Computational Design & Synthesis to Facilitate Science Communication

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Abstract: Experts often deliver poster presentations at scientific conferences. These posters are filled with text, charts, and graphs to illustrate their latest research findings. However, the typical scientific poster may not be optimized in terms of universal design, or even general readability. When scientists from around the globe congregate to discuss research in this way, it is important that they are able to communicate information easily and effectively—but to design an effective poster is a time-consuming and intricate task. This issue may also present difficulties for students at research institutions, as creating scientific posters to be easily read and understood by a wide audience is challenging and not broadly taught. As a result, both students and scientists may not be able to disseminate their latest findings easily. My project provides a solution to this problem by automatically providing suggestions for improving poster design (from text placement habits to color usage) and fixing common issues in display, organization, and overall readability. These adjustments made on research posters can then be used to further improve scientific communication. Thus, the ultimate goal of my research project was to create