Reviewers
- Case studies for Reviewers' comments



Reviewer's comments

"It is bad that there is no way to reproduce the result by the audience since there is no executable or demo program. It is not easy to detect a lane by "mouth". You need to provide some ways to generate good results as mentioned in the paper. The reader will not cite this work for comparison for future publications if it is impossible to reproduce the results"



Reviewer's comments

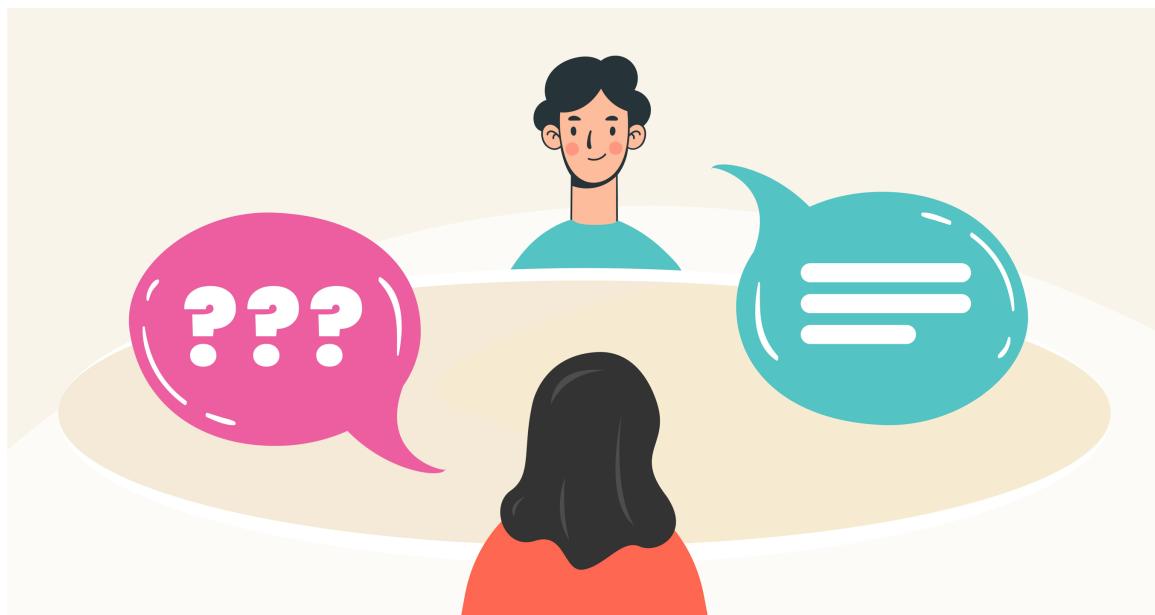
“Need to provide a way to help the audience to compare your results with theirs. It is not possible to reproduce the exact results within weeks for general readers. No one can cite your paper since they cannot compare it easily”



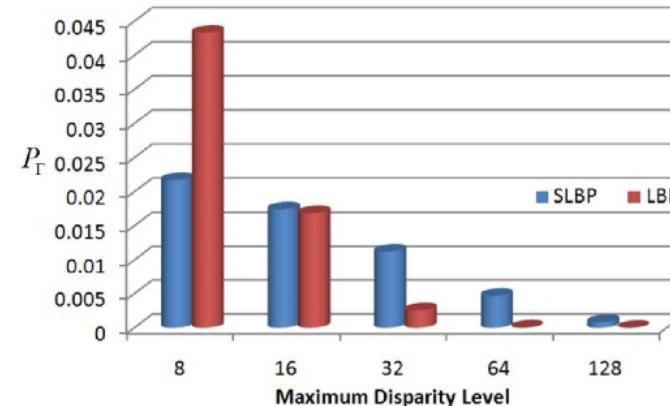
Case Study

Reviewer comment:

"Fig. 5 failed to answer my question, if the change occurs on one position only(minor chanement), LBP is more robust than SLBP. As showed in Fig. 6, SLBP is better than LBP only when the disparity level is greater than 16. It is hard to claim that SLBP is more robust than LBP."



Answers:



The probability of correct matching (P_T) of LBP and SLBP

- Yes, the authors agree with the reviewer. If the change occurs on one position only, LBP is more robust than SLBP. However, SLBP is better than LBP when multi-changes occur in the local region. In addition, SLBP is more robust than LBP because it can establish the correlation information between each pixel to the other neighbor pixels in the local region.

- The authors would like to clarify the meaning of the Fig. 6 in the manuscript:

- ✓ When the maximum disparity level is 8 (or disparity range [0-8]), LBP is better than SLBP.
- ✓ When the maximum disparity level is 32 (or disparity range [0-32]), SLBP is better than LBP.
- ✓ When the maximum disparity level is 64 (or disparity range [0-64]), SLBP is better than LBP.
- ✓ When the maximum disparity level is 128 (or disparity range [0-128]), SLBP is better than LBP.

- In real-world applications, the maximum disparity level is usually high (64 or 128 as described in [1]-[3]) due to large baseline configuration.

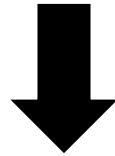
- Thus, we might conclude that SLBP is more robust than LBP under real-world applications when high disparity range is applied.

- These explanations and Fig. 6 have been updated to the current manuscript to clarify the meanings.

Case Study

Reviewer comment:

"The results seem promising however need improvement. For the disparity map generation, tests are conducted on only three stereo pairs which is not adequate, for the sake of completeness all stereo sequences in Middlebury test bench (around 30 pairs with ground truths) should be utilized that involve various texture characteristics and scene complexity".



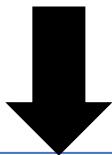
Answers:

- 102 pairs of images of 17 sub-datasets in Middlebury have been conducted to do the experiment as shown in the "Experimental Result" section. Each sub-dataset contains 6 pairs of images under various illumination and exposure changes.

Case Study

Reviewer comment:

“The computation time difference between LBP and SLBP should be much higher than the results given in the paper (4.05sec vs 4.33sec) when the bits for representation are compared. I think this part needs an explanation, why the computation is not increased by factor of 8. The author should clarify the reduction of the expected complexity”



Answer:

- In Section IV.A “Disparity Map Generation”, more explanations for why the computation time is not increased by a factor of 8 have been added.

Case Study

Reviewer comment:

"My biggest concern is about the idea of perturbing the original ordering of intensity configuration of local neighboring voxels and center voxel. This is the main procedure of SLP, but it is clearly lack of motivations and very ad-hoc. Also, it may generate confusing and artificial patterns during the order perturbation. More precisely, this procedure can destroy the original microscopic pattern configuration in the input image, as the patterns obtained after perturbation actually do not exist in the current position of the image. The simple concatenation of the binary representation of the perturbed patterns also suffers from the same problem"

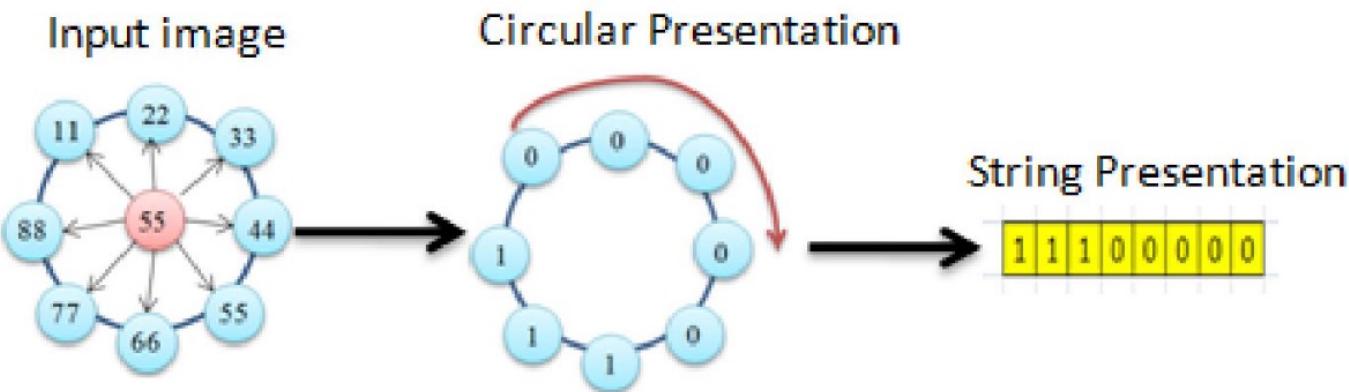
Answer:

In Section II.C “General Model Of Supporting Local Binary Pattern”, more explanations about “the proposed method does not destroy the structure of the input image” has been added.

In addition, the authors would like to review the main idea of LBP. A simple example is then conducted to demonstrate that the proposed method does not destroy the structure of the input image.

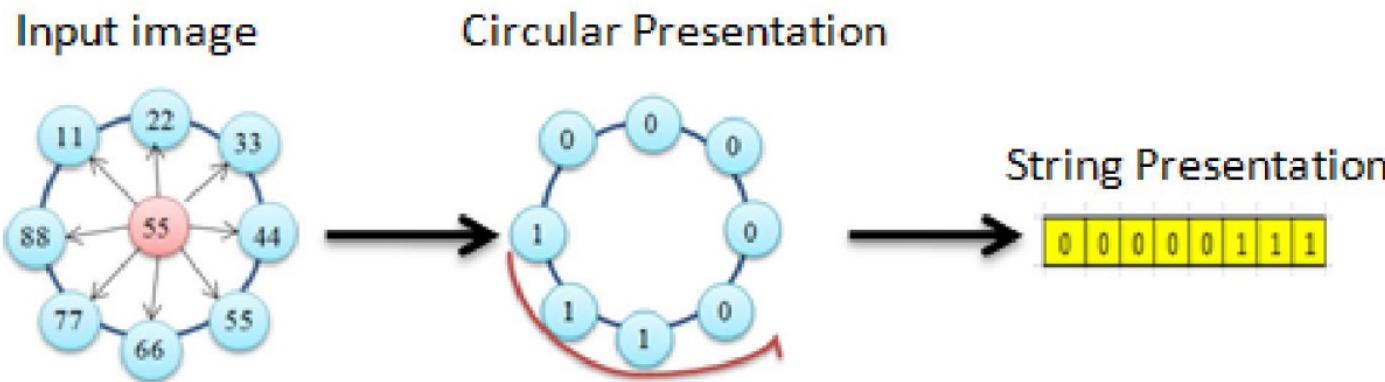
The main idea of LBP is to obtain the encoding information by considering the intensity values between the center pixel and neighborhood pixels in the local region as follows:

ANSWERS



The order to obtain the above final binary string is not important, but we need to keep this order consistent throughout the whole process. Another presentation of the binary string, generated from LBP, is presented as follows:

ANSWERS

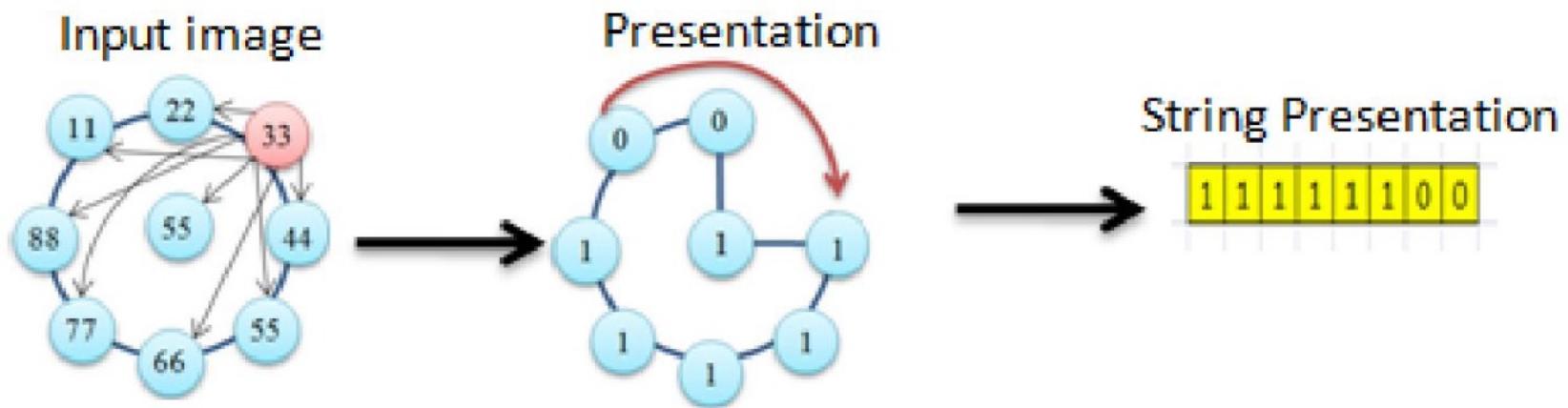


An intuitive question has been raised, what will happen if the number “33” plays as a center pixel. In this situation, we do not move every pixel position in the local region. The rotation invariant is not considered here, because we are considering the general model for establishing the relationship between each pixel and other neighborhood pixels. The rotation invariant is an important property in texture classification but it is not important in other applications (e.g., disparity map generation). One important factor which makes the LBP approach so flexible to different types of problems is that the topology of the neighborhood from which the LBP features are computed can be different, depending on the needs of the given application.

A circular neighborhood is important especially for rotation-invariant operators. However, in some applications, such as face recognition, rotation invariance is not required, but anisotropic information may be important as described in M. Pietikainen [1]. Many neighborhood topologies have been proposed, such as circle, ellipse, parabola, hyperbola and Archimedean spiral) as mentioned in [1].

Therefore, it is reasonable when we try to establish the relationship by considering the number “33” is a center pixel. This work is similar to introduce a new neighborhood topology for encoding the local region. The binary encoding based on “33” is generated the same as original LBP as follows:

ANSWERS



Thus, if we do not consider the value of the final binary string using two cases of LBP (LBP is generated from the center pixel and LBP is generated from the number “33”). The similarity between LBP at center pixel and LBP at “33” are described as follows:

- LBP, at the center pixel, is generated by considering 8 neighborhood pixels around the center pixel.

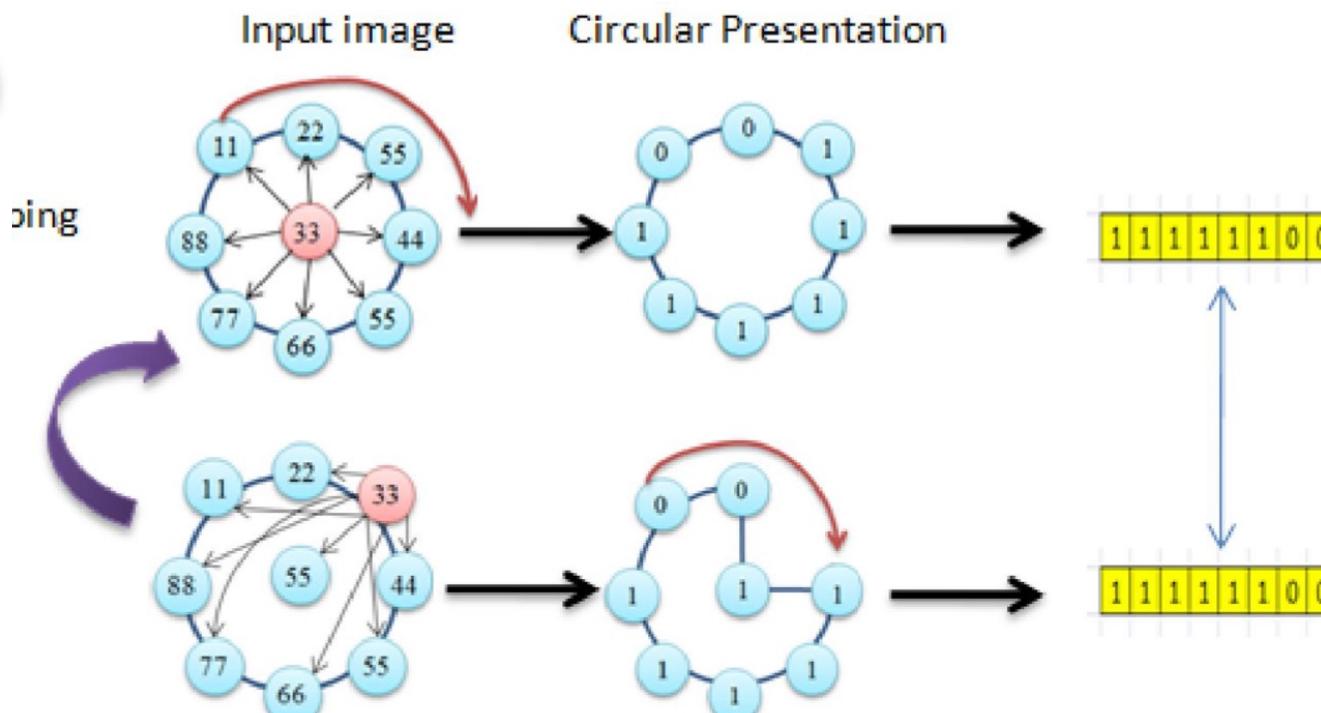


- LBP at “33” is generated by considering 8 neighborhood pixels (these 8 pixels are located at the lower left corner of the pixel “33”).

Based on the above discussion, the structure of the original image is not destroyed because LBP at the center pixel and LBP at “33” perform the same procedure: evaluating the intensity value of the center pixel (or “33” pixel) to 8 neighborhood pixels (or 8 pixels in the lower left corners) to find stable information. From the view point of the center pixel (55) or “33” pixel, the LBP at the center pixel or its modification at the “33” pixel has the same meaning.

For an easier presentation, the position between “33” and center pixel (55) is then swapped. The result is the same before doing swapping as follows:

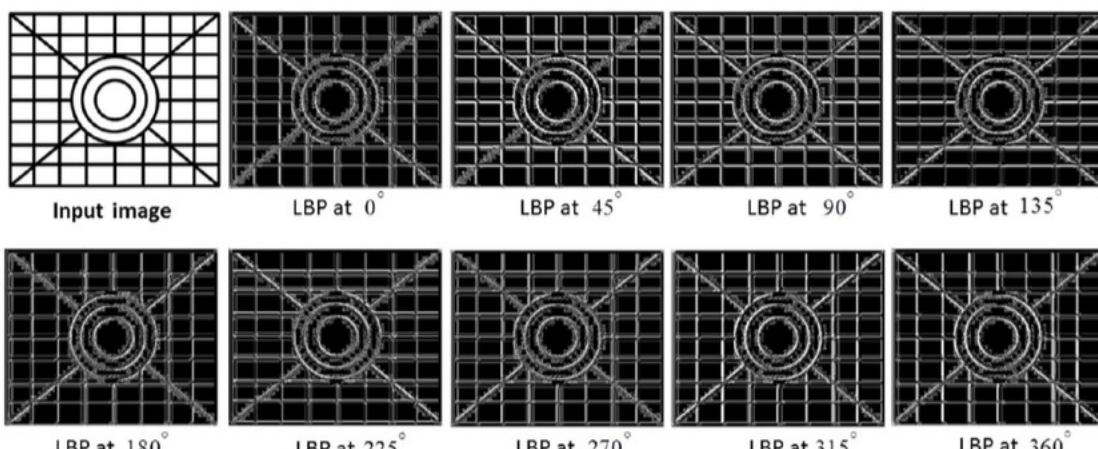
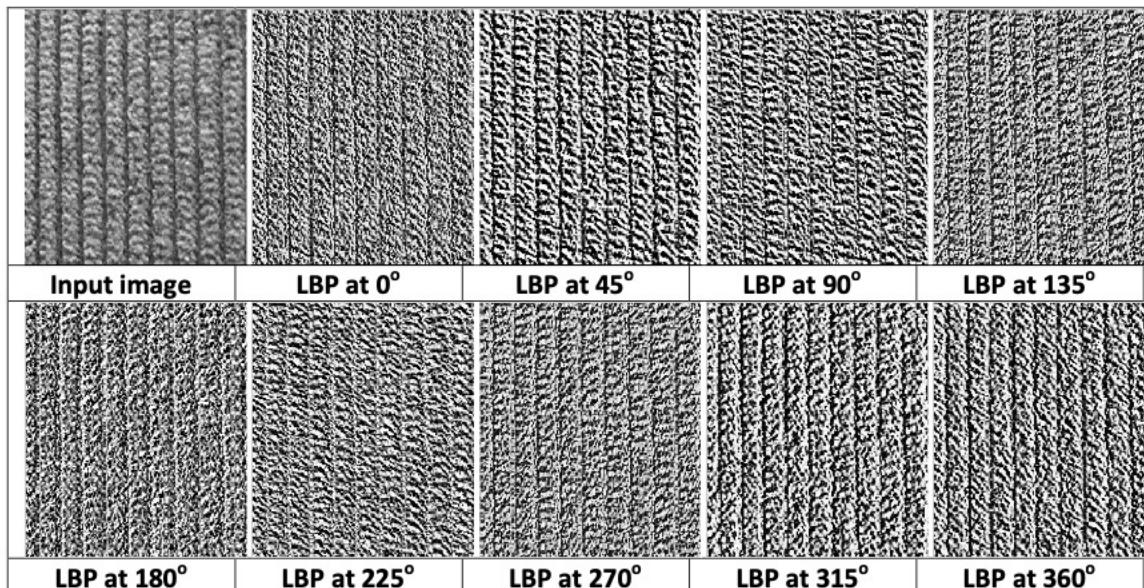
ANSWERS



Finally, the support local binary pattern (SLBP) is obtained by swapping each pixel to the center pixel in the local region. SLBP is a general model. Therefore, it should be modified to satisfy the specific requirements of each application. We have successfully applied the SLBP to disparity map generation and texture classification by slight changes to SLBP.

To demonstrate for the above discussion, the following LBP at various directions (please refer to paper for more details) can be used to extract the local region as follows:

ANSWERS



Case Study

"Given that the paper has rather limited technical novelty (also due to the existence of [27]), I would think the paper has to provide more "new insights", or interesting designs, or convincing new experiments or stellar results to justify a journal publication. Though the paper claims the "new insights" in the conclusion, auto encoder is actually applied in a straightforward way independently for each input matching pair. Sect. E and Fig. 7 are not rigorous or relevant for this particular paper, for instance, where will the part be detected for such a shallow network with a small receptive field of 9x9? Another sign of the paper being very experimental and lacking of depth is that when it's realised that adding another hidden layer does not help by experiments, then it is immediately declared understanding this as a future work"

Dear Dr. Jeon:

The review of your paper

VT-2012-01048: A Fast Evolutionary Algorithm for Real-time Vehicle Detection

has been completed. Below please find comments from the reviewers.

Based on the reviewers' comments, publication of the paper in its present form is not recommended. It is recommended that you resubmit your manuscript, WITHIN TWO MONTHS from the date of this email, as revised in accordance with the comments. If you fail to do so, your paper will be considered withdrawn from the review process.

Please note that this recommendation of resubmission should not be treated as an implication of eventual acceptance of your paper. It only refers to a deferral of the editorial decision to see whether the reviewers' comments could be addressed. In the event that your revision is accepted, the manuscript must be in a format that is in accordance with IEEE final submission requirements. For detailed final submission requirements, kindly refer to the information for IEEE Authors guidelines contained on the website <http://www.ieee.org/pubs/authors.html>.

To submit your revision, please first log onto Manuscript Central (<https://mc.manuscriptcentral.com/tvt-ieee>). In the Author Center, you will see the entry "Revised Manuscripts with Decisions" under "My Manuscripts". Click this entry and you will see an entry with the current paper ID included in the list "Manuscripts with Decisions" at the bottom of the screen. Then click the "Create a revision" button in the entry for this paper to start submitting your revision.

Also, please submit your responses, detailing the changes you have made, either in the "Respond to these comments" box in Step 1 or by attaching a PDF version of your response in Step 6, of the revision submission process. If you choose to attach a PDF file, please indicate so in the "Respond to these comments" box in Step 1.

As the system keeps all the files from your earlier submission(s) for this paper, please remember to delete any files which are not part of this new revised submission.

Sincerely yours,

Dr. Amitava Chatterjee

Associate Editor, IEEE Transactions on Vehicular Technology

Associate Editor Comments:

You have to answer all queries from all reviewers.

Reviewer: 1

ADDITIONAL COMMENTS TO THE AUTHOR:

The paper presents a vehicle tracking system based on evolutionary algorithms. The vehicle is modeled by its form in the image space, which is a rectangle having four corners. The genes will encode this shape, and the purpose of the evolutionary algorithm is to find the best genes that fit to image data (edges and stereo disparity). The method is well described, and the paper is well written and organized. Unfortunately, there are several issues with the tracking technique itself, which I believe should be addressed in a revised version of this paper.

1. Tracking should be based on an underlying physical process, whose state is continuously estimated using the available measurements. In the case of vehicle tracking, especially when 3D information (in the form of stereovision) is available, one should model the vehicle as a 3D box having size, position and speed. Even if the fitness is evaluated only in the image space, a proper measurement projection function can relate the underlying 3d model to the visible image rectangle. I believe that the results of the method will also be greatly improved if such an underlying model is used.

2. The testing section is quite confusing. Why is the detection rate relevant for a tracking algorithm? The title of the paper is indeed about detection, but what is presented in the paper is actually a tracking method, so I expect results that come from a tracking method, results such as accuracy of position, speed, and size estimation. Detection rate is important, but not sufficient. It is clear that the method is not able to deliver estimations about the 3D object being tracked due to the lack of a 3D model.

In conclusion, I recommend the authors to use a 3D model of the vehicles being tracked, as this is the proper way to approach a tracking problem. I believe that not only the paper, but the results themselves will improve significantly.

Reviewer: 2

ADDITIONAL COMMENTS TO THE AUTHOR:

1. The authors have approached a too large number of topics. By consequence some of them are presented too sketchy.

2. The title of the paper, but also the abstract and the declared objectives mention as goal object detection, but also tracking has to be included. What is presented in the paper is actually a tracking method.

3. In the testing section unnecessarily high number of variables are taken into account.

4. The detection rate is not evaluated using the state of the art techniques.

Reviewer: 4

ADDITIONAL COMMENTS TO THE AUTHOR:

This paper first performs a review of existing stereo-based systems aimed at detecting road vehicles and measuring their distance from an equipped vehicle. Such vision systems could be used in Advanced Driving Assistance Systems such as Emergency Breaking or Automatic Cruise Control. This little review provides an interesting comparison table (Table I), allowing to identify the features and differences of various stereovision systems proposed between 2000 and 2010. Maybe this table could also indicate the computing time and the performances (false alarm and detection rates) of each system.

Then, the paper proposes a new system based on the use of a genetic algorithm along with stereo images to perform multiple vehicle detection, tracking and distance measurement.

Initially, each chromosome represents the possible position of a vehicle located at the maximum detection distance of the system, i.e. 140 m. The initial population is distributed around the center of the image; the distribution follows a Gaussian law.

A fitness function is proposed, and combines disparity and edges data. It is claimed that motion data is also used, but it is not clear which term of the fitness function refers to motion. Please clarify this point.

Each term of the fitness function is weighted by a coefficient estimated through a kind of learning stage. The learning image basis contains 115 images. This process is pragmatic, but should be placed before part C (currently it is written in part G). Moreover, it is not clear which influence the choice of the learning database has on the results. This question is a difficult –though interesting - one, and the reviewer does not ask it is answered explicitly. Yet it could be a bit discussed if possible.

A naïve (algorithm 2) and then clever algorithm (algorithm 3) is proposed for the detection of multiple vehicles.

Finally, the searching space is limited thanks to V-disparity data.

Some questions arise. First, the initialization process should be discussed further. Indeed, the reviewer believes the initial random positions should be limited to feasible image regions, like the road surface. It makes little sense to look to vehicles in the sky for instance. Second, it should be explained better how vehicles initially located at a distance different than 140 m can be detected. In particular, part D proposes a chromosome expansion that seems to play an important role in this identification. The underlying principles should be described with additional details: in its current state, part D does not explain them. Third, the initialization process should be integrated more deeply with the searching space limitation implemented using V-disparity data: indeed, the V-disparity map indicates the distance of the potential obstacles. Therefore, it may be more logical to initialize the chromosomes at the corresponding distances.

to jwjeon, vinhnd, ntthuy, nddunga3, vision.fpga, cha_ami, ieeetvt ▾

Dear Dr. Jeon:

I am pleased to inform you that your paper:

VT-2012-01048.R2: A Fast Evolutionary Algorithm for Real-time Vehicle Detection

has been accepted for publication in the IEEE Transactions on Vehicular Technology.

Attached below are comments from the reviewers which should be considered when returning your manuscript in its final form. In the final manuscript, please add the following first footnote (This would be in a paragraph before the author affiliations): "Copyright (c) 2013 IEEE. Personal use of this material is permitted. However, permission to use this material for any other purposes must be obtained from the IEEE by sending a request to pubs-permissions@ieee.org."

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Reviewer: 1

ADDITIONAL COMMENTS TO THE AUTHOR:

The paper presents the results of serious work. The authors complied to the reviewers comments. I recommend publication in the present form.

Reviewer: 2

ADDITIONAL COMMENTS TO THE AUTHOR:

Congratulations

Reviewer: 3

ADDITIONAL COMMENTS TO THE AUTHOR:

I was happy with the previous revision, and the new one is better and addresses the last comments of the reviewers. I suggest the paper can be accepted.

Minor remaining spelling error p 31, l 44 : is close (and not "is closed")

A Fast Evolutionary Algorithm for Real-time Vehicle Detection

Vinh Dinh Nguyen, Thuy Tuong Nguyen, Dung Duc Nguyen, Sang Jun Lee, Jae Wook Jeon,
Member IEEE

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I. Reviewers' Comments

A. Reviewer 1

The paper presents a vehicle tracking system based on evolutionary algorithms. The vehicle is modeled by its form in the image space, which is a rectangle having four corners. The genes will encode this shape, and the purpose of the evolutionary algorithm is to find the best genes that fit to image data (edges and stereo disparity). The method is well described, and the paper is well written and organized. Unfortunately, there are several issues with the tracking technique itself, which I believe should be addressed in a revised version of this paper.

1. Tracking should be based on an underlying physical process, whose state is continuously estimated using the available measurements. In the case of vehicle tracking, especially when 3D information (in the form of stereovision) is available, one should model the vehicle as a 3D box having size, position and speed. Even if the fitness is evaluated only in the image space, a proper measurement projection function can relate the underlying 3d model to the visible image rectangle. I believe that the results of the method will also be greatly improved if such an underlying model is used.

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In conclusion, I recommend the authors to use a 3D model of the vehicles being tracked, as this is the proper way to approach a tracking problem. I believe that not only the paper, but the results themselves will improve significantly.

B. Reviewer 2

1. The authors have approached a too large number of topics. By consequence some of them are presented too sketchy.
2. The title of the paper, but also the abstract and the declared objectives mention as goal object detection, but also tracking has to be included. What is presented in the paper is actually a tracking method.
3. In the testing section unnecessarily high number of variables are taken into account.
4. The detection rate is not evaluated using the state of the art techniques.
5. There are many spelling errors, which have to be corrected.

C. Reviewer 3

Obstacle detection is an important topic both in the fields of mobile robots and intelligent vehicles. This article proposes an interesting solution with several original contribution to this problem but there are some issues that need to be addressed before it can be recommended for publication.

1) One of the major problems is the review of the related work. Most of the papers reviewed are old and they do not reflect the current state of the art. Obstacle detection results should be compared with recent relevant related work. Some of the references are good but many relevant works are completely left out. There is no mentioning of Franke's work on obstacle detection using dynamic stixels:

[1] D. Pfeiffer and U. Franke, "Modeling Dynamic 3D Environments by Means of The Stixel World," IEEE Intelligent Transportation Systems Magazine, vol. 3, pp. 24-36, 2011.

[2] F. Erbs, A. Barth, and U. Franke, "Moving vehicle detection by optimal segmentation of the Dynamic Stixel World," in IEEE Intelligent Vehicles Symposium (IV), 2011, pp. 951-956.

or on scene flow:

[3] A. Wedel, A. Meißner, C. Rabe, U. Franke, and D. Cremers, "Detection and Segmentation of Independently Moving Objects from Dense Scene Flow," in 7th International Conference on Energy Minimization Methods in Computer Vision and Pattern Recognition, Bonn, Germany, 2009, pp. 14-27.

Initially, each chromosome represents the possible position of a vehicle located at the maximum detection distance of the system, i.e. 140 m. The initial population is distributed around the center of the image; the distribution follows a Gaussian law.

A fitness function is proposed, and combines disparity and edges data. It is claimed that motion data is also used, but it is not clear which term of the fitness function refers to motion. Please clarify this point.

Each term of the fitness function is weighted by a coefficient estimated through a kind of learning stage. The learning image basis contains 115 images. This process is pragmatic, but should be placed before part C (currently it is written in part G). Moreover, it is not clear which influence the choice of the learning database has on the results. This question is a difficult – though interesting - one, and the reviewer does not ask it is answered explicitly. Yet it could be a bit discussed if possible.

A naïve (algorithm 2) and then clever algorithm (algorithm 3) is proposed for the detection of multiple vehicles.

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Some questions arise. First, the initialization process should be discussed further. Indeed, the reviewer believes the initial random positions should be limited to feasible image regions, like the road surface. It makes little sense to look to vehicles in the sky for instance. Second, it should be explained better how vehicles initially located at a distance different than 140 m can be detected. In particular, part D proposes a chromosome expansion that seems to play an important role in this identification. The underlying principles should be described with additional details: in its current state, part D does not explain them. Third, the initialization process should be integrated more deeply with the searching space limitation implemented using V-disparity data: indeed, the V-disparity map indicates the distance of the potential obstacles. Therefore, it may be more logical to initialize the chromosomes at the corresponding distances.

The experimental part is quite convincing, providing accurate description of the system implemented, and quantitative results showing the system is quite efficient.

Sometimes the grammar of english is a bit strange, so the reviewer recommends that the paper is corrected by a native speaker.

II. List of corrections

Reviewer 1

No.	The correction details	Page
1.	<ul style="list-style-type: none">- In section III. D, a new section "SEA in 3D" has been added. This section investigates a 3D model to the proposed method. A proper projection of a detected rectangle from 2D to 3D is performed.- The detection rate has been improved from 94.58% to 96.08% as shown in the section IV "Experimental Results".	16-18 26-32
2.	<ul style="list-style-type: none">- In the beginning of Section III, more explanations for "<i>The proposed model is a vehicle detection method</i>" have been added based on two basic steps of the vehicle detection strategy. The flow chart of the proposed method has been re-figured to give coherent meanings.- In section III. H "<i>Simple Vehicle Tracking</i>", more explanations for the role of the tracking phase has been added.	7-8 25-26

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Reviewer 2

No.	The correction details	Page
1.	- Simple topics have been removed such as, "Tournament Selection" and "Vehicle distance estimation" sections. - A lot of paragraphs have been re-written to give the coherent meanings.	
2.	- In the beginning of Section III, more explanations for " <i>The proposed model is a vehicle detection method</i> " have been added based on two basic steps of the vehicle detection strategy. The flow chart of the proposed method has been re-figured to give coherent meanings.	7-8
3.	In section IV "Experimental Results", unnecessarily variables have been removed.	26-32
4.	In section IV "Experimental Results", the comparison to the state of the art methods have been provided.	26-32
5.	The English of the manuscript has been corrected by a native speaker.	

Reviewer 3

No.	The correction details	Page
1.	- In section II "Brief Review of Stereo Vision Based Vehicle Distance Estimation Systems", relevant related works including the current state of the art methods have been added. These related works have been added to the summarized table. - Obstacle detection results have been compared with the relevant related works in the "Experimental result" section.	3-7 26-32
2.	-Yes, it is the disparity value. The correction has been done. -Yes, the dominant disparity is the disparity value with highest occurrence. The correction has been done. -Yes, It is more reasonable to measure the similarity between two chromosomes by considering their dominant disparity values. Census transform has been removed from the manuscript.	11 11 14
3.	-"Distance Estimation" section has been removed from the current manuscript. The discussion of distance estimation to the detected vehicle has been added to the end of section III.G.2 "Chromosome validation" section. -The dominant disparity is selected by considering the most frequently occurring disparity value in the detection region. This value is then used to estimate the distance to the detected vehicle.	24-25
4.	-In section IV "Experimental Results", Experimental results have been highlighted test scenarios that support this claim: different illumination and imperfect weather conditions. - Typos have been corrected.	26-32 3

No.	The correction details	Page
1.	In section II "Brief Review of Stereo Vision Based Vehicle Distance Estimation Systems", the computation time and performance of existing methods have been added into Summarized Table. More recent works have been added into this table.	6
2.	In section III.B.3. "Fitness evaluation", more explanations for the fitness function's term refers to motion data have been added.	12-13
3.	- Section III.E. "Estimation of Fitness's Coefficients" has been moved in front of section III.F. "Multiple Vehicle Detection". - In Section IV "Experimental Results", more discussions of the effective of learning database on the detected results have been added.	18-20 32
4.	- In section III.C "Limiting The Search Space Of SEA", initialization of chromosomes has been limited by sky and road surfaces. The chromosomes are initialized based on the corresponding distance using V-disparity image. - In section III.G. 1 "Chromosome expansion", more explanations for "How vehicle initially located at distance different 140m" have been provided. - Grammar of English has been corrected by a native speaker.	15 24

III- Detail Information to Reviewers

The authors would like to thank the reviewers for their valuable comments and suggestions to improve the quality of the paper. Our manuscript has been corrected based on the reviewer's suggestion as follows:

A. Review 1 & Review 2

The authors would like to provide more information about the current manuscript. The current manuscript introduces a new vehicle detection system.

One of the main contributions of the proposed method is to introduce a new vehicle detection algorithm based on evolutionary algorithm and stereo vision. The simple tracking stage is included in order to reduce the processing time and obtain more stable results.

In order to provide more information about the current manuscript, the authors would like to review current vehicle detection and vehicle tracking strategies. The current manuscript introduces a vehicle detection method based on these strategies.

❖ Two general steps of vehicle detection strategy

- Z. Sun [1] introduced an excellent report of literature vehicle detection methods. Most reviewed methods are based on two basic steps of vehicle detection strategy (pg. 696):

- ✓ *Hypothesis generation (HG)*: HG where the location of possible vehicles in the image are hypothesized.
- ✓ *Hypothesis validation (HV)*: HV where tests are performed to verify the presence of vehicles in the image.

- Our proposed method is followed two above main steps in order to detect and validate the preceding vehicle as follows:

- ✓ *Hypothesis generation*:
 - Firstly, chromosomes are randomly generated to the region of interest (ROI) of the left image based on the Gaussian law without knowledge of the preceding vehicle's positions.
 - Then, each chromosome is evolved throughout the evolution process. Only strong chromosome, that has similar features to a real vehicle, can survive until reaching to the final generation.
 - Finally, the strongest chromosome is selected as a potential vehicle.

B. Review 1

❖ Question No. 1

Reviewer comment:

"Tracking should be based on an underlying physical process, whose state is continuously estimated using the available measurements. In the case of vehicle tracking, especially when 3D information (in the form of stereovision) is available, one should model the vehicle as a 3D box having size, position and speed. Even if the fitness is evaluated only in the image space, a proper measurement projection function can relate the underlying 3d model to the visible image rectangle. I believe that the results of the method will also be greatly improved if such an underlying model is used".

Answers:

- The 3D model has been investigated to the proposed method. The detected vehicle can be visible by 3D box having the size (S_x, S_y, S_z), the position (X, Y, Z), and the velocity (V_x, V_z) in the world coordinate. Accuracy of the proposed method in the case of detection rate is increased by taking into account the 3D constraints.
- The detection rate has been improved from 95.48% to 96.08% after applying the 3D constraints.

❖ Question No. 2

Reviewer comment:

"The testing section is quite confusing. Why is the detection rate relevant for a tracking algorithm? The title of the paper is indeed about detection, but what is presented in the paper is actually a tracking method, so I expect results that come from a tracking method, results such as accuracy of position, speed, and size estimation. Detection rate is important, but not sufficient. It is clear that the method is not able to deliver estimations about the 3D object being tracked due to the lack of a 3D model"

Answer:

As aforementioned discussions, the proposed method focuses on the detection stage. Therefore, the detection rate is included in the experimental result selection.

Tracking is a big problem in intelligent driving assistants due to the complex situation in realistic conditions. The speed of preceding vehicle can be estimated with the robustness tracking

model, accurately. However, our current manuscript focuses on the detection phase rather than the tracking phase. We have a plan to investigate more robust tracking based on the current detected results of the proposed method, as mentioned in the conclusion section of the current manuscript.

C. Review 2

❖ Question No. 1

Reviewer comment:

"The authors have approached a too large number of topics. By consequence some of them are presented too sketchy."

Answer:

- Simple topics are removed from the manuscript such as, "Tournament Selection", "Vehicle distance estimation" section.
- A lot of paragraphs have been re-written to give the coherent meanings.

❖ Question No. 2

Reviewer comment:

"The title of the paper, but also the abstract and the declared objectives mention as goal object detection, but also tracking has to be included. What is presented in the paper is actually a tracking method."

Answer:

In the beginning of Section III, more explanations for "*The proposed model is a vehicle detection method*" have been added based on two basic steps of the vehicle detection strategy. The flow chart of the proposed method has been re-figured to give coherent meaning.

❖ Question No. 3

Reviewer comments:

"In the testing section unnecessarily high number of variables are taken into account."

Answer:

Unnecessarily variables have been removed from the experimental result section.

❖ Question No. 4

Reviewer comment:

"The detection rate is not evaluated using the state of the art techniques."

Answer:

In section IV "*Experimental Results*", the detection rate has been compared with the state-of-the-art methods.

❖ Question No. 5

Reviewer comment:

"There are many spelling errors, which have to be corrected"

Answer:

Spelling errors have been corrected by a native speaker.

D. Review 3

❖ Question No. 1

Reviewer comment:

"One of the major problems is the review of the related work. Most of the papers reviewed are old and they do not reflect the current state of the art. Obstacle detection results should be compared with recent relevant related work. Some of the references are good but many relevant works are completely left out"

Answer:

The review of the current state of the art methods (based on reviewer's suggestions) have been added into related work section. Obstacle detection results have been compared with current state of the art methods.

Assignment 4:

- Requirements: **Write Full Paper**
- Research content: your interested research
- Deadline: **17/02/2023**
- Submission to email:
aivnresearch@gmail.com

Research Paper Title that You Plans to Submit to International Conference or Journal *

*How to write a scientific research paper: Assignment 2 - Write the Experimental results Sections

1st Given Name Surname
dept. name of organization (of Aff.)
name of organization (of Aff.)
City, Country
email address or ORCID

2nd Given Name Surname
dept. name of organization (of Aff.)
name of organization (of Aff.)
City, Country
email address or ORCID

3rd Given Name Surname
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City, Country
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email address or ORCID

6th Given Name Surname
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City, Country
email address or ORCID

Abstract—[Will be submitted in next assignments]
Index Terms—component, formatting, style, styling, insert

I. INTRODUCTION
[Will be submitted in next assignments]

II. RELATED WORK
[Will be submitted in next assignments]

III. THE PROPOSED METHOD
[Finished]

IV. EXPERIMENTAL RESULTS

Please complete this section and send it to AIVN Research Team in order to receive feedback and suggestion in improving the quality of the research.

A. Research Questions

Research Question 1? Research Question 2? Research Question 3?

B. System configuration, Dataset and Evaluation Metrics

C. Results and Discussion

- 1) Research Question 1: Answer and Discussion;
- 2) Research Question 2: Answer and Discussion;
- 3) Research Question 3: Answer and Discussion;

D. Limitations

V. CONCLUSIONS
[Will be submitted in next assignments]

How to write a scientific research paper: Assignment 2 - Write the Experimental results Sections

ACKNOWLEDGMENT

[Will be submitted in next assignments]
The preferred spelling of the word “acknowledgment” in America is without an “e” after the “g”. Avoid the stilted expression “one of us (R. B. G.) thanks ...”. Instead, try “R. B. G. thanks...”. Put sponsor acknowledgments in the unnumbered footnote on the first page.

REFERENCES

- [1] G. Eason, B. Noble, and I. N. Sneddon, “On certain integrals of Lipschitz-Hankel type involving products of Bessel functions,” Phil. Trans. Roy. Soc. London, vol. A247, pp. 529–551, April 1955.
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VI. GUIDE TO WRITE

The IEEEtran class file is used to format your paper and style the text. All margins, column widths, line spaces, and text fonts are prescribed; please do not alter them. You may note peculiarities. For example, the head margin measures proportionately more than is customary. This measurement and others are deliberate, using specifications that anticipate your paper as one part of the entire proceedings, and not as an

Thank
you



