# CBIB - A tool for managing research outputs

**Summary**

The Centre for Artificial Intelligence Research (CAIR) is a virtual centre, hosted at the Council for Scientific and Industrial Research (CSIR), and with nodes at a number of South African universities. The goal of this project is to create a web-based tool for managing the research outputs produced by CAIR members. The tool should enable users to:

- add, modify, and delete entries corresponding to research outputs;
- search entries based on various criteria;
- produce reports based on the stored information.

This functionality should be provided with appropriate levels of security built in, as outlined below.

**Users:**

The site should have four types of users: Global Administrators, Node Administrators, CAIR members, and Observers. Global Administrators, Node Administrators, and CAIR members need to log in. An Observer is anyone who accesses the site. Observers don't need to log in.

A CAIR member is usually affiliated with one Node, but can be affiliated with more than one.

**Global Administrator functionality:**

A Global Administrator should be able to do the following:

- Create accounts for CAIR members and Administrators
- Create new Nodes
- Take on the role of any of the other types of users
- Anything that an Observer can do.

**Node Administrator Functionality:**

A Node Administrator is linked to exactly one CAIR Node. They should be able to do the following:

- Create, modify, and delete research outputs for any CAIR members in the same Node.
- Access basic and detailed information of all the research outputs for CAIR members in the same Node.
- Generate basic and detailed reports related to their Node.
- Anything that an Observer can do.

**CAIR member functionality:**

A CAIR members should be able to do the following:

- Create, modify and delete research outputs of which they are a co-author.
- Access basic and detailed information of all the research outputs of which they are a co-author.
- Generate basic and detailed reports related to all research outputs of which they are a co-author.
- Anything that an Observer can do.

**Observer functionality:**

An Observer can access basic information (but not detailed information) of the research outputs of all CAIR members and can generate basic reports (but not detailed reports).

**Basic vs Detailed Information of Research Outputs**

Basic information of a research output contains the following information:

Author(s), Title, Year of publication, Type of Research Output, and additional information depending on the specific type of research output (see the section of formatting below). The main types of research outputs are: Journal paper, Book, Book Chapter, Conference paper, Workshop paper, Technical Report, and Thesis. Below the entry for the research output, there should be additional entries: "Abstract", "Paper", and "Bibtex". "Abstract" may (but need not) link to a text file (containing the abstract of the research output). "Paper" may (but need not) link to a PDF document (the research output). "Bibtex" may (but need not) contain a text file (containing a Bibtext entry of the research output). See the Formatting section below for an example of what is required.

Detailed information of a research output typically contains proof that the research output was peer reviewed. It consists of two fields. The first field is simply the statement "Proof of peer review". This field may (but need not) have a PDF document linked to , containing proof of peer review. The second field is a boolean flag (with values "Yes" or "No"), which simply indicates whether the PDF document containing the proof of peer-review has been verified. The default setting of this flag should be "No". Only Node Administrators can modify the value of this flag. When an Observer accesses the basic information of CAIR members, they should be able to filter on Node, Author, Year, and Type of publication, or any combination of these.

When a Node Administrator accesses the basic information and detailed information of CAIR members, they should be able to filter on Author, Year, and Type of publication, or any combination of these (they will be restricted to their own Node). For detailed information, they should also be able to filter on whether the boolean flag indicating proof of peer review.

When a CAIR member accesses the basic information and detailed information of their own research outputs, they should be able to filter on Node, Author, Year and Type of publication. For detailed information, they should also be able to filter on whether the boolean flag indicating proof of peer review. They will be restricted to outputs of which they are a co-author, but should be able to filter on their co-authors.

**Reports**

A basic report is a PDF document, listing the basic information of a list of research outputs. Any user should be able to generate a basic report. It should be possible to filter on Node, Author, Year, Type of publication, or any combination of these.

A detailed report is a basic report with a single additional entry for each research output, indicating whether or not proof of peer review for it has been verified. It should be possible to filter on Node, Author, Year, Type of publication, whether or not it there is proof of peer review, or any combination of these.

**Formatting**

To get a sense of the type of formatting that is required when accessing the basic information of a list of research outputs, have a look at this site:

https://lat.inf.tu-dresden.de/research/papers.html

When accessing detailed information in addition to basic information, the formatting should be similar, but with an field added at the end, indicating whether or not there is proof of peer review for the research output.