IEEE RESEARCH PAPER VERIFICATION AND SCREENING SOLUTION DESIGN DOCUMENTATION

Solution Design Overview:

This solution is designed to facilitate the verification and screening process for research papers submitted by users. It consists of three main modules: User Module, Reviewer Module, and Admin Module.

User Module:

1. **User Registration:**
   Users can register with the system, generating a unique 16-digit number automatically.

2. **User Login:**
   Registered users can log in to the system using their credentials.

3. **Paper Submission:**
   Users can upload their research papers through the system.

4. **Check Status:**
   Users can view the status of their submitted papers.

Reviewer Module:

1. **Reviewer Login:**
   Reviewers can log in to the system using their credentials.

2. **Access Document:**
   Reviewers can enter the 16-digit number to access the submitted document for review.

3. **Review Process:**
   Reviewers will evaluate the document based on three screening criteria: peer review, camera-ready, and presentation.

4. **Recommendation:**
   Reviewers will provide recommendations for the submitted document.

5. **Approval Process:**
   If two reviewers accept the document for each screening criterion, it proceeds to the next stage.

Admin Module:

1. **Admin Login:**
   Admins can log in to the system using their credentials.

2. **Access Status:**
   Admins can view the status, date, name of users, and reviewers.

3. **Manage System:**
   Admins have access to system management functionalities.

Three Screening Criteria:

1. **Peer Review:**
   - Reviewers will assess the quality, relevance, originality, and significance of the research paper.
   - Criteria may include methodology, results, and contribution to the field.
   - Feedback on strengths and weaknesses will be provided.

2. **Camera-Ready Check:**
   - Reviewers will ensure proper formatting and adherence to publication guidelines.
   - Verification of margins, font size, figures, tables, citations, and references will be conducted.
   - Paper readiness for publication without formatting errors will be confirmed.

3. **Presentation Evaluation:**
   - Reviewers will evaluate clarity, organization, and coherence of the research paper.
   - Assessment of structure, flow of ideas, language clarity, and readability will be performed.
   - Feedback on effective communication of research findings will be given.

4. **Final Verdict Stage:**
   - Admin makes the final decision (approved or rejected).
   - If approved, the application is published.
   - Transaction status logs are maintained for each stage.

Approval Process:

- **Dual Reviewer Approval:**
  - Each screening criterion requires approval from both reviewers for the paper to proceed.
  - If both reviewers approve a criterion, the paper advances to the next stage.
  - Rejection by either reviewer prompts revision based on feedback before resubmission.

- Only with dual reviewer approval for all three criteria can the paper progress for further processing or publication.

This comprehensive design outlines the functionalities, screening criteria, and approval process for the IEEE Research Paper Verification and Screening System using the MERN stack technology.

Technology Stack:

- Frontend: React.JS
- Backend: Node.js
- Database: MongoDB
- Authentication: JWT for user authentication

Additional Considerations:

- Use RESTful APIs for communication between frontend and backend.
- Implement role-based access control for users, reviewers, and admins.
- Ensure data security and encryption for sensitive information.
- Implement error handling and validation mechanisms.
- Use responsive design for better user experience across devices.

This design document provides a basic outline of the system architecture and functionality. You can further elaborate on each module, define API endpoints, database schema, and detailed workflows based on your project requirements.