# Introduction to Volume 11 Issue 2

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## FOREWORD

This issue begins with an article by McCarthy et al. describing the implementation of a molecular visualization model that was incorporated into two biochemistry courses. This inquiry-based activity explored the molecular basis and cultural relevance of sickle cell anemia. The article describes the activity and then provides an analysis of its impacts on student engagement and cultural awareness.

The article by Gordon and Cahill describes a recent survey of undergraduate programs in computational science. The results indicate that such programs face several challenges including student recruitment and faculty participation. They discuss the challenges that the programs face and some possible short- and long-term strategies that might address the challenges.

We also have three student articles in this issue. Those articles summarize the results of student internship experiences and the impacts of those experiences on the students' academic career.

Guevara et al. describe the development of a molecular model of relating to the interaction of polymer metal interfaces in micropumps. Their model simulates the sealant material polydimethylsiloxane and characterize its behavior with a model Ni-Md-Ga surface.

McDonald and Mercer used the Blue Waters supercomputer to assess tornadic outbreak forecast capability by lead time. They tested several parameter sets to ascertain which provided the best lead time forecasts of potential tornadic events.

Finally, Kellas and Groves tested several approaches to using an evolutionary algorithm to simulate lowest energy conformation molecule of a given stoichiometry. They compare the results using a clustering algorithm and intuitive population creation.