High–level accessibility review – LAA

(MathSciNet platform)

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MathSciNet platform

Summary

Top 3 problems for the MathSciNet platform

This high-level assessment covers limited portions and functionality of the MathSciNet platform. The assessment revealed issues with assistive technology compatibility, resulting in some users missing information required to understand content, states and operate functions. It is important to keep in mind that the findings represent a high-level assessment, and do not reflect the results of a Deque Comprehensive Web Assessment.

1. **Contrast (minimum) –** There is a contrast issue with blue links throughout the site when used on the light gray background.
2. **Non-text Contrast –** Focus indicators for most of the interactive content does not have enough contrast.
3. **Name, Role, Value –** There are several instances that occur on multiple pages where specific states are missing or are not used properly.

Review of Top Accessibility issues from previous evaluation

Majority of the issues have been resolved. The only issue that remains is the labeling issue with forms. It appears that most have an accessible name/label but some are missing visible labels.

Accessibility findings

Project wide issues

The issues presented in this section were identified in multiple pages and are recorded here to avoid repetition. These are applicable to each screen. Due to particularities, similar issues are still reported on a page per page basis, where applicable.

Automated findings using Axe

Issues found through automated testing come from the Axe plugin, an open-source accessibility testing tool that is available for Chrome, Firefox and Edge. Details here: https://www.deque.com/products/axe/.

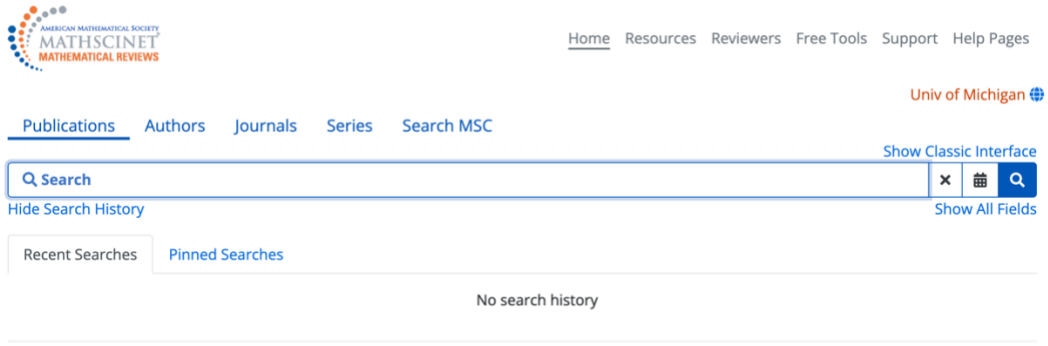
No sitewide issues were found with automated testing.

Additional manual findings using NVDA screen reader

1. **SC 1.1.1 A** – Non-text Content – The MathSciNet logo has a name of “MathSciNet” which does not tell the purpose of the image. Should be something like “MathSciNet Home”.
2. **SC 1.4.11 AA** – Non-text Contrast – The “Previous Release” button focus indicator (#96B6E1) on the bottom of all pages only has a contrast ratio of 2.1:1 with the white (#ffffff) background and must have at least 3:1 contrast.

1. Landing Page

Source: https://mathscinet-ams-org.proxy.lib.umich.edu/mathscinet/publications-search
Test case: Test initial interface/landing page to ensure menus, sub-menus, search box, images, icons, etc. are accessible.



Automated findings using Axe

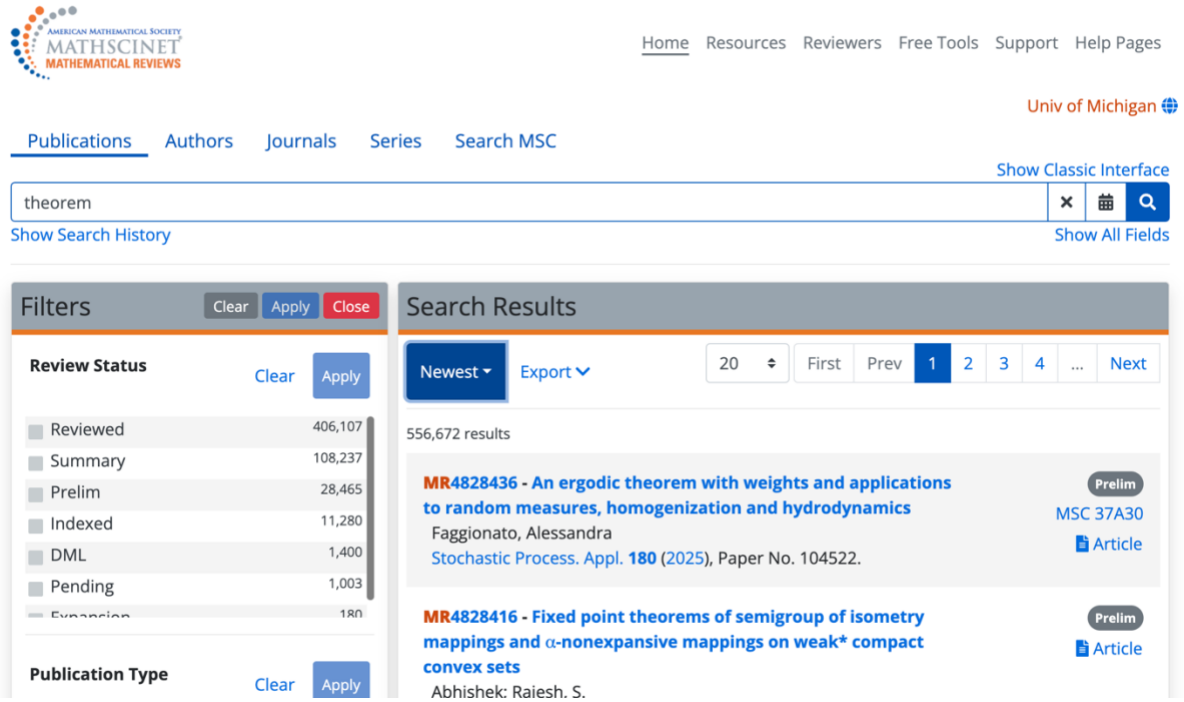
1. **SC 1.4.3 AA** – Contrast (minimum) – The blue (#4179C6) search text only has a contrast ratio of 4.4:1 with the white (#ffffff) background and must have at least 4.5:1 contrast.
2. **SC 4.1.2 A** – Name, Role, Value – The search field has the aria attribute of aria-autocomplete which is not allowed for the element.

Additional manual findings using NVDA screen reader

1. **SC 1.4.11 AA** – Non-text Contrast – The close button (#5E666c) on the calendar modal only has a contrast ratio of 2.3:1 with the gray (#97A4AE) background and must have at least 3:1 contrast.
2. **SC 1.4.11 AA** – Non-text Contrast – The clear, calendar and search buttons focus indicator (#96B6E1) on the search bar only has a contrast ratio of 2.1:1 with the white (#ffffff) background and must have at least 3:1 contrast.
3. **SC 4.1.2 A** – Name, Role, Value – The “Show All Fields” and “Show Search History” buttons are missing the expand/collapse state.

2. Search Results – Theorem

Source: https://mathscinet-ams-org.proxy.lib.umich.edu/mathscinet/publications-search?query=Theorem&page=1&size=20&sort=newest&facets=
Test case: From the initial landing page, conduct a search for: "Theorem". Test search results page, including filters/refine search Publication Type- Journal Article and sort by options.



Automated findings using Axe

1. **SC 1.4.1 A** – Use of Color – The blue (#026dde) links for each search result only have a contrast ratio of 2.996:1 with the dark gray (#25282B) surrounding text and must have at least 3:1 contrast or have another way such as an underline to distinguish them from surrounding text.
2. **SC 1.4.3 AA** – Contrast (minimum) – The blue (#026dde) links for each search result only have a contrast ratio of 4.49:1 with the gray (#f4f4f4) background and must have at least 4.5:1 contrast.
3. **SC 1.4.3 AA** – Contrast (minimum) – The red (#ce490f) MR for each search result only has a contrast ratio of 4.16:1 with the gray (#f4f4f4) background and must have at least 4.5:1 contrast.
4. **SC 4.1.2 A** – Name, Role, Value – The search field has the aria attribute of aria-autocomplete which is not allowed for the element.

Additional manual findings using NVDA screen reader

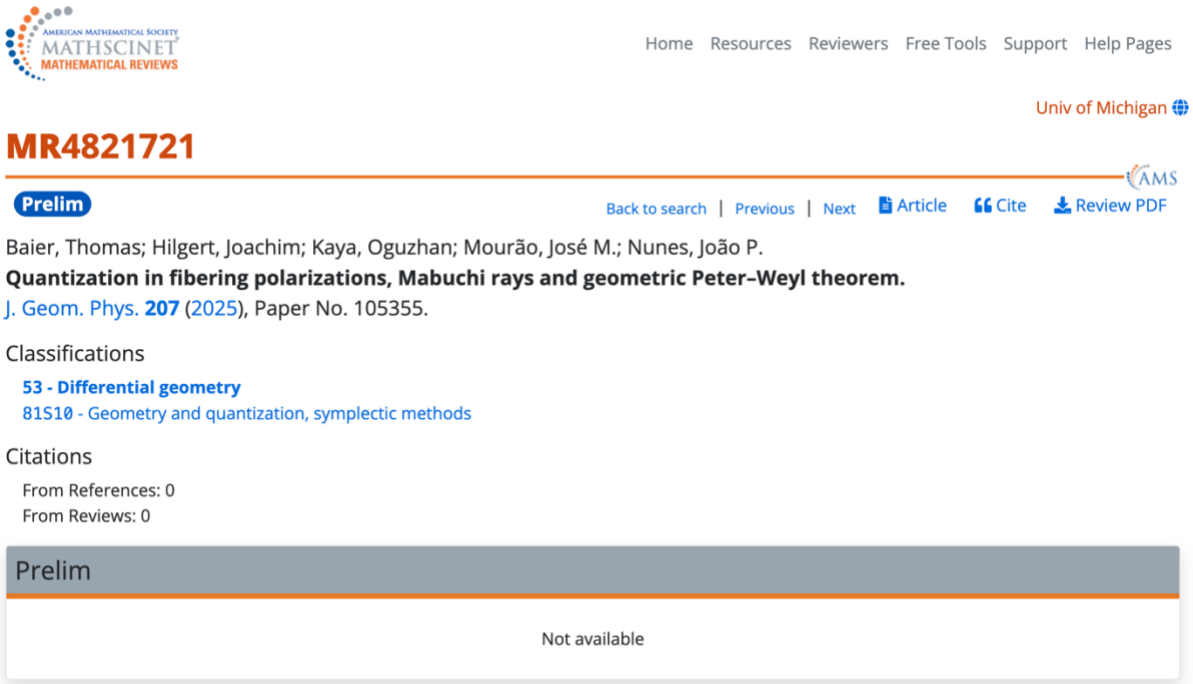
1. **SC 1.4.11 AA** – Non-text Contrast – The apply, newest, export, and pagination buttons focus indicator (#96B6E1) only has a contrast ratio of 2.1:1 with the white (#ffffff) background and must have at least 3:1 contrast.
2. **SC 1.4.11 AA** – Non-text Contrast – The clear button focus indicator (#869090) under Filters only has a contrast ratio of 1.3:1 with the gray (#97A4AE) background and must have at least 3:1 contrast.
3. **SC 1.4.11 AA** – Non-text Contrast – The apply button focus indicator (#7592B5) under Filters only has a contrast ratio of 1.3:1 with the gray (#97A4AE) background and must have at least 3:1 contrast.
4. **SC 1.4.11 AA** – Non-text Contrast – The close button focus indicator (#BF7E87) under Filters only has a contrast ratio of 1.3:1 with the gray (#97A4AE) background and must have at least 3:1 contrast.
5. **SC 1.4.11 AA** – Non-text Contrast – The prelim button focus indicator (#B0B5B8) under each search result only has a contrast ratio of 1.9:1 with the gray (#f4f4f4) background and must have at least 3:1

contrast.

6. **SC 1.4.11 AA** – Non-text Contrast – The checkboxes (#C5CCCF) only has a contrast ratio of 1.6:1 with the white (#ffffff) background and must have at least 3:1 contrast.
7. **SC 1.4.11 AA** – Non-text Contrast – The checkboxes (#C5CCCF) only has a contrast ratio of 1.5:1 with the light gray (#F4F4F4) background and must have at least 3:1 contrast.
8. **SC 3.3.2 A** – Labels or Instructions – The “Citation Field” when export is expanded does not have a visible label.
9. **SC 4.1.2 A** – Name, Role, Value – The “Newest” button is missing the expanded state and doesn’t announce when it is expanded.
10. **SC 4.1.2 A** – Name, Role, Value – The “Export” button is missing the expanded/collapsed state.

3. Search Results Landing Page

Source: https://mathscinet-ams-org.proxy.lib.umich.edu/mathscinet/article?mr=4821721
Test case: Test individual search result landing page of MR4821721- Quantization in fibering polarizations, Mabuchi rays and geometric Peter-Weyl theorem & test actual document (PDF, video, etc.).



Automated findings using Axe

1. **SC 1.4.1 A** – Use of Color – The blue (#026dde) links only have a contrast ratio of 2.996:1 with the dark gray (#25282B) surrounding text and must have at least 3:1 contrast or have another way such as an underline to distinguish them from surrounding text.

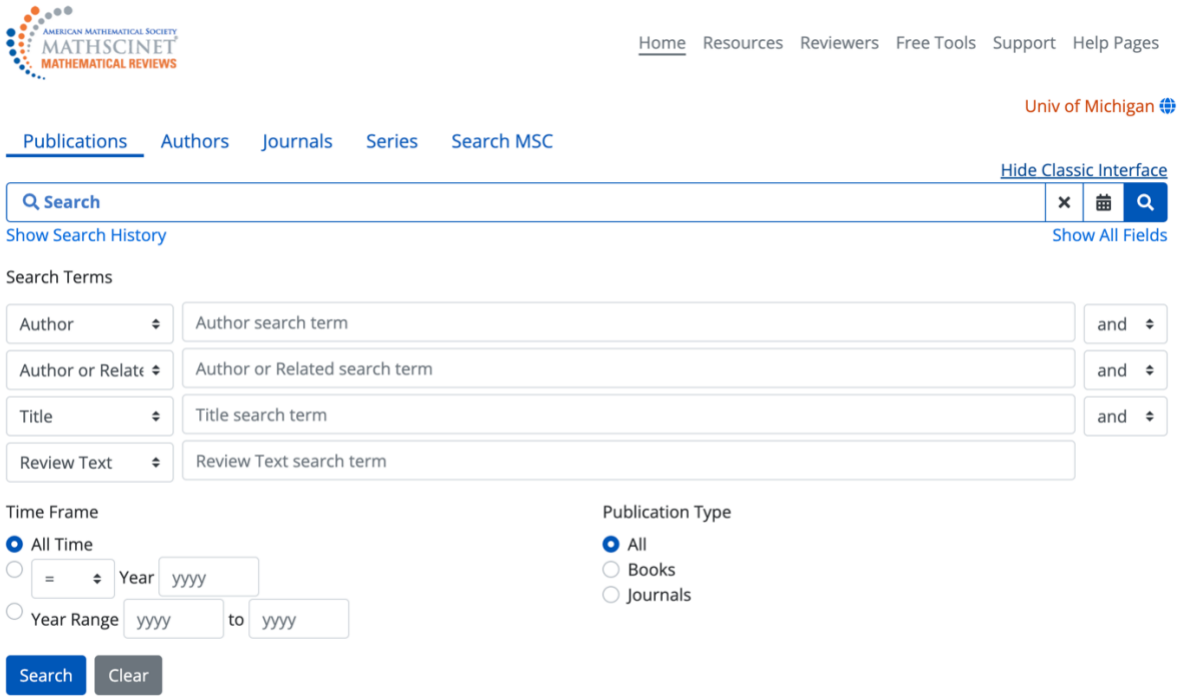
Additional manual findings using NVDA screen reader

No manual issues that pertained to just this page were found.

4. Advanced Search

Source: https://mathscinet-ams-org.proxy.lib.umich.edu/mathscinet/publications-search

Test case: Test advanced search page.



Automated findings using Axe
No automated issues found specific to this component.

Additional manual findings using NVDA screen reader
Not assessed due to insufficient time.