



## Department of Physics

This page is for web developers in the Physics Department, e.g. research group webmasters and web administrators. A list of webmasters can be found at:

<http://www.phy.bris.ac.uk/internal/www/webmasters.doc>

### The Web Working Group

The Web Working Group has been appointed by the departmental Executive Committee to oversee and guide the development of the Department's web pages. See the [Terms of Reference](#) for more information and its composition:

[http://www.phy.bris.ac.uk/internal/www/Terms%20of%20ref\\_WWG.doc](http://www.phy.bris.ac.uk/internal/www/Terms%20of%20ref_WWG.doc)

### The Web Team

The [Web Team](#) is responsible for the day-to-day upkeep of the corporate pages of the departmental web site. The Web Team currently comprises Jean-Pierre Melot (Computing Officer) and Jessica Inglis (Head of Departmental Administration).

### Corporate and specialised pages

The Department's web pages are split into corporate and non-corporate types, indicating tighter or looser departmental control.

The corporate pages are the more generic web pages; they typically carry department-wide information where a consistent appearance is important. At a minimum they include the following pages: home, general information, news, events, people, contact us, travel & maps, vacancies, for staff, for schools, prospective UG students, current UG students, prospective PG students, current PG students, main page for research groups, seminars & colloquia, research overview, people, postgrad studies, facilities and individual staff details pages (including contact information)

The non-corporate pages carry more specialised information, e.g. sub-groups within research groups (such as Positron Annihilation or Applied Spectroscopy). These pages need not be governed by the corporate template but could use it if desired. There will be some guidance and restrictions on how to develop these pages, mostly relating to issues of accessibility and ensuring that only appropriate material is published. Design stipulations will be minimal.

***All pages must be approved by the Web Team on behalf of the WWG prior to publication.***

### The Physics template

The current Physics template is available at <http://www.phy.bris.ac.uk/template.html>. It is designed to provide a "corporate" look, similar to the main University pages and to those of many other departments, while retaining a Physics identity.

The University's web service makes use of two templates: the original "Zope" template (2002), with a layout based on tables, and the more recent "CMS" template (2006) that makes extensive use of style sheets instead. See <http://www.bristol.ac.uk/web/uobtemplates/>.

The Physics template is half-way between those, having mostly the look of the first, but with an entirely stylesheet-driven layout which is using strict XHTML. By contrast with the Zope and CMS templates, it makes use of the Google

search engine, with a prefix of "phy.bris.ac.uk", rather than the University's own search facility. The Google engine appears to provide more relevant results to Physics.

The Physics template works with "server-side includes", which are mostly files containing the fixed sections of the header and footer, and located in the SSI subdirectory of the website. This means that a single editing of an include file propagates to all pages automatically, which eases maintenance of the whole web site. Another server-side include contained in the footer is the "last modified" date of the page, set up by the server.

In order for the server-side include mechanism to be invoked, pages must have one of the following extensions: .html, .stm, .shtml.

Be aware that the server-side include files will not be activated if local browsing (e.g. opening web pages directly as files) is used, rather than browsing pages through the web server. This has implications if a web development program such as Adobe Dreamweaver is used.

## The header

Some parts of the Physics header are fixed, such as the horizontal navigation bar that includes the Google search box. However, parts of the header can and will need to be modified. In particular:

- Additional style sheets may be included (1)
- CSS statements may be added to the style section of each page (2)
- Keywords may be added to the search list (3)
- An accurate breadcrumbs trail must be supplied (4)
- The banner may be modified for the purpose of the group.
- A consistent group name should be used, e.g. "Particle Physics", rather than HEP in some areas and PP in others.

The numbering above refers to sections of a typical header sample, which may look like this:

```
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<!-- The area below may be edited -->

<title>Bristol University Physics – People : A to Z</title>

<link href="/favicon.ico" rel="icon" type="image/gif" />
<link href="/css/physics.css" type="text/css" rel="stylesheet" />
<link href="/css/navbox.css" type="text/css" rel="stylesheet" /> (1)
<link href="/images/header.logo.gif" type="image/gif" rel="prefetch" />
<link href="/images/physicsbanner.jpg" type="image/jpeg" rel="prefetch" />
<link href="/images/footer-crest.jpg" type="image/jpeg" rel="prefetch" />

<style type="text/css"> (2)

.linkbox {
    margin-bottom: 15px
}

</style>

(3)
<meta name="keywords" content="University, Bristol, daxue, education, courses, application, undergraduate,
postgraduate, bachelor, master, doctor, PhD, degree, study, higher, postdoctoral, assistant, lecturer, uk, england,
physics, research, astronomy, astrophysics, cosmology, particle physics, nanostructures, microstructures,
condensed matter, polymer, spectroscopy, theoretical" />

<!-- The area above may be edited -->

<!-- BREADCRUMBS --> (4)
```

```
<div id="headercrumbbox">
  <div class="left">
    <a accesskey="1"
      href="http://www.phy.bris.ac.uk">Physics home</a>
```

```
&gt; People
</div>
```

```
<!-- END OF BREADCRUMBS -->
```

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Two examples of banner modification are:

- <http://www.star.bris.ac.uk>
- <http://wwwteach.phy.bris.ac.uk>

In both cases, the "Physics at Bristol" section was prefixed with a relevant name. Please contact J.P. Melot ([j.p.melot@bristol.ac.uk](mailto:j.p.melot@bristol.ac.uk)) if you are considering some customization.

The main physics.css style sheet must not be modified or re-created. One advantage of cascaded style sheets is that they can override each other in the order they are listed. Additional style statements may be included in a separate style sheet listed after the main physics.css (see **1** above) or in the style section of the header (see **2** above). Nevertheless, be careful before overriding the defaults in physics.css as this might result in a look that is substantially divergent from the Physics site.

### The footer

The footer does not need any modification. It gives general-purpose information, and provides a feedback address so that comments can be received regarding the pages. Note that this goes to "webteam", i.e. Jessica Inglis and J.P. Melot. Comments can then be forwarded by the webteam to group webmasters as appropriate. The name is deliberately generic: this is designed to avoid having to modify the footer whenever individual roles change.

As mentioned earlier, the footer includes the page modification date, which is automatically read from the file attributes of the web page. This removes the need to change the date after a revision, a step often forgotten in any case.

### Navigation column

Many pages, such as the main Physics page or the contacts page, have a left-hand navigation column, usually made up of several sections. The layout of the sections is defined in the style sheet navbox.css, located in the css subdirectory of the main site (see **1** above). Groups needing a navigation column should make use of this.

### Embedded links

The default appearance for hyperlinks is "underline on hover". In navigation columns or splash pages such as the top research page (<http://www.phy.bris.ac.uk/research.html>), all entries are usually hyperlinks and there is no need to highlight them. The underlining which is activated when the cursor moves over the link confirms that the link is being selected. This keeps the overall layout uncluttered.

On the other hand, if the hyperlinks are buried in a text, they may not be easily distinguishable. Colour alone is insufficient to highlight them and can cause problems for people with disabilities. For that reason, a style class has been defined, called "embedded-link", which will do the reverse of the above: The link will normally be underlined, but the underlining is removed on hover.

It is important to ensure that links are clearly visible in text sections. An example of this is:

[http://www.phy.bris.ac.uk/about\\_physics.html](http://www.phy.bris.ac.uk/about_physics.html)

## Group pages

Group pages should be coded according to the strict xhtml standard, rather than the transitional one.

Each group must provide a minimum set of pages at the top level of the group's area. They should all adhere to the Physics template:

- A home page, which is mostly used as a summary of the group's activity, and as an index of the group's other pages, but may also contain news items, etc.
- A Research Overview of highlights page.
- A People page, showing members of staff and postgraduates belonging to the group (see next section).
- A Postgraduate studies page advertising current PG vacancies, or a pointer to the departmental vacancies page.
- A group seminars page (if held)
- A research facilities page (optional)

An example of a research group home page is to be found at:

[http://www.phy.bris.ac.uk/groups/cond\\_matt/index.html](http://www.phy.bris.ac.uk/groups/cond_matt/index.html)

Pages at the sub-group level need not adhere to the Physics template, although it is still desirable.

Further recommendations for designing web pages can be found at:

<http://www.bris.ac.uk/web/best-practice.html>

## People page

Group webmasters should not generate the group's people pages. The Web Working Group will generate them directly from a database populated from central records. This ensures that the information is kept correct and not duplicated, and is regularly updated, thereby easing maintenance. An example of a database-generated page is:

[http://www.phy.bris.ac.uk/groups/cond\\_matt/people.html](http://www.phy.bris.ac.uk/groups/cond_matt/people.html)

Please contact Dr Stephen Dugdale ([S.B.Dugdale@bristol.ac.uk](mailto:S.B.Dugdale@bristol.ac.uk)) for further information on this subject.

## Accessibility

Although the Physics Department has a certain amount of autonomy regarding the design of its web pages, it has to comply with the University policy regarding web sites, and in particular, with requirements for accessibility. This is actually a legal requirement (Special Educational Needs and Disabilities Act 2001). Further information can be found at:

<http://www.bristol.ac.uk/is/info/websupport/accessibility/>

<http://www.bristol.ac.uk/university/governance/policies/full-access.html>

In particular, the use of fixed-size fonts should be avoided. Some browsers, but not all, provide a text size adjustment that works with fixed-size fonts but it is better practice to ensure that relative size fonts are used.

Likewise, pictures should be tagged with an **alt** attribute giving a brief description of the picture's contents so that people with poor eyesight may understand what the pictures are there for.

Avoid using tables for page layout control, as automated screen readers may have problems with interpreting tables. Do not use frames, as they can also be confusing for accessibility tools.

## Validation

Before launching new web pages or after modifying them substantially, please ensure that you validate them to ensure that both the xhtml and the css codes are correct. The following web sites provide validators for those functions:

<http://validator.w3.org>

<http://jigsaw.w3.org/css-validator/>

The level of accessibility of a page can be checked with:

<http://webxact.watchfire.com>

It is also recommended that you check the appearance of the pages in several browsers: Internet Explorer (6 and 7), Mozilla Firefox, Opera and Safari (MacOS X). There can be appreciable differences of behaviour between these browsers. If you only use one browser to check, you may not realize that the intended page layout could come out differently in other browsers.

## **Servers**

Some groups may have their own web servers. This is currently tolerated for wiki-type services, but discouraged by the Web Working Group for actual group web sites. There is a project to reshuffle the departmental web servers (Physics web server and Teaching server) into a high-availability cluster, in which case groups will be encouraged to make use of that facility.

Group web servers should be regularly backed up. The departmental servers are fully backed up on a weekly basis and have a differential backup every night.

Group webmasters that use a group-based server should supply web site usage information on a monthly basis to Dr Stephen Dugdale. The information should be in the form of daily "W3C extended format" logfiles, and should include:

- Date (date)
- Time (time)
- Client IP address (c-ip)
- User Name (cs-username)
- Method (cs-method)
- URI Stem (cs-uri-stem)
- URI Query (cs-uri-query)
- Protocol Status (sc-status)
- Bytes Sent (sc-bytes)
- Protocol Version (cs-version)
- User Agent (cs(User-Agent))
- Referer (cs(Referer))

This information can then be added to that of the Physics website in order to generate monthly web usage statistics.