Global Illumination for Fun and Profit

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Figure 1: Dramatic evening clouds.

ABSTRACT

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Index Terms: Radiosity, global illumination, constant time.

1 INTRODUCTION

This template is for papers of VGTC-sponsored conferences which are ***not*** published in a special issue of TVCG.

2 USING THIS TEMPLATE

- If you receive compilation errors along the lines of "`Package ifpdf Error: Name clash, \ifpdf is already defined`" then please add a new line "`\let\ifpdf\relax`" right after the "`\documentclass[journal]{vgtc}`" call. Note that your error is due to packages you use that define "`\ifpdf`" which is obsolete (the result is that `\ifpdf` is defined twice); these packages should be changed to use ifpdf package instead.

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- The style uses the hyperref package, thus turns references into internal links. We thus recommend using "`\cref{reference}`" (instead of "`Figure~\ref{reference}`" or similar) since "`\cref{reference}`" turns the entire reference into an internal link, not just the number. Examples: Fig. 2 and Tab. 1.

- The style automatically looks for image files with the correct extension (eps for regular LaTeX; pdf, png, and jpg for pdfLaTeX), in a set of given subfolders (figures/, pictures/, images/). It is thus sufficient to use "`\includegraphics{clouds}`" (instead of "`\includegraphics{figs/clouds.jpg}`").

- For adding hyperlinks and DOIs to the list of references, you can use "`\bibliographystyle{abbrv-doi-hyperref-narrow}`" (instead of "`\bibliographystyle{abbrv}`"). It uses the doi and url fields in a bibTeX entry and turns the entire reference into a link, giving priority to the doi. The doi can be entered with or without the "`http://dx.doi.org/`" url part. See the examples in the bibTeX file and the bibliography at the end of this template.

  Note 1: occasionally (for some LaTeX distributions) this hyper-linked bibTeX style may lead to **compilation errors** ("`pdfendlink ended up in different nesting level ...`") if a reference entry is broken across two pages (due to a bug in hyperref). In this case make sure you have the latest version of the hyperref package (i. e., update your LaTeX installation/packages) or, alternatively, revert back to "`\bibliographystyle{abbrv-doi-narrow}`" (at the expense of removing hyperlinks from the bibliography) and try "`\bibliographystyle{abbrv-doi-hyperref-narrow}`" again after some more editing.

  Note 2: the "`-narrow`" versions of the bibliography style use the font "PTSansNarrow-TLF" for typesetting the DOIs

in a compact way. This font needs to be available on your LaTeX system. It is part of the "paratype" package, and many distributions (such as MikTeX) have it automatically installed. If you do not have this package yet and want to use a "`-narrow`" bibliography style then use your LaTeX system's package installer to add it. If this is not possible you can also revert to the respective bibliography styles without the "`-narrow`" in the file name.

DVI-based processes to compile the template apparently cannot handle the different font so, by default, the template file uses the `abbrv-doi` bibliography style but the compiled PDF shows you the effect of the `abbrv-doi-hyperref-narrow` style.

3 Bibliography Instructions

- Sort all bibliographic entries alphabetically but the last name of the first author. This LaTeX/bibTeX template takes care of this sorting automatically.
- Merge multiple references into one; e. g., use [3, 5] (not [3] [5]). Within each set of multiple references, the references should be sorted in ascending order. This LaTeX/bibTeX template takes care of both the merging and the sorting automatically.
- Verify all data obtained from digital libraries, even ACM's DL and IEEE Xplore etc. are sometimes wrong or incomplete.
- Do not trust bibliographic data from other services such as Mendeley.com, Google Scholar, or similar; these are even more likely to be incorrect or incomplete.
- Articles in journal—items to include:
  - author names
  - title
  - journal name
  - year
  - volume
  - number
  - month of publication as variable name (i. e., {jan} for January, etc.; month ranges using {jan #{/}# feb} or {jan #{--}# feb})
- use journal names in proper style: correct: "IEEE Transactions on Visualization and Computer Graphics", incorrect: "Visualization and Computer Graphics, IEEE Transactions on"
- Papers in proceedings—items to include:
  - author names
  - title
  - abbreviated proceedings name: e. g., "Proc.\ CONF_ACRONYNM" without the year; example: "Proc.\ CHI", "Proc.\ 3DUI", "Proc.\ Eurographics", "Proc.\ EuroVis"
  - year
  - publisher
  - town with country of publisher (the town can be abbreviated for well-known towns such as New York or Berlin)
- article/paper title convention: refrain from using curly brackets, except for acronyms/proper names/words following dashes/question marks etc.; example:
  - paper "Marching Cubes: A High Resolution 3D Surface Construction Algorithm"
  - should be entered as "{M}arching {C}ubes: A High Resolution {3D} Surface Construction Algorithm" or "{M}arching {C}ubes: A high resolution {3D} surface construction algorithm"
  - will be typeset as "Marching Cubes: A high resolution 3D surface construction algorithm"
- for all entries
  - DOI can be entered in the DOI field as plain DOI number or as DOI url; alternative: a url in the URL field
  - provide full page ranges AA--BB
- when citing references, do not use the reference as a sentence object; e. g., wrong: "In [4] the authors describe ...", correct: "Lorensen and Cline [4] describe ..."

4 Supplemental Material Instructions

In support of transparent research practices and long-term open science goals, you are encouraged to make your supplemental materials available on a publicly-accessible repository. Please describe the available supplemental materials in the Supplemental Materials section. These details could include (1) what materials are available, (2) where they are hosted, and (3) any necessary omissions.

5 Figure Credits

In the Figure Credits section at the end of the paper, you should credit the original sources of any figures that were reproduced or modified. Include any license details necessary, as well as links to the original materials whenever possible. For credits to figures from academic papers, include a citation that is listed in the **References** section. An example is provided below.

6 Example Section

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You can use the margins for comments while editing the submission, but please remove the marginpar comments for submission.

7 Exposition

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$$\sum_{j=1}^{z} j = \frac{z(z+1)}{2} \tag{1}$$

Table 1: VIS/VisWeek accepted/presented papers: 1990–2016.

year	Vis/SciVis	SciVis conf	InfoVis	VAST	VAST conf	TVCG @ VIS	CG&A @ VIS	VIS/VisWeek incl. TVCG/CG&A	VIS/VisWeek w/o TVCG/CG&A
2016	30		37	33	15	23	10	148	115
2015	33	9	38	33	14	17	15	159	127
2014	34		45	33	21	20		153	133
2013	31		38	32		20		121	101
2012	42		44	30		23		139	116
2011	49		44	26		20		139	119
2010	48		35	26				109	109
2009	54		37	26				117	117
2008	50		28	21				99	99
2007	56		27	24				107	107
2006	63		24	26				113	113
2005	88		31					119	119
2004	70		27					97	97
2003	74		29					103	103
2002	78		23					101	101
2001	74		22					96	96
2000	73		20					93	93
1999	69		19					88	88
1998	72		18					90	90
1997	72		16					88	88
1996	65		12					77	77
1995	56		18					74	74
1994	53							53	53
1993	55							55	55
1992	53							53	53
1991	50							50	50
1990	53							53	53
sum	**1545**	**9**	**632**	**310**	**50**	**123**	**25**	**2694**	**2546**

7.1 Lorem ipsum

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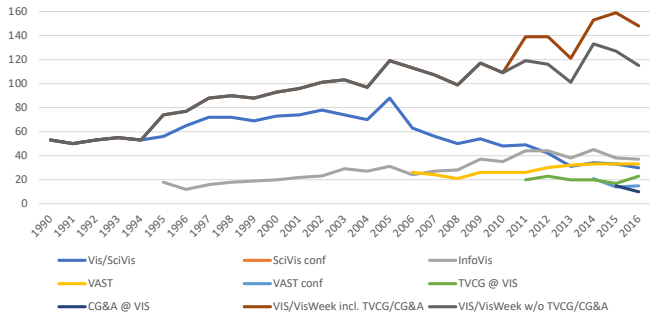


Figure 2: A visualization of the 1990–2016 data from Tab. 1, recreated based on Fig. 1 from [1] and is in the public domain.

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8 Conclusion

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[1]The algorithm behind Marching Cubes [4] had already been described by Wyvill et al. [7] a year earlier.

[2]Footnotes appear at the bottom of the column.

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Supplemental Materials

Refer to the instructions for this section (Sec. 4). Below is an example you can follow that includes the actual supplemental material for this template:

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Figure 2 is a partial recreation of Fig. 1 from [1], which is in the public domain.

Acknowledgments

The authors wish to thank A, B, and C. This work was supported in part by a grant from XYZ.

References

[1] P. Isenberg, F. Heimerl, S. Koch, T. Isenberg, P. Xu, C. Stolper, M. Sedlmair, J. Chen, T. Möller, and J. Stasko. vispubdata.org: A Metadata Collection about IEEE Visualization (VIS) Publications. *IEEE Transactions on Visualization and Computer Graphics*, 23, 2017. To appear. doi: 10.1109/TVCG.2016.2615308 3, 4

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