

Template of abstract summary for SPIE Digital Library publication*

Taro Yamada^{*a}, Hanako Saito^a, Hiroshi Tanaka^b

^aDepartment of Mechanical Engineering, International Nogyo University, 5-67-8 Shibuya-ku, Tokyo, 222-2222, Japan

^bGraduate School of Agriculture, Nogyo Kikai University, 1-23-4 Shinagawa-ku, Tokyo, 111-1111, Japan

Abstract

Abstracts with approximately 120 words must be included. The basic structure of an abstract includes a topic sentence or hypothesis (rationale) of the work, a brief description of the methods, a summary of the results, and a conclusion. Literature citations and references to tables, figures, or equations found in the body of the manuscript should not be used. The authors are asked to put keywords of 5-10 words, written in small letters but the first letter of proper noun be written in capital letter.

Keywords: agriculture, environment, remote sensing, robot arm, robust control

***papers must be at least 2 pages in length and also be approved by the conference chair in order to be published in the SPIE Digital Library and indexed in scientific databases.**

I Introduction

This is a template of the manuscript. In formatting your page, set top margin to 25 mm (1") and bottom margin to 49 mm (1.95"). Left and right margins should be 19 mm (3/4"). Use a two-column format where each column is 83 mm (3 1/4") wide and spacing of 6 mm (1/4") between columns. Indent paragraphs by 6 mm (1/4").

Authors will submit a **2-page-minimum** paper written in English, including text, figures, tables, and references using 9-point font size.

II Body

1. Units

Units to be used in a paper must be expressed in International System of units (SI); metric or foot-pound system units may be written together within a bracket.

2. Section numbers

I II III (Sections of major captions) 11pt

1. 2. 3. (Sections of minor captions) 10pt

(1) (2) (3) (Sections of minor captions) 10pt

a b c (Sections of minor captions) 10pt

(a) (b) (c) (Sections of minor captions) 10pt

(i) (ii) (iii) (Sections of minor captions) 10pt

3. Figures and captions

Figures are centered. Use or insert .jpg, .tiff, or .gif illustrations instead of PowerPoint or graphic constructions. Captions go below figures. Indent 5 spaces from left margin and justify.



Figure 1. Figure captions are indented 5 spaces and justified. If you are familiar with Word styles, you can insert a field code called Seq figure which automatically numbers your figures.

*Tyamada@narxlab.com; phone 1 222 555-1234

PAPER MARGINS	
A4	
Top margin	2.5 cm (<i>1in.</i>)
Bottom margin	5 cm (<i>2in.</i>)
Left, right margin	2 cm (.75 <i>in.</i>)
<u>Printable area--all text, figures and footnotes:</u>	
A4: 17.15×22.23 cm	

4. Math equations

Use common fonts like Times Roman in your math equations. A math reference in a paragraph sentence such

as $\alpha g \frac{\rho}{s}$ is not numbered. The steps of a mathematical

argument can be numbered using a right-aligned tab for clarity, for example

$$a = \frac{-b \pm \sqrt{b - 2ac}}{2o} \quad (1)$$

and

$$\rho = \sum (x - x')^2. \quad (2)$$

III Results and Discussion

Results should be concrete and meaningful for engineering scope. You should describe limitations of your results.

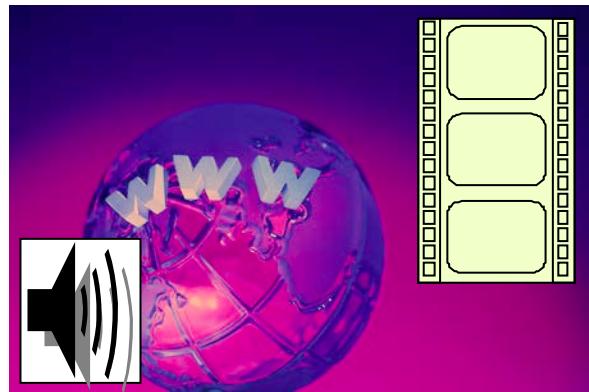
IV Multimedia Figures—Video and Audio Files

Video and audio files can be included for publication. Table 3 lists the specifications for the multimedia files. Use a screenshot or another jpg illustration for placement in the text. Use the file name to begin the caption. The text of the caption must end with the text "<http://dx.doi.org/doi.number.goes.here>" which tells the SPIE editor where to insert the hyperlink in the digital version of the manuscript.

Table 3. Information on video and audio files that can accompany a manuscript submission.

Item	Video	Audio
File name	Video1, video2, ...	Audio1, audio2, ...
Number of files	0-10	0-10
Size of each file	max. 5 mb	max. 5mb
File types accepted	.mpeg, .mov (Quicktime), .wmv (Windows Media Player)	.wav, .mp3

Here is a sample illustration and caption for a multimedia file:



Video 2. A label of “Video/Audio 1, 2, …” should appear at the beginning of the caption to indicate to which multimedia file it is linked. Include this text at the end of the caption:

<http://dx.doi.org/doi.number.goes.here>

V Form of References

The references should aid the reader, librarian, or indexer to retrieve the items cited. Place all bibliographic references together at the end of the text in the references section. Arrange the list alphabetically by the last name of the first author. List two or more articles by the same author (or authors) chronologically from the oldest to the most recent. Indicate two or more articles by the same authors in the same year by the letters a, b, etc. For example: 1987a, 1987b, etc.

VI Reference Linking

SPIE is able to display the references section of your paper in the SPIE Digital Library, complete with links to referenced journal articles, proceedings papers, and books, when available. This added feature will bring more readers to your paper and improve the usefulness of the SPIE Digital Library for all researchers.

Denote reference citations within the text of your paper by means of a superscript number. List references at the end of the paper in numerical order, and enclose the reference number in square brackets. Include the following information (as applicable).

If you use this formatting, your references will link your manuscript to other research papers that are in the CrossRef system. Exact punctuation is required for the automated linking to be successful.

book: [1] Booth, N. and Smith, A. S., [Infrared Detectors], Goodwin House Publishers, New York & Boston, 241-248 (1997).

journal paper: [2] Davis, A. R., Bush, C., Harvey, J. C. and Foley, M. F., "Fresnel lenses in rear projection displays," SID Int. Symp. Digest Tech. Papers 32(1), 934-937 (2001).

proceedings paper: [3] Van Derlofske, J. F., "Computer modeling of LED light pipe systems for uniform display illumination," Proc. SPIE 4445, 119-129 (2001).

website: [4] Myhrvold, N., "Confessions of a cybershaman," Slate, 12 June 1997, <<http://www.slate.com/CriticalMass/97-06-12/CriticalMass.asp>> (19 October 1997).

-OR-

[4] Myhrvold, N., "Confessions of a cybershaman," Slate, 12 June 1997, <http://www.slate.com/CriticalMass/97-06-12/CriticalMass.asp> (19 October 1997).

References

- Allen, J. S. 1988. The Complete Dictionary of Abbreviations. New York: MacMillan & Sons, Inc.
Overstreet, H. A. 1925. The psychology of effective writing. In Effective Report Writing: Principles and

Practices, ed. W. H. Pierre, ch. 3, 87-109. Chicago: Graphic Publishing Co.

James, D. 1980. United States fruit and vegetable harvest projections – 1990. USDA-1007. Washington, D.C.: GPO.

Weed, D. J. 1992. Effect of tillage and crop rotation on soil nitrate and moisture. M.S. thesis. Ames: Iowa State Univ., microfiche.

U.S. House Committee on Conservation Needs and Opportunities. 1986. Soil conservation: Assessing the national resource inventory, vol. 1. Washington, D.C.: National Academy Press.

Arizona Water Commission. 1992. Arizona State Water Plan, Phase I, Inventory of resources and uses. Phoenix: State of Arizona.

Boulart, J. 1983. Process for protecting a fluid product and installations for the realization of that process. French Patent No. 2513087 (In French).

Cundiff, J. S., D. H. Vaughan and D. J. Parrish. 1985. Pith separation procedure for processing whole-stalk sweet sorghum. In Proc. 5th Annual Solar and Biomass Workshop, 133-136. Atlanta, Ga., 23-25 April.

Miller, F. R. and R. A. Creelman. 1980. Sorghum -- A new fuel. In Proc. 35th Annual Corn and Sorghum Industry Research Conf., eds. H. D. Londen and W. Wilkinson, 219-232. Washington, D.C.: Am. Seed Trade Assoc.

Anthony, W. S. 1989. Performance characteristics of cotton ginning machinery. ASAE Paper No.89-1010. St. Joseph, Mich.: ASAE.

ASAE Standards, 36th Ed. 1989. S352.1. Moisture measurement -- Grain and seeds. St. Joseph, Mich.: ASAE.

Burner, A. D. 1989. Driveline design considerations. Agricultural Engineering 70(July/August):16-19.

Griffin Jr., A. C. 1977. Cotton moisture control. In Cotton Ginners Handbook. Agricultural Handbook No. 503, USDA, Washington, D.C.

Jacobson, L. D. 1989. Reluctance to drink, stray voltage symptom. Int. Pigletter 8(12):47-48.

Slaughter, D. C. and R. C. Harrell. 1989. Discriminating fruit for robotic harvest using color in natural outdoor scenes. Transactions of the ASAE 32(2):757-763.