

# iPlant: Electronic Plant System

## SPCL-2012 - Project Proposal

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### BACKGROUND AND MOTIVATION

For years students and other individuals have failed to keep plants alive, correct watering and sunlight is difficult to provide in today's busy world. Yet we do desire to keep plants for their decoration as well as their oxygen production. A similar problem is when it is necessary to vacuum, we do not wish to waste time by doing it too often, but still want our home to be clean, today the typical solution is to make it a weekly tradition, but depending on how much you are at home and what you do, this is far from an optimal solution. Our solution solves all these issues for the busy people of today, along with a huge range of information about the temperature and other things in your home. Keep your home healthy.

### IDEA

This format is to be used for submissions that are published in the conference proceedings. We wish to give this volume a consistent, high-quality appearance. We therefore ask that authors follow some simple guidelines. In essence, you should format your paper exactly like this document. The easiest way to do this is simply to download a template from the conference web site, and replace the content with your own material.

### SCENARIO

On each page your material (not including the page number) should fit within a rectangle of 18 x 23.5 cm (7 x 9.25 in.), centered on a US letter page, beginning 1.9 cm (.75 in.) from the top of the page, with a .85 cm (.33 in.) space between two 8.4 cm (3.3 in.) columns. On an A4 page, use a text area of the same dimensions (18 x 23.5 cm.), again centered. Right margins should be justified, not ragged.

### PLAN

Prepare your submissions on a word processor or typesetter. Please note that page layout may change slightly depending upon the printer you have specified. For this document,

printing to Adobe Acrobat PDF Writer was specified. In the resulting page layout, Figure 1 appears at the top of the left column on page 2, and Table 1 appears at the top of the right column on page 2. You may need to reposition the figures if your page layout or PDF-generation software is different.

### REQUIREMENTS

- Arduino microprocessor
- Temperature Sensor
- Humidity Sensor
- Water Pump (Stepper motor)
- Dust Sensor
- Solar Panel / Sensor
- UV-Diodes

To position names and addresses, use a single-row table with invisible borders, as in this document. Alternatively, if only one address is needed, use a centered tab stop to center all name and address text on the page; for two addresses, use two centered tab stops, and so on. For more than three authors, you may have to place some address information in a footnote, or in a named section at the end of your paper. Please use full international addresses. Leave one 10-pt line of white space below the last line of affiliations.

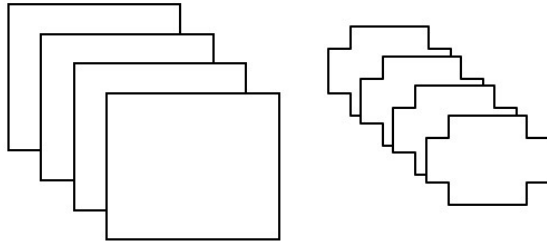
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**Figure 1.** Figure captions should be centered and placed below the figure.

Every submission should begin with an abstract of **no more than 150 words**, followed by a set of keywords. The abstract and keywords should be placed in the left column of the first page under the left half of the title. The abstract should be a concise statement of the problem, approach and conclusions of the work described. It should clearly state the paper's contribution to the field of Ubiquitous Computing.

The first set of keywords will be used to index the paper in the proceedings. The second set are entries from the ACM Classification System.

### Normal or Body Text

Please use a 10-point Times Roman font or, if this is unavailable, another proportional font with serifs, as close as possible in appearance to Times Roman 10-point. The Press 10-point font available to users of Script is a good substitute for Times Roman. If Times Roman is not available, try the font named Computer Modern Roman. On a Macintosh, use the font named Times and not Times New Roman. Please use sans-serif or non-proportional fonts only for special purposes, such as headings or source code text.

### First Page Copyright Notice

Include the copyright notice, as provided in this template, at the bottom of the left column of the first page.

### Subsequent Pages

On pages beyond the first, start at the top of the page and continue in double-column format. The two columns on the last page should be of equal length. Note the template provided for Latex users does not automatically balance columns at the end of the document. You will need to do this manually by inserting a page break, or use one of the additional packages available for this purpose (*balance*, *flushend*, or *multicol*).

### References and Citations

Use a numbered list of references at the end of the article, ordered alphabetically by first author, and referenced by numbers in brackets, e.g. "[2,4,5,7]". For papers from conference proceedings, include the title of the paper and an abbreviated name of the conference (e.g., for UbiComp 2008 proceedings, use Proc. UbiComp 2008). Do not include the location of the conference or the exact date; do include the

page numbers if available. See the examples of citations at the end of this document.

Your references should be published materials accessible to the public. Internal technical reports may be cited only if they are easily accessible (i.e., you provide the address for obtaining the report within your citation) and may be obtained by any reader for a nominal fee. Proprietary information may not be cited. Private communications should be acknowledged in the main text, not referenced (e.g., "[Robertson, personal communication]").

### SECTIONS

The heading of a section should be in Helvetica 9-point bold, all in capitals. Use Arial if Helvetica is not available. Sections should not be numbered.

#### Subsections

Headings of subsections should be in Helvetica 9-point bold with initial letters capitalized. (Note: For sub-sections and sub-subsections, a word like the or of is not capitalized unless it is the first word of the heading.)

#### Sub-subsections

Headings for sub-subsections should be in Helvetica 9-point italic with initial letters capitalized.

### FIGURES/CAPTIONS AND OPTIONAL AUDIO/VIDEO

Place figures and tables at the top or bottom of the appropriate column or columns, on the same page as the relevant text (see Figure 1). A figure or table may extend across both columns to a maximum width of 17.78 cm (7 in.).

Captions should be Times New Roman 9-point bold. They should be numbered (e.g., "Table 1" or "Figure 2"), centered and placed beneath the figure or table. Please note that the words "Figure" and "Table" should be spelled out (e.g., "Figure" rather than "Fig.") wherever they occur.

Papers and notes may use color figures, which are included in the page limit; the figures must be usable when printed in black and white in the proceedings.

You may provide up to two supporting audio or video files for your Full Paper or Note. However, the paper should stand on its own without this material, as it may not be available to everyone who reads the paper. Please note that your **total submission size cannot exceed 10.0 MB** (including your submission document and any additional material).

### Inserting Images

To ensure that generated PDF Files are not larger than necessary, please resize and edit any images you include to an appropriate printing resolution (usually 600 dpi).

### Table Style

There are various ways of producing tables in Latex. Generally, text in each field of a table will look better if it has equal amounts of spacing above and below it, as in Table 1.

Objects	Caption pre-2002	Caption since 2003
Tables	Above	Below
Figures	Below	Below

**Table 1.** Table captions should be placed below the table.

## LANGUAGE, STYLE AND CONTEXT

The written and spoken language of the UbiComp conference is English. Spelling and punctuation may use any dialect of English (e.g., British, Canadian, US, etc.) provided this is done consistently. Hyphenation is optional. To ensure suitability for an international audience, please pay attention to the following:

- Write in a straightforward style.
- Try to avoid long or complex sentence structures.
- Briefly define or explain all technical terms that may be unfamiliar to readers.
- Explain all acronyms the first time they are used in your text e.g., “Digital Signal Processing (DSP)”.
- Explain local references (e.g., not everyone knows all city names in a particular country).
- Explain “insider” comments. Ensure that your whole audience understands any reference whose meaning you do not describe (e.g., do not assume that everyone has used a particular device or application).
- Explain colloquial language and puns. Understanding phrases like “red herring” may require a local knowledge of English. Humor and irony are difficult to translate.
- Use unambiguous forms for culturally localized concepts, such as times, dates, currencies and numbers (e.g., “1-5-97” or “5/1/97” may mean 5 January or 1 May, and “seven o’clock” may mean 7:00 am or 19:00).
- If possible, use the full (extended) alphabetic character set for names of persons, institutions, and places (e.g., Grønbæk, Lafrenière, Sánchez, Universität, Weißenbach, Züllighoven, Århus, etc.).

## PAGE NUMBERING, HEADERS AND FOOTERS

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## PRODUCING AND TESTING PDF FILES

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## BLIND REVIEW

For archival submissions, UbiComp requires a “blind review.” To prepare your submission for blind review, remove author and institutional identities in the title and header areas of the paper. You may also need to remove part or all of the Acknowledgments text. Authors should take care throughout their paper that their and their institution’s identity is not revealed. However **relevant references to the author’s previous research should not be suppressed** as they may be required for reviewers to understand and evaluate the paper’s contribution. For more details, see the submission guidelines and checklist for your submission category.

## CONCLUSION

It is important that you write for the UbiComp audience. Please read previous years’ Proceedings to understand the writing style and conventions that successful authors have used. It is particularly important that you state clearly what you have done, not merely what you plan to do, and explain how your work is different from previously published work, i.e., what is the unique contribution that your work makes to the field? Please consider what the reader will learn from your submission, and how they will find your work useful. If you write with these questions in mind, your work is more likely to be successful, both in being accepted into the Conference, and in influencing the work of our field.

## ACKNOWLEDGEMENTS

We thank CHI, PDC and CSCW volunteers, and all publications support and staff, who wrote the original version of this document that we modified. Some of the references cited are included for illustrative purposes only.