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Education

- Ph.D., Computer Science, 1976, Michigan State University, specialization in Pattern Recognition and Formal Language Theory. thesis: *Discriminant Grammars For Pattern Classification*
- M.S., Computer Science, Michigan State University, 1971
- B.S., Mathematics, 1970, Michigan State University, "with high honor", *Phi Beta Kappa*.

Employment

- August 2001-Present: Faculty Research Associate, Department of Biology and Biodesign Institute Center for Evolutionary Functional Genomics, Arizona State University.
- 1986-1993 and 1996-2001: Member of the Technical Staff, GTX Corporation, Phoenix, Arizona; also intermittent Faculty Associate in the ASU Mathematics Department during the period 1986-1993, teaching discrete mathematics.
- 1993-1996: Senior Analyst, ReGenisys Corporation, Scottsdale, AZ.
- 1981-1985: Principal Staff Engineer, Motorola Microsystems, Tempe, AZ..
- 1980-1981: Software Engineering Specialist, E-Systems, Garland, TX.
- 1974-1980: Assistant Professor of Mathematics, Central Michigan University (1974-1977), and Visiting Assistant Professor, Arizona State University (1977-1980).
- 1969-1974: Fortran Programmer, Michigan State Housing Development Authority. Economic feasibility models, market models; Research Assistant, Michigan State University Department of Computer Science; and Programmer, Computer Institute for Social Science Research, East Lansing, Michigan.

Other

- 1993 – 1994 President, Southwest & Rocky Mountain Division, AAAS
- 1995 – 2006 Member, Arizona/Nevada Academy of Sciences

- 1987 – 1991 Conducted tutorials in software development at annual Computer Language Software Development Seminars.
- 1977 – 2008 Speaker at many science & engineering conferences, including Genetics 2000, the 1995 Desert Fishes Council, the 1989 Conference on Computer Vision and Pattern Recognition, the 1985 IEEE Conference on Systems, Man, and Cybernetics, the 1985 ACM Symposium on Small Systems, the 1991 and 1992 Golden West Conferences on Intelligent Systems, the 1981 IEEE International Conference on Cybernetics and Society, the 1977 IEEE Workshop on Picture Data Definition and Management, and Summer 1984 and Winter 1985 USENIX Conferences.

Selected Publications

1. Filipski A, S Prohaska, and S Kumar, “Molecular Signatures of Adaptive Evolution” chapter of the book *Evolutionary genomics and proteomics*, Pagel, MD and A Pomiankowski (eds) Sinauer Associates, Sunderland, Mass (2008).
2. Drosophila 12 Genomes Consortium, “Evolution of genes and genomes on the Drosophila phylogeny” *Nature* 450, 203-218 (8 November 2007).
3. Kumar S and A Filipski, “Multiple sequence alignment: In pursuit of homologous DNA positions.” *Genome Research* 17(2): 127-35 (2007).
4. Kumar S, A Filipski, V Swarna, A Walker and SB Hedges, “Placing confidence limits on the molecular age of the human-chimpanzee divergence,” *Proceedings of the National Academy of Sciences (USA)* 102:18842-1 (2005).
5. Filipski A and S Kumar, “Comparative Genomics of Eukaryotes”, chapter in the book *The Evolution of the Genome*, T. Ryan Gregory, ed., Burlington, MA, Elsevier Academic (2005).
6. Kumar S and A Filipski, “Reconstructing Vertebrate Phylogeny” in *Encyclopedia of Genetics, Genomics, Proteomics, and Bioinformatics*, Subramaniam S, ed., John Wiley & Sons, New York, (2005).
7. Kumar S and A Filipski, Multiple attributed contributions to *Dictionary of bioinformatics and computational biology*, Hancock, JM and MJ Zvelebil, Wiley-Liss, Hoboken, NJ (2004).
8. Jiang Z, JS Melville, H Cao, S Kumar, A Filipski *et al*, “Measuring conservation of contiguous sets of autosomal markers on bovine and porcine genomes in relation to the map of the human genome.” *Genome* 45(4): 769-76 (2002).

9. Kumar S and A Filipski, "Molecular Phylogeny Reconstruction" in *Encyclopedia of Life Sciences*, Macmillan Reference Ltd, Oxford, UK (2001). (www.els.net).
10. Kumar S and A Filipski, "Molecular Clock Testing" in *Encyclopedia of Life Sciences*, Macmillan Reference Ltd, Oxford, UK (2001). (www.els.net).
11. Kumar S, S Gadagkar, A Filipski, and X Gu, "Determination of the number of conserved chromosomal segments between species", *Genetics* 157:1387-1395, (2001).
12. Filipski A, "Automated Conversion of Engineering Drawings to CAD Form", *Proceedings of the IEEE*, (July, 1992).
13. Filipski A, "The UNIX Operating System", in *Encyclopedia of Computer Science and Technology*, Marcel Dekker, Inc., New York, (1990).
14. Filipski A, "File Encryption", *Computer Language Magazine*, (February, 1987).
15. Filipski A, and J Hanko, "Making UNIX Secure", *Byte Magazine*, (April, 1986).
16. Filipski A, "High-Precision Arithmetic", *Computer Language Magazine*, (September 1985), translated into Japanese and reprinted in *ASCII magazine*, (June 1986).
17. Filipski A, "A Least Mean-Squared Error Approach to Syntactic Pattern Recognition", *IEEE Transactions on Pattern Analysis and Machine Intelligence*, (May 1980).