Advanced Styling

Supposed I'm assigned to base a conference paper on my report. Here are the guidelines that I should comply:

- 1. The font should be an 11pt serif font
- 2. The title should be in 17 pt and bold
- 3. The paper contains a single-column abstract and two-column main text
- 4. The abstract should be centered
- 5. The main text should be justified (both edges of each line are aligned)
- 6. First level section headings should be 13pt, centered, and rendered in small capitals
- 7. Second level headings are run-ins, italicized and have the same size as the body text
- 8. Finally, the pages should be US letter sized, numbered in the center of the footer and the top right corner of each page should contain the title of the paper

Writing the right set rules

```
// the pages should be US letter sized, numbered in
// the center of the footer and the top right corner
// of each page should contain the title of the paper
#set page(
  paper: "us-letter",
  header: align(right)[
  A fluid dynamic model for
  glacier flow
  ],
  numbering: "1",
  // "(1/1)" to should current and total pages
// The main text should be justified
#set par(justify: true)
// The font should be an 11pt serif font
#set text(
  font: "Libertinus Serif",
  size: 11pt,
  )
```

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Creating a title and abstract

```
// The title should be in 17 pt and bold
#align(center, text(17pt)[
  *A fluid dynamic model for glacier flow*
])
#grid(
  columns: (1fr, 1fr),
  align(center)[
   Therese Tungsten \
   Artos Institute \
   #link("mailto:tung@artos.edu")
  align(center)[
   Dr. John Doe \
   Artos Institute \
   #link("mailto:doe@artos.edu")
  ]
)
```

A fluid dynamic model for glacier flow

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```
// The paper contains a single-column abstract
// The abstract should be centered
#align(center)[
    #set par(justify: false) //doesn't affect the
remainder of the document
    *Abstract* \
    #lorem(80)
]
```

Tip: use variables

By saving the paper title in a variable, so that we do not have to type it twice.

```
#let title = [
    A fluid dynamic model for glacier flow
]

#set page(
    header: align(
        right + horizon,
        title,
    ),
)

#align(
    center,
    text(17pt)[
        *#title*
    ],
)
```

Adding columns

To switch our paper to a two-column layout, simply amend our page set rule with the columns argument. However, by adding columns: 2 to the argument list, we have wrapped the whole document in two column.

To keep title, authors and abstract spanning the whole page, we can wrap them in a function called place. It expects an alignment and the content it should place. Using the named scope argument, we can decide if the items should be placed relative to the current column or its parent.

What's more, if no other arguments are provided, place takes its content out of the flow of the document, and positions it over the other content without affecting the layout of other content in its container. For example:

```
#place(
  top + center,
  rect(fill: black),
)
#lorem(30)
```

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Since the text below the block acts like as if there was nothing, and we don't want title and others cover the main text, we pass the argument float: true to place. Also, we remove #set align(center)s inside it since they inheit the center alignment from the placement.

```
#set page(
  paper: "us-letter",
  header: align(
    right + horizon,
  ),
  numbering: "1",
  columns: 2,
#place(
  top + center,
  float: true,
  // be placed relative to its parent (page)
  scope: "parent",
  // provide the space between it and the body
  clearance: 2em,
) [
  . . .
  #par(justify: false)[
    *Abstract* \
    #lorem(80)
  ]
]
= Introduction
#lorem(300)
// here is a second level headings,
// the example on official website seems wrong
== Related Work
#lorem(200)
```

Adding headings

By writing our own heading show rule, we can style our headings.

```
// First level section headings should be 13pt,
// centered, and rendered in small capitals
#show heading: it => [
    #set align(center)
    #set text(13pt, weight: "regular")
    #block(smallcaps(it.body))
]
```

Introduction

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Motivation

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Now, there's only one rule left. To make second level headings looks different from the firsts, we use a where selector on our set rule. It's a method we can call on headings (and other elements) that allows us to filter them by their level. We can use it to differentiate between section and subsection headings:

A fluid dynamic model for glacier flow

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```
#show heading.where(
  level: 1
): it => block(width: 100%)[
  #set align(center)
  #set text(13pt, weight: "regular")
  #smallcaps(it.body)
]

#show heading.where(
  level: 2
): it => text(
  size: 11pt,
  weight: "regular",
  style: "italic",
  it.body + [.],
```

Introduction

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Review

Now, all guidelines are done perfectly. We learn to use functions and the where method, and custom heading styles. The paper is a great success! Here is the final work:

A fluid dynamic model for glacier flow

A fluid dynamic model for glacier flow

Therese Tungsten Artos Institue tungsten@artos.edu Dr. John Doe Artos Institue doe@artos.edu

Abstract

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magnam aliquam quaerat voluptatem. Ut enim aeque doleamus animo, cum corpore dolemus, fieri tamen permagna accessio potest, si aliquod aeternum et infinitum impendere malum nobis opinemur. Quod idem licet transferre in voluptatem, ut postea variari voluptas distinguique possit, augeri amplificarique non possit. At etiam Athenis, ut e patre audiebam facete et urbane Stoicos irridente, statua est in quo a nobis philosophia defensa et.

Introduction

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et molestiae non recusandae. Itaque earum rerum defuturum, quas natura non depravata desiderat. Et quem ad me accedis, saluto: 'chaere,' inquam. 'Titel' lictores, turma omnis chorusque: 'chaere.

Problem Statement. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magnam aliquam quaerat voluptatem. Ut enim aeque doleamus animo, cum corpore dolemus, fieri tamen permagna accessio potest, si aliquod aeternum et infinitum impendere malum nobis opinemur. Quod idem licet transferre in voluptatem. ut.

RELATED WORK

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