CURRICULUM VITÆ

February 10, 2021

1. Biographical and Personal Information

Donald E. Knuth, born January 10, 1938, Milwaukee, Wisconsin; U. S. citizen.
Chinese name 高德纳 (pronounced Gāo Dénà or Ko Tokuno or Go Deoknab).
Married to Nancy Jill Carter [高精兰] (b. July 15, 1939), June 24, 1961.
Children: John Martin (b. July 21, 1965), Jennifer Sierra (b. December 12, 1966).

2. Academic History

Case Institute of Technology, September 1956–June 1960; B.S., summa cum laude, June, 1960; M.S. (by special vote of the faculty), June 1960.
California Institute of Technology, September 1960–June 1963; Ph.D. in Mathematics, June 1963. Thesis: "Finite Semifields and Projective Planes."

3. Employment Record

Consultant, Burroughs Corp., Pasadena, California, 1960–1968.
Assistant Professor of Mathematics, California Institute of Technology, 1963–1966.
Associate Professor of Mathematics, California Institute of Technology, 1966–1968.
Professor of Computer Science, Stanford University, 1968–.
Staff Mathematician, Institute for Defense Analyses—Communications Research Division, 1968–1969.
Guest Professor of Mathematics, University of Oslo, 1972–1973.
Professor of Electrical Engineering (by courtesy), Stanford University, 1977–.
Fletcher Jones Professor of Computer Science, Stanford University, 1977–1989.
Professor of The Art of Computer Programming, Stanford University, 1990–1992.
Professor of The Art of Computer Programming, Emeritus, Stanford University, 1993–.
Visiting Professor in Computer Science, University of Oxford, 2002–2006, 2011–2017.
Honorary Distinguished Professor, Cardiff School of Computer Science and Informatics, 2011–2016.
Theta Chi Hall of Honor, 2016–.

4. Professional Societies

American Guild of Organists, 1965–.
American Mathematical Society, 1961–.
  Committee on Composition Technology, 1978–1981.
Association for Computing Machinery, 1959–.
  Chairman, subcommittee on ALGOL, 1963–1964.
  General technical achievement awards subcommittee, 1975–1979.
  National Lecturer, 1966–1967.
  Visiting Scientist, 1966–1967.
Mathematical Association of America, 1959–.
Society for Industrial and Applied Mathematics, 1965–.

5. Publications

(see attached list)

6. Patents

3422405 (with Roger E. Packard) Digital computers having an indirect field length operation. January 14, 1969.

3454929 (with Donald P. Hynes) Computer Edit System. July 8, 1969.

3548174 Random number generator. December 15, 1970.

3626167 (with LeRoy R. Guck, Lawrence G. Hanson) Scaling and number base converting method and apparatus. December 7, 1971.

5305118 (with Stephen N. Schiller) Methods of controlling dot size in digital halftoning with multi-cell threshold arrays. April 19, 1994. European patent 96108227.8-2202, July 17, 1996.

7. Principal Invited Lectures Given

ACM National Convention, Syracuse, 1962.
NATO Summer School, Denmark, 1967.
Britannica Scholar, Chicago, 1968.
International Symposium on Teaching of Programming, Newcastle-Upon-Tyne, 1970.
International Congress of Mathematicians, Nice, 1970.
IFIP Congress, Ljubljana, 1971.
International Congress on Logic, Methodology, and Philosophy of Science, Bucharest, 1971.
Mathematical Association of America, San Francisco, 1974.
The Computer Science Lecture, Carnegie-Mellon University, 1974.
ACM National Convention, San Diego, 1974.
Symposium on Computational Systems, Monterrey, Mexico, 1975.
Chaire Aisenstadt, Montréal, 1975.
American Association for the Advancement of Science, Boston, 1976; see paper P82 below.
Gibbs Lecture (American Mathematical Society), Atlanta, 1978; see paper P91 below.
Gillies Lectures, University of Illinois, 1979.
Hitchcock Professor, University of California, 1979.
Ritt Lecturer, Columbia University, 1980.
International Colloquium on Automata, Languages, and Programming, Epidaurus, Greece, 1985; see paper Q82 below.
4th SIAM Conference on Discrete Mathematics, San Francisco, 1988.
IFIP Congress, San Francisco, 1989 (keynote address); see paper P138 below.
Organick Memorial Lectures, University of Utah, 1990.
Donegall Lecturer in Mathematics, Trinity College, Dublin, 1992.
International Symposium on Teaching of Programming, Newcastle-Upon-Tyne (25th Anniversary Year), 1992.
Weizmann Memorial Lectures, Weizmann Institute of Science, 1992.
ACM–SIAM Symposium on Discrete Algorithms, Austin, 1993.
ATypI Congress, San Francisco, 1994.
Unicode Conference, San José, 1995.
Commemorative lecture for Fiftieth Anniversary of Mathematisch Centrum, Amsterdam, 1996.
Commemorative lecture for Kyoto Prize, Kyoto, 1996.
SIAM Annual Meeting, Stanford, 1997.
God and Computer Lectures, MIT, 1999.
Pascal Lectures, University of Waterloo, 2000.
Strachey Lecture, Oxford University, 2001.
Pi Mu Epsilon J. Sutherland Frame Lecture, San José, 2007.
BCS/IET Turing Lectures, 2011.
Dan E. Christie Lectures, Bowdoin College, 2011.
Vienna Distinguished Gödel Lecture, Vienna University of Techology, 2013.
Kailath Lecture, Stanford University, 2014.
SIAM Annual Meeting (Von Neumann Lecture), Boston, 2016.

8. Editorial Boards

ACM Transactions on Algorithms, 2004–.
Acta Informatica, 1970–.
Advances in Mathematics, 1971–1979.
Applied Mathematics Letters, 1987–2000.
Communications of the ACM, 1966.
Combinatorica, 1985–1998.
Computers and Mathematics with Applications, 1973–2008.
Discrete Applied Mathematics, 1979.
Discrete and Computational Geometry, 1986–2012.
Discrete Mathematics, 1970–1978.
Electronic Journal of Combinatorics, 1994–2013.
Fibonacci Quarterly, 1964–1979.
Historia Mathematica, 1972–1979.
Human-Computer Interaction, 1985–1995.
IEEE Transactions on Software Engineering, 1975–1979.
Information Processing Letters, 1970–1979.
Japan Journal of Industrial and Applied Mathematics, 1997–2005.
Journal of Algorithms, 1979–2004.
Journal of Computer and Information Sciences, 1969–1979.
Journal of Computer and System Sciences, 1969–2012.
Journal of Computer Science and Technology, 1989–.
Journal of Experimental Algorithmics, 1996–.
Journal of Graph Algorithms and Applications, 1996–.
Journal of Graph Theory, 1975–1979.
Journal of Statistical Planning and Inference, 1975–1979.
Journal of the ACM, 1964–1967.
Mathematica Journal, 1990–.
The Mathematical Intelligencer, 1978–1979.
Random Structures & Algorithms, 1990–2007.
SIAM Journal on Computing, 1973–1979.
Software — Practice and Experience, 1979–2007.
Structured Programming, 1989–1993; Software Concepts and Tools, 1994–2000.
Theory of Computing, 2004–.
Utilitas Mathematica, 1970–1972.

9. Honors and Awards

Member, Pi Delta Epsilon, 1958–.
Member, Tau Beta Pi, 1958–.
Member, Blue Key, 1959–.
Case Honor Key, 1959.
Member, Sigma Xi, 1960–.
Woodrow Wilson Fellow, 1960.
National Science Foundation Fellow, 1960.
Grace Murray Hopper Award (first recipient), Association for Computing Machinery, 1971. ($1000)
John Simon Guggenheim Fellow, 1972–1973.
Fellow, American Academy of Arts and Sciences (Class I, Section 5), 1973–.
Alan M. Turing Award, Association for Computing Machinery, 1974. ($1000)
Member, National Academy of Sciences (Class III, Section 33 [renumbered later to Section 34]), 1975–.
Lester R. Ford Award, Mathematical Association of America, 1975. ($100, for paper P63.)
California Institute of Technology Distinguished Alumni Award, 1978.
National Medal of Science, 1979.
W. Wallace McDowell Award, IEEE Computer Society, 1980. ($1000)
Doctor of Science, honoris causa, Case Western Reserve University, 1980.
Distinguished Fellow, The British Computer Society, 1980.
Priestley Award, Dickinson College, 1981. ($1000)
Member, National Academy of Engineering, 1981–.
Honorary member, IEEE, 1982–.
IEEE Computer Pioneer Award (charter recipient), 1982.
Doctor of Science, honoris causa, Luther College, 1985.
Doctor of Science, honoris causa, Lawrence University, 1985.
Golden Plate Award, American Academy of Achievement, 1985.
ACM SIGCSE Award, 1986. ($500)
Doctor of Science, honoris causa, Muhlenberg College, 1986.
Doctor of Science, honoris causa, University of Pennsylvania, 1986.
Docteur honoris causa, University of Paris–Sud (Orsay), 1986.
ACM Software Systems Award, 1986.
Doctor of Science, honoris causa, University of Rochester, 1986.
Steele Prize for Expository Writing, American Mathematical Society, 1986. ($4000)
Doctor of Science, honoris causa, State University of New York at Stony Brook, 1987.
The New York Academy of Sciences Award, 1987. ($5000)
Benjamin Franklin Medal, Franklin Institute, Philadelphia, 1988.
Doctor of Science, honoris causa, Valparaiso University, 1988.
Doctor of Science, honoris causa, University of Oxford, 1988.
Doctor of Science, honoris causa, Brown University, 1988.
Doctor of Science, honoris causa, Grinnell College, 1989.
J. D. Warnier Prize, 1989. ($3000)
Gold Medal Award, Case Alumni Association, 1990.
Doctor of Science, honoris causa, Dartmouth College, 1990.
Doctor of Science, honoris causa, Concordia University, Montréal, 1991.
Honorary Doctor of Technology, Royal Institute of Technology, Stockholm, 1991.
Associé Étranger, l'Académie des Sciences, Paris, 1992–.
Pochëtnyĭ Doktor [Почётный Доктор], Saint Petersburg University, 1992.
Computer Language productivity award, 1992. (for literate programming)
Doctor of Science, honoris causa, Adelphi University, 1993.
Utenlandsk medlem, Det Norske Videnskaps-Akademi, 1993–.
Lester R. Ford Award, Mathematical Association of America, 1993. ($250, for paper P137.)
Docteur honoris causa, University of Marne-la-Vallée, 1993.

Best New Book: Computer Science, Association of American Publishers, 1994. [Awarded for *The Stanford GraphBase*.]
ACM Fellow (charter recipient), 1994.
Adelsköld Medal, Royal Swedish Academy of Sciences, 1994.
IEEE John von Neumann Medal, 1995. ($10,000)
Harvey Prize, Technion, 1995. ($35,000)
Doctor Scientiæ Mathematicæ, honoris causa, Masaryk University, Brno, 1996.
Memorial Medal, Mathematics and Physics Faculty, Charles University, Prague, 1996.
Cum Deo Award (charter recipient), Milwaukee Lutheran High School, 1996.
Kyoto Prize for Advanced Technology, Inamori Foundation, 1996. (¥50,000,000)
Doctor of Science, honoris causa, Duke University, 1998.
Doctor of Science, honoris causa, St. Andrews University, Scotland, 1998.
Korrespondierendes Mitglied der Mathematisch-naturwissenschaftlichen Klasse, Bayerische Akademie der Wissenschaften, 1998–.
Fellow of The Computer History Museum, 1998–.
Doctor of Science, honoris causa, Williams College, 2000.
Doctor of Letters, honoris causa, University of Waterloo, Canada, 2000.
Minor planet "(21656) Knuth" [`http://sunkl.asu.cas.cz/~asteroid/planetky/21656/eng.htm`] named in 2001.
Epitimos Didaktor [Επίτιμος Διδάκτωρ], Athens University of Economics and Business, 2001.
Doctor of Science, honoris causa, Eberhard Karls Universität Tübingen, 2001.
Doctor Philosophiæ honoris causa, Universitetet i Oslo, 2002.
Doctor honoris causa in de Wetenschappen, Universiteit Antwerpen, 2003.
Foreign member, Royal Society of London for Improving Natural Knowledge, 2003–.
Doctor of Science, honoris causa, Harvard University, 2003.
Epitimos Didaktor [Επίτιμος Διδάκτωρ], University of Macedonia, 2003.
Doctor of Science, honoris causa, Université de Montréal, 2004.
Honorary Fellow, Magdalen College, Oxford University, 2005–.
Honorary Doctor, National Academy of Sciences, Republic of Armenia, 2005.
Doktor der Wissenschaften, honoris causa, Eidgenössische Technische Hochschule Zürich, 2005.
Honorary Doctor of Letters, Concordia University Wisconsin, 2006.
Gold Commemorable Medal, State Engineering University of Armenia, 2006.
Gold medal from Yerevan State University, 2006.
Member, Pi Mu Epsilon, 2007–.
Electronic Design's Engineering Hall of Fame, 2007.
Docteur honoris causa, University of Bordeaux 1, 2007.
Foreign member, Russian Academy of Sciences [Rossiĭskaia͡ Akademiia͡ Nauk], 2008–.
SIAM Fellow (charter recipient), 2009.
Katayanagi Prize for Research Excellence, 2010 ($10,000).
Doctor of Science, honoris causa, University of Glasgow, 2011.
ABACUS Award, Upsilon Pi Epsilon, 2011 ($5,000).
2010 Frontiers of Knowledge Award in Information and Communication Technologies, BBVA Foundation, 2011 (€400,000).
Stanford Engineering Hero, 2011.
IET Faraday Medal, 2011.
Ausbildungs- und Beratungszentrum für Informatikunterricht Platinum Gold Medal of Eidgenössische Technische Hochschule Zürich for Computer Science and Computer Science Education, 2012.
Member, American Philosophical Society (Class 1), 2012–.
American Mathematical Society Fellow (charter recipient), 2013.
Dr. Peter Karow Award for Font Technology and Digital Typography, 12 October 2013.
Doctor of Science, honoris causa, National University of Ireland, 2015.
Honorary Member, London Mathematical Society, 2015–.
Trotter Prize in Information, Complexity, and Inference, Texas A&M University, 2018 ($5,000).

Distinguished Alumni Award, Case Western Reserve University Alumni Association, 2020.

10. Ph.D. Students, thesis titles, and year of graduation

Wayne Theodore Wilner, “Declarative Semantic Definition,” 1971.
Clark Allan Crane, “Linear Lists and Priority Queues as Balanced Binary Trees,” 1972.
Isu Fang, “FOLDS, A Declarative Formal Language Definition System,” 1972.
Michael Lawrence Fredman, “Growth Properties of a Class of Recursively Defined Functions,” 1972.
Vaughan Ronald Pratt, “Shellsort and Sorting Networks,” 1972.
Richard Lee Sites, “Proving that Computer Programs Terminate Cleanly,” 1974.
Gary Don Knott, “Deletion in Binary Storage Trees,” 1975.
Edwin Hallowell Satterthwaite, Jr., “Source Language Debugging Tools,” 1975.
Robert Sedgewick, “Quicksort,” 1975.
Leonidas Ioannis Guibas, “The Analysis of Hashing Algorithms,” 1976.
Mark Robbin Brown, “The Analysis of a Practical and Nearly Optimal Priority Queue,” 1977.
Richard Eric Sweet (joint supervision with Cordell Green), “Empirical Estimates of Program Entropy,” 1977.
John Fredrick Reiser, “Analysis of Additive Random Number Generators,” 1977.
Bernard Marcel Mont-Reynaud, “Hierarchical Properties of Flows, and the Determination of Inner Loops,” 1977.
Luis Isidoro Trabb Pardo, “Set Representation and Set Intersection,” 1978.
Lyle Harold Ramshaw, “Formalizing the Analysis of Algorithms,” 1979.
Christopher John Van Wyk, “A Language for Typesetting Graphics,” 1980.
Jeffrey Scott Vitter, “Analysis of Coalesced Hashing,” 1980.
Michael Frederick Plass, “Optimal Pagination Techniques for Automatic Typesetting Systems,” 1981.
Ignacio Andres Zabala Salelles, “Interacting with Graphic Objects,” 1982.
Daniel Hill Greene, “Labelled Formal Languages and Their Uses,” 1983.
Franklin Mark Liang, “Word Hy-phen-a-tion by Com-put-er,” 1983.
Andrei Zary Broder, “Weighted Random Mappings,” 1985.
John Douglas Hobby, “Digitized Brush Trajectories,” 1985.
Scott Edward Kim, “Viewpoint: Toward a Computer for Visual Thinkers,” 1987.
Pang-Chieh Chen, “Heuristic Sampling in Backtrack Trees,” 1989.
Ramsey Wadi Haddad, “Triangularization: A Two-Processor Scheduling Problem,” 1990.
Tomás Feder, “Stable networks and product graphs,” 1991.

11. **Published biographical data** (∗ means photograph included)

"What's that about a score card? A computer's the thing," *Newsweek* **53**, 1 (January 5, 1959), 63.

IEEE Transactions on Electronic Computers* **EC-13 (1964), 478.

Who's Who in Computers and Data Processing, 1971.

American Men and Women of Science, beginning with 12th edition (1972).

**Datamation*, vol. 21, no. 1 (January 1975), 11–12.

IEEE Transactions on Software Engineering* **SE-1 (1975), 3.

Who's Who in Computer Education and Research, 1975.

bit **7** (1975), 430–433, 444–447 (Japanese); by Makoto Arisawa.

**Stanford Daily*, Thursday, May 27, 1976.

Who's Who in America, 40th edition (1978).

Dictionary of International Biography **15**, 1979.

Leaders in Electronics, McGraw–Hill.

**Men of Achievement*, 1979.

International Who's Who in Education, 1980.

Who's Who in Technology Today, 2nd edition (1980).

China Computerworld, no. 14 (July 20, 1981), p. 15; no. 15 (August 5, 1981), p. 15; no. 16 (August 20, 1981), p. 15.

**Campus Report*, vol. 16, no. 17 (Stanford University, January 25, 1984), 5–6; vol. 16, no. 18 (February 1, 1984), 5, 8; by Donald Stokes.

**West* (San Jose Mercury News, February 19, 1984), 18–23; by Jan C. Shaw.

**Discover*, vol. 9, no. 5 (Time Inc., September 1984), 74–76, 78; by Bruce Schechter.

**Computer Language*, vol. 1, no. 2 (October 1984), 17–19; by Jan C. Shaw.

**Cleveland*, vol. 15, no. 1 (January 1986), 106–109, 140–144; by William Marling.

**Portraits of Success*, by Carolyn Caddes (Portola Valley: Tioga Press, 1986), 78–79.

**Notices of the American Math. Society*, vol. 34, no. 2 (February 1987), 228.

**Portraits in Silicon*, by Robert Slater (Cambridge, Mass.: MIT Press, 1987), 341–351.

D. É. Knut i ego "fabrika knig", by B. B. Pokhodzeĭ, in the Russian translation of *Mathematics for the Analysis of Algorithms* (see under Books), 114–115.

Communications of the ACM* **30 (1987), 816–819; by Karen A. Frenkel.

**Peninsula*, vol. 3, no. 9 (December 1988), 72–74; by Sherry Posnick-Goodwin. Japanese translation in *Kunuusu Sensei no Program-Ron* (see under Books), 168–174.

**dialog Wissenschaft* (Nixdorf Computer AG, January 1989), 6–15; interview by Norbert Ryska and Stuart E. Savory.

Eulogy: Donald E. Knuth, by G. W. Bond, in Latin with an English paraphrase, *Bulletin of the London Mathematical Society* **21** (1989), 110–112.

Japan Society for Software Science and Technology **7**, 2 (April 1990), 73–77; by Makoto Arisawa.

**Case Alumnus*, vol. 67, no. 8 (Spring/Summer 1990), cover and 2–7; by William Marling.

**Byte*, vol. 15, no. 9 (September 1990), 282.

**Macworld*, vol. 8, no. 7 (July 1991), 207.

**The Rattle of Theta Chi*, vol. 73, no. 1 (Winter 1993), 10–11.

Information Science Dictionary (Iwanami, Tokyo, 1990), 181.

IEEE Spectrum* **32, 6 (June 1995), 40.

**Out Of Their Minds* by Dennis Shasha and Cathy Lazere (New York: Copernicus, 1995), 89–101.

CyberTimes (10 August 1996), `http://www.nytimes.com/web/docsroot/library/cyber/week/0810knuth` by Steve Ditlea.

Lingua Franca* **6, 6 (September 1996), 11–13; by Rick Perlstein.

**Automatisering Gids* (15 Maart 1996), 9.

**NRC Handelsblad* (28 Maart 1996); by Dirk van Delft.

**De Ingenieur* (3 Juli 1996), 27–29; by H. M. Nieland.

Application Development Trends* **3, 10 (October 1996), 17–18; by Elizabeth U. Harding.

Computer Abstracts* **41, 3/4 (1997), 4–6.

Computer Software **14**, 1 (January 1997), 83–86, by Makoto Arisawa [in Japanese].

Shi Jie Zhu Ming Ke Xue Jia Zhuan Ji (Biographies of World Famous Scientists), Technology Scientists I (Beijing: Science Press, 1997), 117–125, by Dong Yunmei.

**Wizards and Their Wonders*, by Christopher Morgan with photographs by Louis Fabian Bachrach (New York: ACM Press, 1997), 118–119.

Contemporary Authors **163** (1998), 244–247.

San Jose Mercury-News (29 November 1998), 1G, 14G, by Leigh Weimers

Technology Review* **102, 5 (September/October 1999), 66–70, by Steve Ditlea.

**Salon.com > Technology* (16 September 1999), by Mark Wallace, `http://www.salon.com/tech/feature/1999/09/16/knuth`.

The International Who's Who, 64th edition, 2000.

**NZZ Folio* (February 2002), 35–40, by Peter Haffner.

Science & Spirit **13**, 4 (July–August 2002), 13–14, by Laura Sivitz.

Stanford* **35, 3 (May–June 2006), 64–69, by Kara Platoni.

Coders at Work by Peter Seibel (New York: Apress, 2009), 565–601.

**Kvantik* No. 11 (November 2014), 18–21, by Grigori Feldman [in Russian].

The New York Times (18 December 2018), D1, D6, by Siobhan Roberts.

Modern Weekly 1047 (?? February 2019), 22 [in Chinese].

Quanta Magazine (16 April 2020), by Susan D'Agostino.

*see also papers Q62 and Q154 listed below.

Publications of Donald E. Knuth

1. Books

The Art of Computer Programming, Vol. 1: *Fundamental Algorithms* (Reading, Mass.: Addison–Wesley, 1968), xxii + 634 pp. Second printing, revised, July 1969.

Second edition, completely revised, December 1973. Second printing, revised, February 1975.

Third edition, completely revised, May 1997, originally xx + 650 pp.; xx + 652 pp. since 2011.

Volume 1, Fascicle 1: *MMIX: A RISC Computer for the New Millennium* (Upper Saddle River, N.J.: Addison–Wesley, 2005), v + 134 pp.

Romanian translation, by Adrian Davidoviciu, Adrian Petrescu, Smaranda Dimitriu, and Paul Zamfirescu, *Tratat de programarea calculatoarelor*, V. 1: *Algoritmi fundamentali* (Bucharest: Editura tehnică, 1974), 676 pp.

Romanian translation of the third edition, by Mihaela Târpa, *Arta programării calculatoarelor*, V. 1: *Algoritmi fundamentali* (Bucharest: Editura Teora, 2002), 616 pp.

Romanian translation of Volume 1, Fascicle 1, by Ioan Bledea: *MMIX: Un calculator RISC pentru noul mileniu* (Bucharest: Editura Teora, 2005), ix + 149 pp.

Russian translation, by Galina P. Babenko and I͡u. M. Baĭakovskiĭ, edited by K. I. Babenko, and V. S. Štarkman, *Iskusstvo programmirovanii͡a dli͡a ÉVM*, T. 1: *Osnovnye algoritmy* (Moscow: Mir, 1976), 735 pp.

Russian translation of the third edition, under direction of I͡u. V. Kozachenko, by S. G. Trigub, I͡u. G. Gordienko, and I. V. Krasikov, edited by S. N. Trigub, *Iskusstvo programmirovanii͡a*, T. 1: *Osnovnye algoritmy* (Moscow: Vil'iams, 2000), 713 pp.

Russian translation of Volume 1, Fascicle 1, by Yu. G. Gordienko, edited by S. N. Trigub, *MMIX — RISC-komp'iuter dli͡a novogo tysi͡acheletii͡a* (Moscow: Vil'iams, 2007), 151 pp.

Japanese translation, under direction of Takakazu Simauti, in two volumes: Chapter 1, by Ken Hirose, *Kihon Sampō / Kiso Gainen* (Tokyo: Saiensu-Sha, 1978), 22 + 331 pp.; Chapter 2, by Nobuo Yoneda and Katsuhiko Kakehi, *Kihon Sampō / Jōhō Kōzō* (Tokyo: Saiensu-Sha, 1978), 8 + 373 pp.

Japanese translation of the third edition, by Takashi Aoki, Kazuhiko Kakehi, Ken-Ichi Suzuki, and Takahiro Nagao, supervised by Makoto Arisawa and Eiiti Wada (Tokyo: ASCII Corporation, 2004), xxii + 632 pp. Republished in softcover (Tokyo: ASCII DWANGO, 2015).

Japanese translation of Volume 1, Fascicle 1, by Takashi Aoki, supervised by Makoto Arisawa and Eiiti Wada (Tokyo: ASCII Corporation, 2006), vii + 134 pp.

Chinese translation, by Guan JiWen and Su Yunlin, *Ji Suan Ji Cheng Xu She Ji Ji Qiao*, 1. Juan: *Ji Ben Suan Fa* (Beijing: Defense Industry Publishing Co., 1980), 14 + 573 pp.

Chinese translation of the third edition, by Su YunLin, *Jisuanji Chengxu Sheji Yishu*, 1. Juan: *Jiben Suanfa* (Beijing: National Defense Industry Press, 2002), xx + 625 pp.

Chinese translation of the third edition, by Li Bomin, Fan Ming, and Jiang Aijun, *Jisuanji Chengxu Sheji Yishu*, 1. Juan: *Jiben Suanfa* (Beijing: Posts & Telecom Press, 2016), xv + 517 pp.

Spanish translation, by Michel Antscherl Harlange and Joan Lluis i Biset, under direction of Ramón Puigjaner i Trepat, *El Arte de Programar Ordenadores*, V. 1: *Algoritmos Fundamentales* (Barcelona: Reverté, 1980), xxiii + 672 pp.

Indian Student Edition, with an introduction by P. C. P. Bhatt (New Delhi: Narosa Publishing House, 1985).

Hungarian translation, under direction of Miklós Simonovits, *A Számítógép-Programozás Művészete*, V. 1: *Alapvető Algoritmusok* (Budapest: Műszaki Könyvkiadó, 1987), 654 pp.

Hungarian translation of Volume 1, Fascicle 1, by Péter Burcsi and Zoltán Csörnyei, under direction of Antal Iványi, *MMIX: RISC számítógép a következő évezredre* (Budapest: Antoncom Infokommunikációs, 2009), 168 pp.

Polish translation of the third edition, by Grzegorz Jakacki, *Sztuka Programowania*, Tom 1: *Algorytmy Podstawowe* (Warsaw: Wydawnictwa Naukowo-Techniczne, 2002), xxiv + 679 pp.

Polish translation of Volume 1, Fascicle 1, by Grzegorz Jakacki, *MMIX — komputer na nowe tysiąclecie* (Warsaw: Wydawnictwa Naukowo-Techniczne, 2008), xii + 146 pp.

Korean translation of the third edition, by Ryu Gwang (Seoul: Hanbit Media, 2006), 793 pp.

Czech translation of the third edition, by David Krásenský, *Umění programování*, 1. díl, *Základní algoritmy* (Brno: Computer Press, 2008), xx + 649 pp.

German translation of the third edition (Heidelberg: Springer), in preparation.

Greek translation of the third edition, by Manos Roumeliotis and Stavros Souravlas, *Η τέχνη του προγραμματισμού* (Athens: Tziolas, 2010), 751 pp.

Macedonian translation of the third edition (Skopje: Prosvetno Delo), in preparation.

Albanian translation of the third edition, *Arti i programimit kompjuterik* (2010), 960 pp.

The Art of Computer Programming, Vol. 2: *Seminumerical Algorithms* (Reading, Mass.: Addison–Wesley, 1969), xii + 624 pp. Second printing, revised, November 1971.

Second edition, completely revised, January 1981, xiv + 689 pp.

Third edition, completely revised, September 1997, originally xiv + 762 pp.; xiv + 764 pp. since 2011.

Russian translation, by Galina P. Babenko, É. G. Belaga, and L. V. Maĭorov, edited by K. I. Babenko, *Iskusstvo programmirovanii͡a dli͡a ÉVM*, T. 2: *Poluchislennye algoritmy* (Moscow: Mir, 1977), 724 pp.

Russian translation of the third edition, under direction of I͡u. V. Kozachenko, by L. F. Kozachenko, V. T. Tertyshnyĭ, and I. V. Krasikov, edited by S. N. Trigub, *Iskusstvo programmirovanii͡a*, T. 2: *Poluchislennye algoritmy* (Moscow: Vil'iams, 2000), 830 pp.

Japanese translation, under direction of Takakazu Simauti, in two volumes: Chapter 3, by Masaaki Sibuya, *Jun Suchi Sampō / Ransū* (Tokyo: Saiensu-Sha, 1982), ii + 259 pp.; Chapter 4, by Keisuke Nakagawa, *Jun Suchi Sampō / Sanjutsu Enzan* (Tokyo: Saiensu-Sha, 1986), xii + 536 pp.

Japanese translation of the third edition, by Hiroaki Saito, Takahiro Nagao, Shogo Matsui, Takao Matsui, and Hitoshi Yamaushi, supervised by Makoto Arisawa and Eiiti Wada (Tokyo: ASCII Corporation, 2004), xvi + 725 pp. Republished in softcover (Tokyo: ASCII DWANGO, 2015).

Romanian translation, by Florian Petrescu, Ioan Georgescu, Rolanda Predescu, and Paul Zamfirescu, *Tratat de programarea calculatoarelor*, V. 2: *Algoritmi seminumerici* (Bucharest: Editura tehnică, 1983), 722 pp.

Romanian translation of the third edition, by Mihaela Târpa, Cora Radulian, and Mihai Iosif, *Arta programării calculatoarelor*, V. 2: *Algoritmi seminumerici* (Bucharest: Editura Teora, 2002), 663 pp.

Spanish translation, *Algoritmos seminuméricos*, in preparation (Barcelona: Reverté).

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3. **Papers** (∗ means written by coauthor)

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