

IT:

College of Science and Engineering:

The Institute of Technology Years (1935-2010)

75

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With the assistance of

Nathan Crowe, Ronald Frazzini, and Margaret Hofius

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Preface

This history of the first 75 years of the University of Minnesota's College of Science and Engineering originated in conversations in 2007 between Steven Crouch, dean of the college, and Alan Shapiro, then head of the history of science and technology program. In the program, Bob Seidel had written similar histories of the Lawrence Berkeley Laboratory and the Los Alamos National Laboratory, and Tom Misa also had an interest in science, technology, and institutions. They agreed to lead a project to write a history of the Institute of Technology, which became the College of Science and Engineering on July 1, 2010. Dean Crouch made the funds and the files of the Institute available to the research team.

Nathan Crowe, Ronald Frazzini, and Margaret Hofius served as the project's research assistants. They conducted the majority of the primary archival research on which this volume is based as well as 30 interviews with present and former faculty, staff, administrators, and students. In the fall of 2009 each of them worked on two draft chapters: Ronald Frazzini outlined

chapters 1 and 4; Nathan Crowe sketched chapters 2 and 6; while Margaret Hofius worked out the themes of chapters 3 and 5. As editors, we did a number of revisions in the spring of 2010, tightening the arguments of the chapters and extending the research as needed. This book, then, represents a collective achievement.

At the University Archives, we are indebted to Elisabeth Kaplan, University Archivist, who supported the project and directed her capable staff to assist with our research. Erin George, Karen Spilman, and Karen Klinkenberg patiently helped us locate valuable materials and made collections available to us. Lois Hendrickson, at the University's Wangenstein Historical Library, assisted us with her knowledge. Many departments and centers have documented their achievements and historical development by depositing significant materials with the University Archives. We did find significant caches of materials around campus not yet transferred there. Unless noted otherwise, all citations in the footnotes are to documents held in the University Archives. To identify a document, we provide box numbers and folder descriptions, in addition to identifying the collection itself, so that anyone wishing to review the same documents that we examined can do so. We located most of the book's 128 illustrations in the archives as well.

As we revised the chapters in Spring 2010, a number of faculty members offered insights, suggestions, and corrections to our accounts. We have carefully considered each and every comment we received; the book is much improved for this valuable feedback. Sometimes, a suggestion asked for more detail or a lengthier treatment than we could accommodate in a compact volume. A number of published and unpublished histories of the various units that comprise the College of Science and Engineering already exist,

and interested readers can find citations to these in the footnotes as well as in the bibliography at the end of this book.

For their direct suggestions and helpful comments, we are grateful to the following: Jennifer Alexander, Douglas Arnold, Pete Carr, Robert Gehrz, Maria Gini, Wayne Gladfelter, Richard Goldstein, Caroline Hayes, Joachim Heberlein, Roberta Humphreys, Warren Ibele, Michel Janssen, Richard Kain, Sally Gregory Kohlstedt, Uwe Kortshagen, James Leger, Peter McMurry, Willard Miller, Wayland Noland, Andrew Odlyzko, R. Lee Penn, Ann Pflaum, Roger Stuewer, William Tolman, and Rhonda Zurn.

We are also grateful for the 30 faculty, administrators, students, and alumni who gave us their insights about the college in taped interviews. These are Ken Albrecht, Steven Crouch, Don Craighead, Dale Enns, Charles Fairhurst, Ed Fletcher, Evan Gustafson, Greg Haugstad, Wally Helmbrecht, Peter Hudleston, Roberta Humphreys, Jerry Larson, Bob Lewis, Rufus Lumry, Willard Miller, Wayland Noland, Ashley Nord, Robert Pepin, William Peria, George Sell, Ed Silberman, Ephraim Sparrow, Roger Staehle, Kim Stelson, Paul Strykowski, Shih-Pau Yen, Cecil J. Waddington, William Warner, Hans Weinberger, and Herbert Wright. The recordings and notes are part of the permanent project files; resources did not permit us to make transcriptions of the interviews, as was done, for example, with the university-level interviews done by Clarke Chambers and Ann M. Pflaum for their historical studies.¹ Additional interviews, especially of Marvin Stein and Neal Amundson, done earlier at the Charles Babbage Institute, were helpful.

Our project team worked at the Charles Babbage Institute, conveniently enough two doors down from the University Archives,

and we met every two weeks during the core research period. Our thanks to CBI staff for making available ample space, needed resources, and gracious hospitality. Special thanks—above and beyond the call of duty—to CBI’s Katie Charlet. As our interviews, documents, and photos streamed in, she helped us keep our computer files orderly, updated, and secure. She also took up the demanding tasks of proofreading, fact-checking, and copy-editing as the project moved toward publication. At times, her scholarly temperament led her back to inspect original documents to straighten out a title or name or date.

A word on dates. We have tried to verify all dates by consulting Regents’ minutes or other contemporaneous documents. Sometimes, a date is a matter of convention, such as when the Department of Physics identifies its origin with Frederick S. Jones becoming professor of physics in 1889. With buildings, it is common to have a span of meaningful dates. You sometimes read that Pillsbury Hall was “built in 1887,” but that is only part of the story. Originally the Hall of Science, it was designed in 1887 by Harvey Ellis, assistant to famed Minnesota architect Leroy Buffington. While under construction, it suffered a disastrous fire and, in the absence of sufficient funds, the project was in limbo. In 1889, John Pillsbury gave the university \$150,000 to complete the building, including fireproofing, which opened as Pillsbury Hall finally in 1890. (And as chapter 1 recounts, the story of Pillsbury Hall helps explain why there isn’t a second, agricultural campus outside the metropolitan Twin Cities.) For the illustration captions, the year in parentheses is the year when the photograph was taken—not necessarily when the building was built. In chapter 1 the caption for a photograph taken in 2010 reads, simply, “Pillsbury Hall opened 1890 (2010).”