GEORGE K. FRANCIS   UNIVERSITY OF ILLINOIS

B.S.[mcl]	Mathematics	Notre Dame	August, 1958
A.M.	Mathematics	Harvard	May, 1960
Ph.D.	Mathematics	U Michigan	April, 1967

2005 onward	Prof. Beckman Institute	U Illinois
1990 onward	Prof. Campus Honors Faculty	U Illinois
1989 onward	Prof., later Senior Research Fellow	NCSA
1982 onward	Professor	U Illinois
1973-81	Associate Professor	U Illinois
1968-72	Assistant Professor	U Illinois
AY 1968	Lloyd Post D Fellow	U Michigan
AY65,66	Teaching Fellow	U Michigan
AY 1964	Lecturer	Newton College
AY 1964	Lecturer	Boston College
AY 1962	Lecturer	Regis College
Summer 1961	High School Teacher	Pomfret Prep

PROFESSIONAL APPOINTMENTS: (row label for the above table)

RELATED PUBLICATIONS:

1. George K. Francis, The hypergraphics honors seminar at Illinois. In Dave Thomas (Ed.) Scientific Visualization in Mathematics and Science Teaching. Assoc. Adv. Computing in Educ., Charlottsville, VA, 1995.

2. George K. Francis, John M. Sullivan, Robert B. Kusner, Kenneth A. Brakke, Chris Hartman, Glenn Chappell, The Minimax Sphere Eversion. In Konrad Polthier and Hans-Christian Hege, eds., Mathematics and Visualization I. Springer Verlag, Berlin, 1997. pp 3-20.

3. George K. Francis, Metarealism in Geometrical Computer Graphics. In David Salesin and Carlo Séquin, eds., Mosaic 2000: Millennial Open Symposium on the Arts and Interdisciplinary Computing. University of Washington, 21-24 August 2000. pp 1-12. Expanded to: Metarealistic Rendering for Real-time Interactive Computer Animation, in Michele Emmer, ed., Visual Mind 2, MIT Press, 2004.

4. George Francis, Camille Goudeseune, Henry Kaczmarski, Benjamin Schaeffer, John M. Sullivan, ALICE on the Eightfold Way: Exploring Curved Spaces in an Enclosed Virtual Reality Theater (CUBE), in Hans-Christian Hege and Konrad Polthier, edgs., Visualization and Mathematics III, Springer Verlag, 2003, p.304-316.

5. Benjamin Schaeffer, Peter Brinkmann, George Francis, Camille Goudeseune, Jim Crowell, Hank Kaczmarski, MYRIAD: Scalable VR via Peer-to-Peer Connectivity, PC Clustering, and Transient Inconsistency. Proceedings of Virtual Reality Software and Technology 2005, Monterey, CA, p. 68-77. Complete and updated version in Computer Animation and Virtual Worlds, vol 18, issue 1, pp 1-17, Wiley 2007.

SIGNIFICANT PUBLICATIONS:

1. George K. Francis, The folded ribbon theorem, a contribution to the study of immersed circles, Trans. Amer. Math. Soc. 141(1969), p.271-303. MR 39 4863 (M. Marx).

2. George K. Francis, A Topological Picturebook. Springer-Verlag, New York, 1987. Second printing, 1988. Japanese translation, Springer-Tokyo, 1991. Russian translation, MIR, Moscow, 1991. Chinese facsimile authorized paper edition, 1991, Japanese PB edition, Springer, Tokyo, 2006, English PB edition, Springer, NY, 2006.

3. George K. Francis and Louis H. Kauffman, Air on the Dirac strings. In W. Abikoff, J. Birman, and K. Kuiken, (Eds.) The Mathematical Legacy of Wilhelm Magnus, Contemporary Mathematics, Vol. 169, Amer. Math. Soc., Providence, RI, 1994, p.261-276.

4. George Francis, Ken Brakke, Rob Kusner, Dennis Roseman, John M. Sullivan, Ulrike Axen, Alex Bourd, Glenn Chappell, Chris Hartman, Paul McCreary, Jason Rubenstein, Will Scullin). LATERNAmatheMAGICA, GII Testbed and HPC Challenge Applications on the I-WAY, eds. Holly Korab and Maxine D. Brown, Published by ACM/IEEE Supercomputing 95, 1995, p 43.

5. George K. Francis and Jeffrey R. Weeks, Conway's ZIP Proof. American Mathematical Monthly. Mathematical Association of America. vol 106 (May 1999), pp 393-399.

SYNERGISTIC ACTIVITIES:

1. Teaching college since Notre Dame summerschool, 1957.

2. Founding director of the UIMATH Applelab (1983-1994), grafiXlab, (1995-2006), now the REU-Lab. Co-PI with Donna Cox, Renaissance Experimental Lab, NCSA (1989-2005).

3. Eisenhower grants for inservice teacher training, eighties and early nineties.

4. Taught Math 198 "Hypergraphics" freshman honors seminar in geometrical computation for the Campus Honors Program, (1990-2006).

5. Developed many undergraduate and graduate courses, chiefly for teachers training. Campus AMOCO award for excellence in undergraduate teaching.

6. With Umesh Thakkar, 3 year summer REU programs "Audible Sketchpad for the CAVE" under NCSA PACI program.

7. IlliMath2001, 2002, 2004, 2006, summer REU programs under VIGRE and Workforce in Mathematical Sciences.

THESIS AND POSTDOCTORAL ADVISOR:
Prof. Charles Titus, Mathematics, University of Michigan.

RECENT COLLABORATORS:
Bernard, Ben (Amazon.com), Peter Brinkmann (CUNY), Jim Crowell (ISL UIUC), Camille Goudeseune (ISL UIUC), Chris Hartman (U Alaska), Hank Kaczmarski (ISL UIUC), Stuart Levy (NCSA UIUC), Paul McCreary (Evergreen College), Tony Robbin (New York), Benjamin Schaeffer (New York), John M. Sullivan (TUB Berlin), Jeffrey Weeks (Canton, NY).

PH.D. STUDENTS/POSTDOCS:

| Alexei Bourd | Qualcomm | Ph.D. 2003 | [differential equations] |
| Paul McCreary | Everygreen College | Ph.D. 1998 | [mathematical visualization] |