



LST Administration of Members and Authors

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Table of Contents

1	Introduction	5
2	Login	6
2.1	Login Process	6
2.2	LDAP Authentication	6
2.3	Permissions and Roles	7
2.3.1	LDAP Group Mapping	7
2.4	Password Management	8
2.5	Security Considerations	8
2.6	Logging Out	8
3	Usage Guide	9
3.1	Navbar	9
3.2	Home Page	9
3.3	Members Page	10
3.3.1	Calculation of the "Is Author" and "CF" Columns	12
3.3.2	Exporting Data	12
3.3.3	Info Button	13
3.3.4	Add Member Button	14
3.3.5	Edit Member Button	14
3.4	Authors Page	14
3.4.1	Author list	15
3.4.2	Info Button	15
3.4.3	Edit Author Button	16
3.4.4	Alerts notification	17
3.5	Institutes Page	17
3.5.1	Add Institute Button	17
3.5.2	Edit Institute Button	18
3.6	Statistics Page	18
3.6.1	Cards	19
3.6.2	Tables for Countries and Groups	20
3.6.3	Histograms	21

3.7 Admin Panel 23

1 Introduction

The LST Administration of Members and Authors (LAMA) system is a tool developed using Django for the LST Collaboration. It serves as a platform for managing and tracking the roles and statuses of members and authors within the collaboration.

This document offers a comprehensive overview of LAMA, detailing its core functionalities, system architecture, and operational guidelines.

The LAMA system provides:

- A database for managing members' and authors' information, including dynamic updates to names, email addresses, and institutes.
- Tools for tracking membership duration, authorship eligibility and the ability to accommodate institute changes without losing historical records.
- View and edit members' details from the Member List view.
- Automatic creation of missing AuthorDetail records to ensure consistency in authorship management.
- Remove or update outdated memberships as needed.
- Automated updates to authorship and membership periods based on predefined rules, such as maintaining a 6-month overlap for authorship after ending membership.
- The ability to export an up-to-date list of authors.

It also includes a statistics module that offers:

- Visual dashboards with summary cards.
- Filtering options by country, group, and institute.
- Historical data trends using interactive histograms.

2 Login

The LST Administration of Members and Authors system utilizes LDAP authentication to manage user access securely. Users can log in to the system using their CTAO credentials.

Upon opening LAMA webpage, the user is welcomed by a general page visible in Fig. 2.1. Click on the button "Log In To Get Started!" to be redirected to the login page.

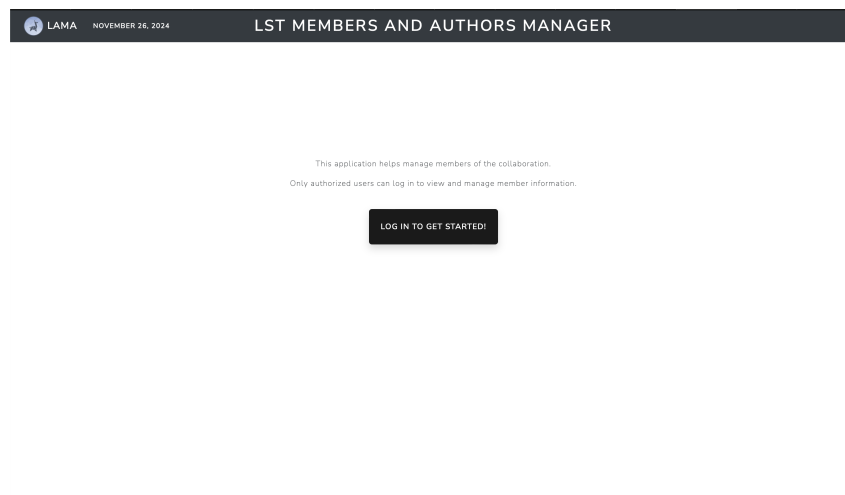


Figure 2.1 – Start view.

2.1 Login Process

To log in, users must follow these steps:

1. Navigate to the login page of the LAMA system (Fig. 2.2).
2. Enter your username in the format `name.surname`. This should match the CTAO credentials username.
3. Enter your CTAO credentials password in the provided password field.
4. Click on the "Login" button to authenticate.

Once successfully authenticated, users will be redirected to the home page.

2.2 LDAP Authentication

The system communicates with the CTAO LDAP server to verify user credentials. When a user attempts to log in, their username and password are sent to the LDAP server for validation. If the credentials are correct, the user is granted access to the LAMA system.

The authentication is handled through the following LDAP structure:

- Users must enter their `name.surname` as the username.

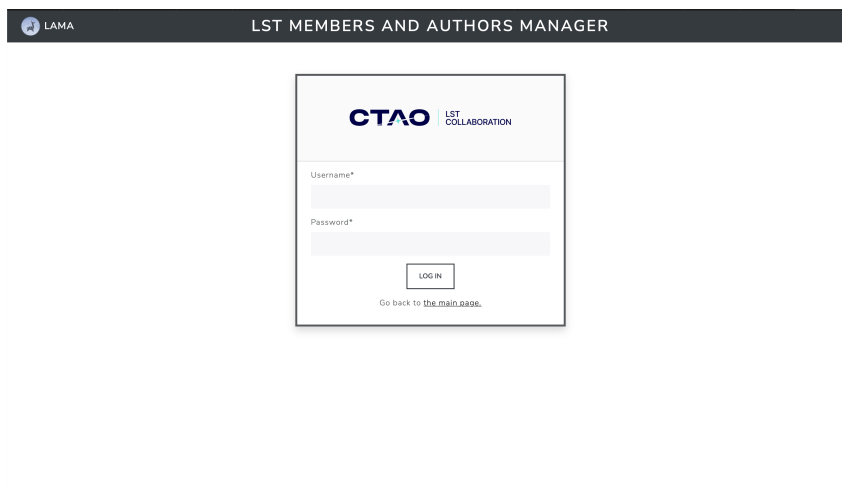


Figure 2.2 – Login page.

- The password field must match the user's CTAO credentials password.
- The LAMA system uses this information to authenticate against the organization's central LDAP server.

2.3 Permissions and Roles

Permissions are linked to specific LDAP groups, and LAMA assigns user permissions based on their group affiliation. Permissions control the level of access a user has within the system, such as viewing, editing, or managing members and authors. In LAMA, two roles are defined, with their corresponding permissions as follows:

- **Admin:** Full access to all features of the system, including managing users, members, authors, and statistics. Admin users can also assign or revoke permissions for other users.
- **Sapo:** Semi-administrative access, with the ability to edit and create institutes, manage author details for publications. Sapo users cannot manage users or system settings.
- **Viewer:** Can view data and statistics, but does not have permission to make any changes to the system. Viewers have read-only access to the system's dashboards and statistics.

2.3.1 LDAP Group Mapping

Each role within the LAMA system is mapped to an LDAP group, which determines the permissions granted to the user. When a user logs in, the system checks their LDAP group membership and grants the corresponding permissions, assigning the user to the correct role.

- **lst-membership-admin:** Members of this group are granted Admin permissions.
- **lst-sapo:** Members of this group are granted Sapo permissions.

- **lst-members:** Users in this group are granted Viewer permissions.

The system automatically checks the user's LDAP group upon login and assigns the corresponding permissions. If a user belongs to multiple groups, the highest level of permission is granted.

2.4 Password Management

Since LAMA relies on LDAP for authentication, password management is handled by the CTAO system. Users should follow the organization's guidelines for password resets and changes.

2.5 Security Considerations

To ensure the security of user data:

- The system does not store passwords; it only verifies them against the LDAP server.
- Sessions are automatically timed out after a 30-minute period of inactivity.

2.6 Logging Out

To log out of the system, users can click the "Logout" button in the top right corner of the page. Logging out will terminate the session and require re-authentication to access the system again.

3 Usage Guide

3.1 Navbar

Throughout the application, the navigation bar (Fig. 3.1) is displayed at the top of the interface, providing key tabs to navigate the site.

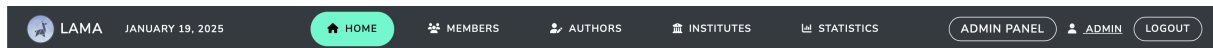


Figure 3.1 – Navigation bar of the app in case of Admin permission, with the added button "Admin Panel" compared to the standard permission level.

The navigation bar includes the following elements:

- **Admin Panel:** A button that brings the user to the Django admin site. This is only available to users with Admin permissions.
- **Username:** Displays the logged-in user's name for easy identification.
- **Logout:** Allows the user to log out of the application and end their session.

The navigation menu, located at the center of the navigation bar, includes the following tabs:

- **Home:** Returns the user to the main page (the Home Page).
- **Members:** Provides access to the Members List page, where users can view and manage member information.
- **Authors:** Provides access to the Authors List page, where users can view and edit author details for publications.
- **Institutes:** Opens the Institutes list page, allowing users to view, edit, and create institutes.
- **Statistics:** Redirects users to the Statistics page, which provides detailed visual dashboards and trends.

The currently active tab is highlighted for easy navigation. Clicking on any of the other tabs will take the user to the corresponding page.

3.2 Home Page

Once a user has logged into LAMA, they will be directed to the **Home Page**, shown in Fig. 3.2. The Home Page serves as the central hub, providing users with a quick overview of the collaboration's status.

This page presents the following summary metrics, allowing users to quickly grasp key information about the collaboration:

- Total number of active members and authors.

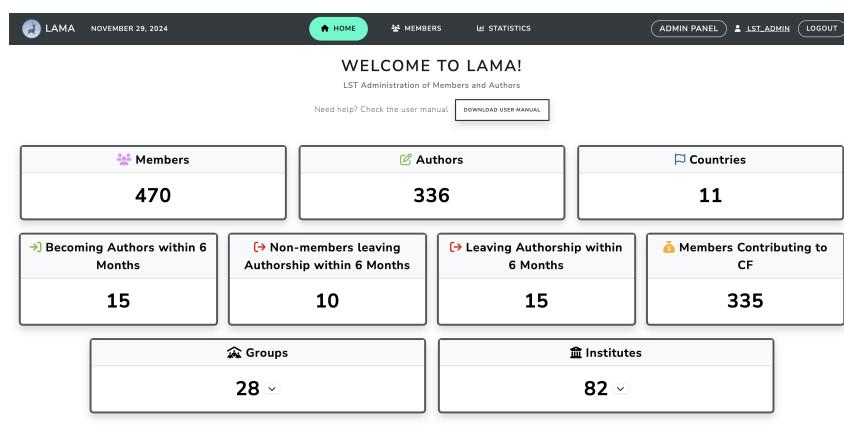




Figure 3.2 – Home view.

- Number of countries, groups, and "official" institutes involved in the project.
- Number of members who will become authors within the next 6 months.
- Number of members who are no longer members but still authors (with a max duration of 6 months).
- Number of members who will leave authorship within the next 6 months.
- Number of members contributing to the Common Fund (CF).

These key statistics are presented in summary cards for an at-a-glance overview of the most relevant data.

3.3 Members Page

The **Members Page**, displayed in Fig. 3.3, is where users can view and manage the list of members and their associated details. It is one of the main functionalities of the LAMA system, and it provides a detailed view of all members, their roles, and key information about their status within the collaboration.

The table on the Members Page includes several filters on the top left (Fig. 3.4) that help users refine the displayed data. These filters allow users to search for members based on specific criteria. There is also a search bar that enables searching for any written pattern. By default, the table shows only active members, excluding former members. To include past members, users can use the toggle switch . When active, the toggle switch turns green .

Filters are designed to be simple, offering drop-down selection options for the following criteria:

- **Country Filter:** Users can select a country from a drop-down list. The page will display only members associated with that country.
- **Group Filter:** This filter allows users to select a specific group. Only members belonging to the selected group will be displayed. By default, all groups are selected.

#	FIRST NAME	LAST NAME	INSTITUTE	GROUP	COUNTRY	MEMBERSHIP START	MEMBERSHIP END	CF	AUTHOR	AUTHORSHIP START	AUTHORSHIP END	ACTIONS
1	Miroslav	Palatka	FZU	CZECHIA	Czechia	2020-11-01	-	No	No	-	-	[Edit] [Delete]
2	Juan	Escudero	IAA, Granada	IAA-CSIC	Spain	2020-11-01	-	Yes	Yes	2021-05-01	-	[Edit] [Delete]
3	Héctor	Prieto Alfonso	U Alcala	UAH	Spain	2022-10-20	-	No	No	-	-	[Edit] [Delete]
4	Carmela	Evoli	INFN I'Aquila	INFN	Italy	2021-10-15	-	No	No	-	-	[Edit] [Delete]
5	Jamned	Green	MPP	MPP	Germany	2021-11-01	-	Yes	Yes	2022-08-01	-	[Edit] [Delete]
6	Luis Angel	Tejedor	UCM, Altas Energias	UCM-GAE	Spain	2018-01-01	-	No	No	-	-	[Edit] [Delete]
7	Gayoung	Chen	MPP	MPP	Germany	2023-07-01	-	Yes	Yes	2024-01-01	-	[Edit] [Delete]
8	Gloria Maria	Ciccari	U Palermo	INFN	Italy	2023-06-01	-	Yes	Yes	2023-12-01	-	[Edit] [Delete]
9	Tarek	Hassan	CIEMAT	CIEMAT	Spain	2018-01-01	-	Yes	Yes	2018-07-01	-	[Edit] [Delete]
10	Etienne	Lyard	U Geneva - Astro	UGENEA-ASTRO	Switzerland	2020-11-01	-	No	No	-	-	[Edit] [Delete]

(a) Admin view.

#	FIRST NAME	LAST NAME	EMAIL	INSTITUTE	GROUP	COUNTRY	MEMBERSHIP START	MEMBERSHIP END	CF	AUTHOR	AUTHORSHIP START	AUTHORSHIP END	DETAILS
1	Martin	Makariev	makariev@inrne.bas.bg	INRNE, BAS	BULGARIA	Bulgaria	2018-01-01	-	Yes	Yes	2018-07-01	-	[Details]
2	Petar	Temnikov	petar.temnikov@gmail.com	INRNE, BAS	BULGARIA	Bulgaria	2018-01-01	-	Yes	Yes	2018-07-01	-	[Details]
3	Ulisses	Barres de Almeida	ulisses@cbpf.br	CBPF	CBPF	Brazil	2018-01-01	-	Yes	Yes	2018-07-01	-	[Details]
4	Rodrigo Félix	de Araujo Cardoso	rfelix@cbpf.br	CBPF	CBPF	Brazil	2018-01-01	-	No	No	-	-	[Details]
5	Joao	Giesbrecht Paiva	joao.giesbrecht@gmail.com	CBPF	CBPF	Brazil	2022-01-01	-	Yes	Yes	2022-07-01	-	[Details]
6	Juan	Bernete Medrano	juan.bernete@ciemat.es	CIEMAT	CIEMAT	Spain	2022-02-20	-	Yes	Yes	2022-08-20	-	[Details]
7	Alajo	Cifuentes	alajo.cifuentes@ciemat.es	CIEMAT	CIEMAT	Spain	2021-12-09	-	Yes	Yes	2022-06-09	-	[Details]
8	Juan	Cortina	juan.cortina@ciemat.es	CIEMAT	CIEMAT	Spain	2018-01-01	-	Yes	Yes	2018-07-01	-	[Details]
9	Carlos	Delgado	carlos.delgado@ciemat.es	CIEMAT	CIEMAT	Spain	2018-01-01	-	Yes	Yes	2018-07-01	-	[Details]
10	Carlos	Diaz	carlos.diaz@ciemat.es	CIEMAT	CIEMAT	Spain	2018-01-01	-	Yes	Yes	2018-07-01	-	[Details]

(b) User view.

Figure 3.3 – Comparison of Admin and User views of the Members Page.

Search...

Author: All CF: All

Country: All Group: All Institute: All

Figure 3.4 – Filters for the member list.

- **Institute Filter:** This filter narrows down the list of members by selecting a specific institute. It will only show members associated with the selected institute.
- **Authors:** This filter enables users to display only members who are currently authors. The calculation for is an author is done
- **CF:** This filter enables users to display only members who are currently contributing to the Common Fund (CF).

Each of these filters can be selected independently and the Members List will update dynamically as each filter is applied.

The filters for Country, Group, and Institute are interconnected. When a country is selected, the Group filter will display only the groups within that country, and upon selecting a group, the Institute filter will display only institutes associated with the selected group.

To reset filter selections, click on the **Clear Filter** button  located on the right side of the page.

3.3.1 Calculation of the "Is Author" and "CF" Columns

Two key columns in the Members Table are **Is Author** and **CF** (Contributing to Common Fund). These fields are calculated as follows:

- **Is Author:** A member is marked as an author if:
 1. They have a valid authorship period.
 2. The current date (today) is greater than or equal to the start date of the authorship period (`authorship_period.start_date`).
 3. Either:
 - The `authorship_period.end_date` date is not set, or
 - The `authorship_period.end_date` ends on or after the current date.

If these conditions are met, the member is considered an active author. If any of these conditions change, the member's `is_author` field is updated in the database.

- **CF:** A member is marked as contributing to the Common Fund if:
 1. They are an active author (`is_author`) or will become an author within the next six months (`will_become_author`).
 2. Their authorship period starts on or before a date six months in the future (`six_months_future`).
 3. Either:
 - The authorship period does not have an end date, or
 - The authorship period ends after the six-month threshold.

The `six_months_future` threshold is calculated as the current date plus six months, using the `relativedelta` module from Python's `dateutil` package. This allows to account for months with different numbers of days as leap years.

The `relativedelta(months=6)` expression guarantees that exactly six calendar months are added to the current date, taking these variations into account, making the calculation more reliable and accurate than adding a fixed number of days (e.g., 180 days). This ensures that CF eligibility accounts for members whose authorship starts within the next six months.

These calculations ensure that the **Is Author** and **CF** statuses are dynamically updated based on the member's data.

3.3.2 Exporting Data


There is also the option to download the filtered data in several formats, by clicking on the corresponding button    . The export options available are:

- **Copy** (to Clipboard)

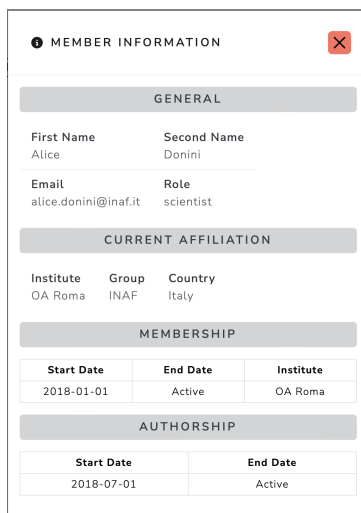
- **CSV** Format
- **Excel** Format
- **Print**

These options will export the data currently displayed on the Members List. If filters are applied, only the filtered results will be exported.

3.3.3 Info Button

In the **Details** column of the table, there is an **Info** button  that provides more detailed information about each member. Clicking this button opens a pop-up window (Fig. 3.5) that displays a comprehensive overview of the member's information, organized into the following sections:

- **General:** Displays the member's first name, second name, email address, and role.
- **Current Affiliation:** Shows the member's current institute, group, and country. For former members, a message indicates "No current affiliation."
- **Membership:** Lists all membership periods, including the start and end dates, as well as the institute associated with each period. If no end date is set, "Active" is displayed for the end date.
- **Authorship:** Details the member's authorship periods, including start and end dates for active authorship. If the member has no active authorship but a future period is defined, the start date of the future period is specified. If the member is not an author or no authorship periods are available, a message indicates "No authorship period."



The modal window, titled "MEMBER INFORMATION", displays the following data for member Alice Donini:

GENERAL		
First Name	Second Name	
Alice	Donini	
Email	Role	
alice.donini@inaf.it	scientist	


CURRENT AFFILIATION		
Institute	Group	Country
OA Roma	INAF	Italy

MEMBERSHIP		
Start Date	End Date	Institute
2018-01-01	Active	OA Roma

AUTHORSHIP	
Start Date	End Date
2018-07-01	Active

Figure 3.5 – Modal showing member information.

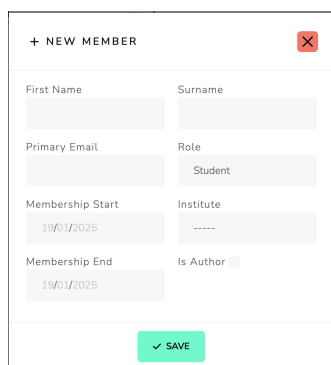
3.3.4 Add Member Button

For users with admin permission level, there is the option to add members by clicking the **Add Member** button  on the top left of the page (see Fig. 3.3a). After clicking this button, a modal will open, allowing the user to input the necessary information for adding a new member (see Fig. 3.6a). The requested fields are:

- **First Name** and **Surname** (mandatory)
- **Primary Email** (mandatory)
- **Role**
- **Membership Start** and **Membership End** (the end date can be left blank)
- **Institute** (mandatory)

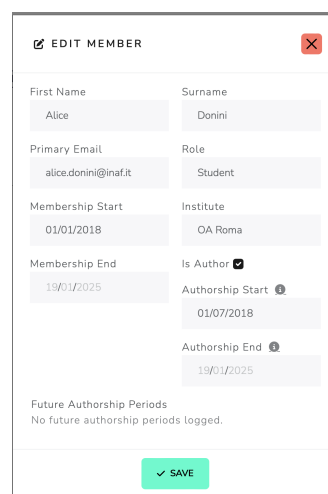
Additionally, there is a check-box for:

- **Is Author:** If checked, the authorship start date will be automatically set to 6 months after the start of the membership.



The modal titled '+ NEW MEMBER' contains the following fields: First Name, Surname, Primary Email, Role (with 'Student' selected), Membership Start (19/01/2025), Institute (empty), Membership End (19/01/2025), and Is Author (checkbox). A green 'SAVE' button is at the bottom.

(a) Modal to add a new member.




The modal titled 'EDIT MEMBER' contains the following fields: First Name (Alice), Surname (Donini), Primary Email (alice.donini@inaf.it), Role (Student), Membership Start (01/01/2018), Institute (OA Roma), Membership End (19/01/2025), Is Author (checked), Authorship Start (01/07/2018), and Authorship End (19/01/2025). A section for 'Future Authorship Periods' shows 'No future authorship periods logged.' A green 'SAVE' button is at the bottom.

(b) Modal to edit member's data.

Figure 3.6 – The two modal accessible to manage member information for admin users.

3.3.5 Edit Member Button

For users with admin permission level, an **Edit** button  is available in the **Details** column of the table. This button allows users to edit any information related to the member.

3.4 Authors Page

The **Authors Page**, displayed in Fig. 3.8, is designed to display and manage active authors within the system. This page ensures that all author information, including affiliations and publication-related details, is accurate and consistent for academic and professional use.

#	FIRST NAME	LAST NAME	INSTITUTE	GROUP	COUNTRY	AUTHORSHIP START	AUTHORSHIP END	MAIN AFFILIATION	ACTIONS
1	Yukio	Kobayashi	U Tokyo, ICRR	JAPAN	Japan	2018-07-01	-	U Tokyo, ICRR	[Info] [Edit] [Delete]
2	Fuyuki	Tokanai	U Yamagata	JAPAN	Japan	2018-07-01	-	U Yamagata	[Info] [Edit] [Delete]
3	Dai	Tateishi	U Saitama	JAPAN	Japan	2021-04-01	-	U Saitama	[Info] [Edit] [Delete]
4	David	Sanchez	LAPP	LAPP	France	2018-07-01	-	LAPP	[Info] [Edit] [Delete]
5	Stefano	Marchesi	OA Roma	INAF	Italy	2023-11-15	-	U Bologna - DF	[Info] [Edit] [Delete]
6	Masaki	Hashizume	U Hiroshima	JAPAN	Japan	2024-09-12	-	No Affiliation	[Info] [Edit] [Delete]
7	Ivan	Agudo	IAA, Granada	IAA-CSIC	Spain	2018-07-01	-	IAA, Granada	[Info] [Edit] [Delete]
8	Juan	Escudero	IAA, Granada	IAA-CSIC	Spain	2021-05-01	-	IAA, Granada	[Info] [Edit] [Delete]
9	Mirko	Bunse	TU Dortmund	DORTMUND	Germany	2024-07-01	2025-07-01	TU Dortmund - AI	[Info] [Edit] [Delete]
10	Matteo	Balbo	U Geneva - DPNC	UGENEVA-PHYSICS	Switzerland	2024-05-15	-	U Geneva - Astro	[Info] [Edit] [Delete]

Figure 3.7 – Authors page overview.


3.4.1 Author list

The Authors Page provides tools for generating author lists tailored for publication. At the top left of the page, a dropdown menu allows users to select from eight predefined journals (e.g., *Nature*, *Science*, *ApJ*, etc.). After selecting a journal, users can export a .tex file containing the author list formatted according to the chosen journal's guidelines.

To further refine the exported list, a date selector is available, enabling users to specify a cutoff date. Only members who are active authors as of the selected date will appear in the exported list. This functionality ensures that the author list remains accurate and adheres to journal-specific formatting requirements (see Fig. 3.8).

Figure 3.8 – Export options for generating journal-specific author lists.

3.4.2 Info Button

Like for the other pages, The **Info** button , located in the **Details** column of the Authors Page table, provides more detailed information about each author.

Clicking this button opens a pop-up window (Fig. 3.9) displaying detailed data organized into three sections:

- **General:** Displays the author's basic information, including their first and last name, email, group, institute, and country.
- **Authorship:** Lists active and past authorship periods with their start and end dates. If there are no periods, a message indicates 'No authorship period'.
- **Publishing Info:** Provides details for publications, like the author's name, email, ORCID, and affiliations. If multiple affiliations exist, they are displayed in order of appearance, with additional descriptions where available.

AUTHOR INFORMATION

GENERAL

First Name	Second Name
Alice	Donini
Email	Institute
alice.donini@inaf.it	OA Roma
Group	Country
INAF	Italy

AUTHORSHIP

Start Date	End Date
2018-07-01	Active

PUBLISHING INFO

Author Name	ORCID
A. Donini	0000-0002-3066-724X


Email
alixd90@gmail.com

Affiliations

1. OA Roma
INAF - Osservatorio Astronomico di Roma, Via di
Frascati 33, 00040, Monteporzio Catone, Italy

Figure 3.9 – Pop-up window displaying detailed author information.

3.4.3 Edit Author Button

For users with admin or sapo permission level, an **Edit** button  is available in the **Details** column of the table.

Clicking this button opens a pop-up window (Fig. 3.10) where is possible to edit publishing information related to the author.

EDIT AUTHOR

Full Name

A. Donini

Family Name

Donini

Given Name

A.

ORCID

0000-0002-3066-724

Email

alixd90@gmail.com

Publishing Affiliations

OA Roma

REMOVE

ADD AFFILIATION

✓ SAVE

Figure 3.10 – Pop-up window to edit author information.

3.4.4 Alerts notification

Warnings are displayed at the top of the Authors Page to highlight missing critical information for the author list. These notifications appear as alert boxes and inform administrators if any author is missing essential details, such as their name used in publications or affiliation information. These alerts ensure data gaps are promptly identified and addressed, maintaining the accuracy and completeness of author records (see Fig. 3.11).

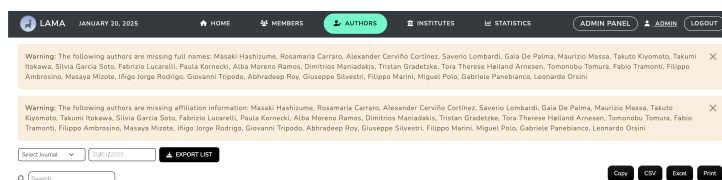


Figure 3.11 – Alerts on the Authors Page highlighting missing details for some authors.

3.5 Institutes Page

The **Institutes Page**, shown in Fig. 3.12, serves as a centralized interface for managing all institutes within the collaboration. Institutes are classified into two categories: official and non-official. Non-official institutes are primarily created for publication purposes and serve as affiliation options for authors.

#	INSTITUTE NAME	LONG NAME	GROUP	COUNTRY	OFFICIAL	LONG DESCRIPTION	ACTIONS
1	ASU	ASU	CZECHIA	Czechia	Yes	Astronomical Institute of the Czech Academy of Sciences, Borni II 1401 - 14100 Prague, Czech Republic	
2	CBPF	CBPF	CBPF	Brazil	Yes	Centro Brasileiro de Pesquisas Físicas, Rua Xavier Sigaud 150, RJ 22290-180, Rio de Janeiro, Brazil	
3	CIEMAT	CIEMAT	CIEMAT	Spain	Yes	CIEMAT, Avda. Complutense 40, 28040 Madrid, Spain	
4	CIEMAT-PIC	CIEMAT-PIC	CIEMAT	Spain	Yes	Port d'Informació Científica, Edifici D, Carrer de l'Albareda, 08193 Bellaterra (Cardanyola del Vallès), Spain	
5	CPPM	CPPM, CNRS-IN2P3, Aix-Marseille Université	CPPM	France	Yes	Aix Marseille Univ, CNRS-IN2P3, CPPM, Marseille, France	
6	EPFL	Ecole Polytechnique Fédérale	EPFL	Switzerland	Yes	Laboratory for High Energy Physics, Ecole Polytechnique Fédérale, CH-1015 Lausanne, Switzerland	
7	FESB	FESB	CROATIA	Croatia	Yes	University of Split, FESB, R. Bolšakovića 32, 21000 Split, Croatia	
8	FZU	FZU	CZECHIA	Czechia	Yes	FZU - Institute of Physics of the Czech Academy of Sciences, Na Slovance 1999/2, 182 21 Praha 8, Czech Republic	
9	IAA, Granada	IAA, Granada	IAA-CSIC	Spain	Yes	Instituto de Astrofísica de Andalucía-CSIC, Glorieta de la Astronomía s/n, 18008, Granada, Spain	
10	IAC	IAC	IAC	Spain	Yes	Instituto de Astrofísica de Canarias and Departamento de Astrofísica, Universidad de La Laguna, C. Vía Láctea, s/n, 38205 La Laguna, Santa Cruz de Tenerife, Spain	

Figure 3.12 – Overview of the Institutes Page..

3.5.1 Add Institute Button

Users with **admin** or **sapo** permissions can add new institutes by clicking the **Add Institute** button located at the top left of the page (see Fig. 3.12). Clicking this button opens a modal where users can input the necessary details to create a new institute, as shown in Fig. 3.13a.

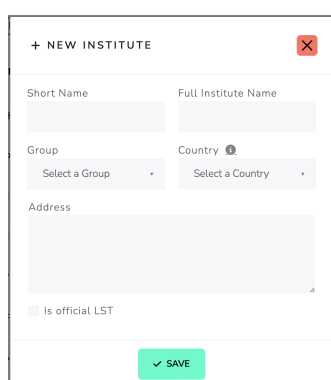
The required fields for adding an institute include:

- **Short Name** (mandatory): serves as a concise identifier for the institute, often used in tables or drop-down selections where space is limited.

- **Full Institute Name** (mandatory): provides the official, complete designation of the institute.
- **Group** (mandatory): This field links the institute to a specific group within the collaboration.
- **Country**: Specifies the country where the institute. If just the group is selected, the country is automatically derived from the group information.
- **Address**: The detailed physical address of the institute. Used in publications.

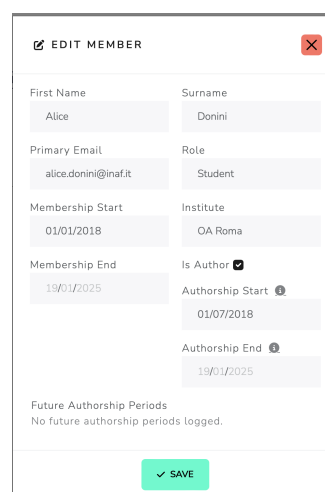
Additionally, there is a check - box for:

- **Is Official LST**: When selected, the institute is marked as official within the collaboration, and relevant statistics will be available for it.



The modal titled '+ NEW INSTITUTE' contains the following fields: 'Short Name' (text input), 'Full Institute Name' (text input), 'Group' (dropdown menu with 'Select a Group'), 'Country' (dropdown menu with 'Select a Country'), 'Address' (text area), and 'Is official LST' (checkbox). A green 'SAVE' button is at the bottom right.

(a) Modal to add a new institute.




The modal titled 'EDIT MEMBER' contains the following fields: 'First Name' (text input with 'Alice'), 'Surname' (text input with 'Donini'), 'Primary Email' (text input with 'alice.donini@inaf.it'), 'Role' (text input with 'Student'), 'Membership Start' (date input with '01/01/2018'), 'Institute' (text input with 'OA Roma'), 'Membership End' (date input with '19/01/2025'), 'Is Author' (checkbox, checked), 'Authorship Start' (date input with '01/07/2018'), and 'Authorship End' (date input with '19/01/2025'). A section for 'Future Authorship Periods' shows 'No future authorship periods logged.' A green 'SAVE' button is at the bottom right.

(b) Modal to edit institute details.

Figure 3.13 – Modals for managing institute information, accessible to users with admin or sapo permissions.

3.5.2 Edit Institute Button

For users with either **admin** or **sapo** permissions, an **Edit** button  is available in the **Details** column of the institutes table. Clicking this button opens a modal, allowing users to update any information related to the selected institute (see Fig. 3.13b).

3.6 Statistics Page

The **Statistics Page** provides users with visual insights into the collaboration's dynamics. This page includes:

- **Summary Cards**: that show the total number of members and authors.
- **Tables for Countries and Groups**: tables summarizing the total number of members and authors, both in absolute numbers and percentages, along with their average number over the last 12 months.

- **Trend Analysis:** interactive charts to visualize member and author trends over time.

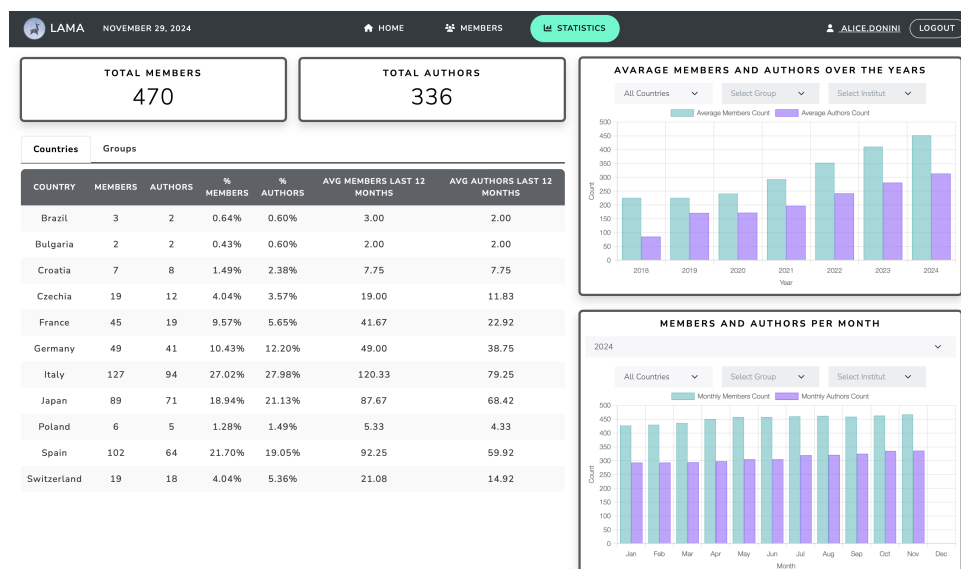


Figure 3.14 – Statistic page view.

3.6.1 Cards

Two cards display the total number of **Members** and **Authors**. The calculations for these totals are as follows:

- **Total Members:** The total number of active members is calculated by filtering members whose membership_end_date is either in the future or not set. Specifically, members are selected where:
 - Their end_date is greater than the current date (today), or
 - Their end_date is null, meaning their membership has no defined end date and is ongoing.

This ensures that only currently active members are included in the count.

- **Total Authors:** The total number of authors is calculated by checking members who have an authorship_start date that is less than or equal to the current date, and either:
 - Their authorship_end date is null (indicating ongoing authorship), or
 - Their authorship_end date is after the current date.

This ensures that only members whose authorship is currently active (or ongoing) are counted as authors.

These calculations are performed dynamically to ensure that the total number of **Members** and **Authors** displayed on the Statistics Page accurately reflects the current status based on the latest membership and authorship data.

3.6.2 Tables for Countries and Groups

The data tables for countries and groups show detailed statistics on members and authors over the last 12 months, broken down by the following:

3.6.2.1 1. Countries

The table for countries shows the total number of members and authors in each country, the percentage of the total collaboration members and authors, as well as the average number of members and authors over the last 12 months.

- **Members by Country:** The count of active members in each country is based on their membership start and end dates wrt to the current date. The query filters members whose membership start date is before or equal to today's date and whose end date is either null or after today. This ensures that only members and authors who are currently active (i.e., their membership or authorship is ongoing) are included in the count.
- **Authors by Country:** The count of active authors in each country is based on their authorship start and end dates wrt to the current date. The query filters authors whose authorship start date is before or equal to today's date and whose authorship end date is either null or after today.
- For each country, the percentages of active members and authors are calculated relative to the total number of active members and authors in the entire collaboration.
- The average number of members and authors over the last 12 months is calculated by evaluating **the count of active members or authors on the 15th of each month**. Specifically:
 - If the current date is before the 15th of the month, the calculation starts from the 15th of the previous month and excludes the current month.
 - If the current date is on or after the 15th, the calculation includes the current month, starting from the 15th.
 - For each of the last 12 months, the active members or authors are counted by filtering records where the start date is less than or equal to the 15th of the month and the end date is either null or after the 15th.
 - These monthly counts are then averaged over the 12-month period.

3.6.2.2 2. Groups

The table for groups provides a similar breakdown, showing the total number of members and authors in each group, their percentages of the total collaboration members and authors, and their averages over the last 12 months.

- **Members by Group:** The count of active members in each group is calculated similarly to the country count. Members in a specific group are filtered by their membership start and end dates relative to the current date.
- **Authors by Group:** The count of active authors in each group is calculated in the same way as the country-based authorship counts. Authors are filtered by their authorship start and end dates.

- **Percentages:** For each group, the percentages of active members and authors are calculated relative to the total number of active members and authors in the collaboration.
- The average number of members and authors over the last 12 months is calculated similarly to the country table:
 - If the current date is before the 15th of the month, the calculation starts from the 15th of the previous month and excludes the current month.
 - If the current date is on or after the 15th, the calculation includes the current month, starting from the 15th.
 - For each of the last 12 months, the active members or authors are counted by filtering records where the start date is less than or equal to the 15th of the month and the end date is either null or after the 15th.
 - These monthly counts are then averaged over the 12-month period, providing insights into group-specific trends over time.

3.6.3 Histograms

There are two histograms on the statistics page: one displays the **Average Members and Authors Over the Years**, and the other shows the **Members and Authors Per Month** for a selected year.

3.6.3.1 Average Members and Authors per Year

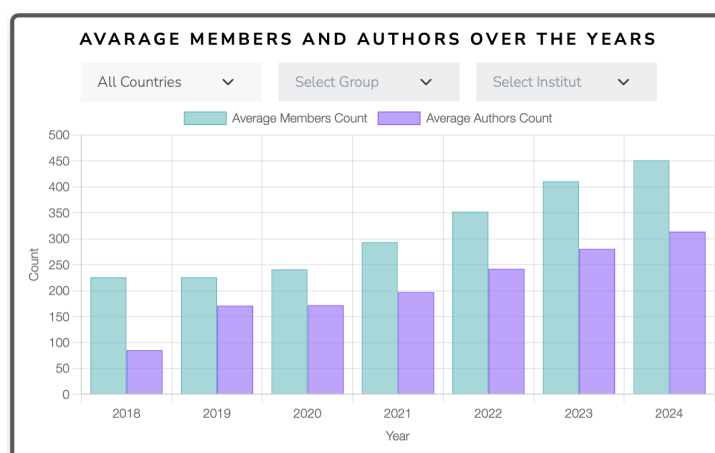


Figure 3.15 – Average Members and Authors Over the Years histogram.

The histogram that displays the average number of members and authors over the years is generated by calculating yearly averages based on the selected filters (such as country, group, and institute). The average number of members and authors per year is computed by evaluating the active counts on the 15th of each month within the year. The calculation considers whether the year is the current year or a previous one:

- **For the current year:** The average is based on the counts up to the current month. For each month, the active members or authors are filtered and counted as those whose:

- Membership or authorship start date is on or before the 15th of the month.
- Membership or authorship end date is either null or after the 15th of the month.

The counts for all considered months are then averaged by dividing the total count by the number of months elapsed in the current year (e.g., up to November for a query executed in November).

- **For previous years:** The average is calculated using the counts for all 12 months. Similar filtering criteria are applied for each month, but the divisor is fixed at 12, representing the total months in the year.

The calculated averages are displayed in a histogram, where the x-axis represents the years (e.g., 2018 to the current year), and the y-axis represents the average counts of members and authors. Separate lines are plotted for members and authors to visualize their trends over time.

3.6.3.2 Members and Authors Per Month

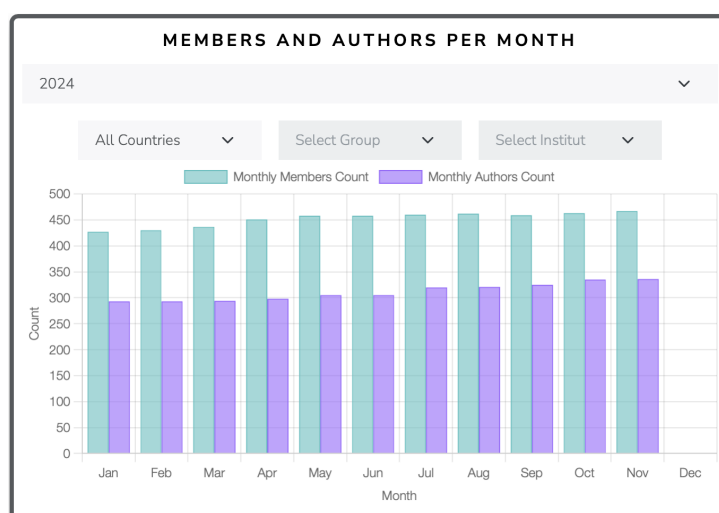


Figure 3.16 – Members and Authors Per Month histogram.

This histogram shows monthly trends in the number of active members and authors for a selected year. Users can apply filters such as **Year**, **Country**, **Group**, and **Institute** to explore specific subsets of data. If no filters are applied, the visualization shows all members and authors for the chosen year, offering a comprehensive overview.

Data Filters: The data displayed in the histogram dynamically adjusts based on the filters selected:

- **Year:** Choose a specific year to visualize its monthly activity.
- **Country:** Narrow the data to members and authors associated with a specific country.
- **Group:** Focus on members and authors from a particular group.
- **Institute:** Drill down to data associated with a specific institute.

When no specific selections are made, all data for the chosen year is displayed by default.

Monthly Active Count For each month in the selected year, active members and authors are identified based on the following criteria:

- **Active Members:**
 - Their membership start date is on or before the 15th of the month.
 - Their membership end date is either null or occurs after the 15th of the month.
- **Active Authors:**
 - Their authorship start date is on or before the 15th of the month.
 - Their authorship end date is either null or occurs after the 15th of the month.

These criteria ensure that all members and authors contributing to activity within a given month are accurately counted. The histogram considers the data up to the current month. If the selected year matches the current year, the data will include only months up to the current month. For years earlier than the current year, data is included for all 12 months.

3.7 Admin Panel

For users with Admin permissions, the **Admin Panel** provides access to the Django admin site. Here, administrators can manage system settings, permissions, and perform tasks such as:

- Viewing and editing user roles and permissions.
- Managing group associations and ensuring correct access rights for each user.
- Monitoring and managing all data within the system.