

Preface

The name of the gathering archived in these proceedings, the “First International Conference on Intelligent Systems for Molecular Biology,” was carefully worded and bears some exegesis. To begin with, there is an obvious element of optimism in the use of the word “First.” The organizers were confident that this would indeed be the inauguration of a continuing series of such meetings, based upon the growing level of participation in a number of predecessor colloquia of various types (including AAAI Symposia and Workshops). This optimism was fully justified by the response. Nearly 70 papers were received from around the world, as well as hundreds of inquiries. In the judgment of the editors, the submissions were of high quality for a new conference in a field not yet well established. Funding agencies were also enthusiastic, in part because of groundwork laid in a preliminary meeting to promote the development of infrastructure in this new sub-field of computational biology (jointly sponsored by the National Science Foundation, and the National Library of Medicine and attended by many on the program committee). The success of this particular aspect of that effort is evidenced by the planning already underway for the second conference in the series.

The word “international” in the title reflects the observation that outstanding work in this field takes place in many countries around the world. Not only was the program committee drawn from Europe, North America, and Asia, but a gratifying fraction of the submissions were as well. It should also be noted that the conference is cross-cultural in a scientific sense as well. The organizers can attest that the rewards of such interdisciplinary work are balanced by difficulties that sometimes amount to outright culture clashes, not least of which are the differing attitudes toward conferences and conference proceedings. It is hoped that, as the conference series is established, these proceedings will be an attractive and respected venue for publication of original biological results as well as pragmatically-inclined applications of computational research. This inaugural volume would seem to bode well.

The words “Intelligent Systems” are the most problematic in the title. It was neither contrariness nor fear of an AI Winter that inspired this terminology; the organizers are all unabashed artificial intelli-

gencers, and feel as well that this field represents a natural constituency for the technology push of AI to balance the applications pull of biology. Rather, the words “intelligent systems” were intended in part to promote inclusiveness, for example towards appropriate work in robotics, statistics, and databases — computational fields associated with AI, but not subsumed by it. In addition, the more general terminology was meant to let more emphasis fall on biological discovery. The final connective of the title, in fact, wavered for some time between “and” and “for,” before the latter was chosen on the strength of its connotation of service. The choice of molecular biology as the domain (as opposed to biology generally) seemed a reasonable restriction, given the predominance of this arena in computational applications, and the need to provide some focus within the tremendous range of biological application areas.

The organizers accept any blame that may attach to these decisions, but they must confer praise on the program committee (listed elsewhere), which made timely and perspicacious comments on the papers submitted. Several other individuals deserve thanks for significant contributions to the organization of the conference: Laura Cuccia for secretarial support at the University of Wisconsin; Saundra Greenberg for secretarial support at the National Library of Medicine; Mark Craven and David Opitz for organizing the student volunteers; and Mike Hamilton at AAAI Press for ably publishing the proceedings.

To conclude, we would like to explicitly acknowledge and thank the funding agencies that made this conference possible: the National Library of Medicine, for grant R13-LM05518, as well as the use of its meeting facilities; the Department of Energy, Office of Health and Environmental Research for grant DE-FG02-93ER61562; the American Association for Artificial Intelligence; The Biomatrix Society; and the National Institutes of Health, Division of Computer Research and Technology. We would also like to thank the sponsors of the infrastructure planning meeting that led to this conference: the National Library of Medicine for grant R13-LM20003 and the National Science Foundation for grant IRI-9123156.

—Lawrence Hunter, David Searls, & Jude Shavlik