Gerald D. Chandler, Ph.D.

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Summary

Dr. Chandler received an undergraduate degree in applied engineering and then a Ph. D. in physics. He initially worked at the RCA Laboratories in Princeton and then taught computer science for a dozen years at international and American universities while doing research in computer algorithms. His further career was in consulting, where he worked in military and civilian applications centered on information systems. Besides his core expertise in information technology he has expert knowledge of mathematics, statistics, physics, electrical engineering, developmental economics, and econometrics.

Expertise

- **Development Methodology and Software Architecture:**
  Recognized expert in object-oriented design and use of frameworks and patterns. Lecturer in program design and project management
- **Systems Analysis and Review**
  Including for Bank of America, AT&T, Lucent Technologies
- **Econometric Analysis and Statistical Studies**

- **Real-time and Embedded systems:**
  Including systems for battle information, advanced voice processing; network management; electronic counter radar.
- **Interface (GUI) design:**
  Designed interfaces for various GIS, File Manager, Network Managers, Document retrieval, and Bank relationship management systems.
- **Data Modeling and Database Definition**:
  Designed the data architecture for a major order processing system. Participated in data modeling in many projects. Taught databases at several universities.
- **Compilers and Operating Systems:**
  Implemented function-description compiler for dynamic signal processing; directed Pascal Compiler/Editor project; directed APL implementation; maintained Fortran compiler, implemented Basic interpreter; taught compilers.

- **University Teacher and Lecturer:**
  Taught computer science while doing computer science research and consulting. Lectured and ran development seminars for various companies

Employment and Consulting Positions

Consultant on Software Process Improvement, ZTE Corporation (Shenzhen, China)
- Surveyed current software standards and needs for ZTE in Shenzhen, Shanghai, and Nanjing, China.
- Taught two courses on software development methodology, including an introduction to object-oriented programming and UML.

- Lead a team implementing new software methodology for the Requirements and General Design stages.
- Designed an improved Network Manager GUI for a 10G SDH system.
- Tools/systems: Unix on HP & Sun, MS Windows, C++, Delphi, CORBA, Rhapsody UML.

Team Manager, Sterling Software [now Lockheed Martin] (Tinton Falls, NJ)
- Lead Team of 20 software developers, testers, and system engineers working on a US Army GIS project to computerize battlefield information flow.
- Responsible for detailed design; staff selection and training; managing implementation, scheduling, and budgeting; and working with external agencies and co-contractors.
- Tools/systems: C++ (Sun Workshop), Rational Rose, Rational ClearCase, UIM/X over X-Motif, JMTK-V, and DCE on Sun Sparcs and Ultras running Solaris.

Team Leader and Designer, Lucent Technologies (Holmdel, NJ)
- Lead Team and designed parts of an entirely new flexible, redundant real-time voice processing system.
- Responsible for the architecture for controlling dynamic loading of applications, real-time operating code replacement, and alarm processing; managing a team in implementing parts of these; training new staff, and leading the software standards team.
- Tools/systems: GNU C++, SCCS, ObjecTime, and pSOS on Sun Sparc 2/10 running Solaris.

Consultant, Bellcore/Nynex Research (Morristown, NJ)
- Designed and implemented one of the earliest graphical network managers for Bellcore's then experimental fiber-optic WAN.
- Revised virtual machine for packet processing on experimental network chip via ROM microprogramming.
- Tools/Systems: Sun Sparc, Solaris, Sun C, and Sun Window Manager.

Military and Security Work
Heat Transfer Studies for Nuclear Submarines (Vard Industries)
ECM (Electronic Counter Measure) for B1 Bomber (now Lockheed-Grumman)
MCS (Maneuver Control System) for US Army (now Lockheed-Grumman)
Highway Design (California Division of Highways)

University Positions
- **Maitre de Conference, ENSMN (Mines de Nancy), Nancy, France**
Among other activities introduced control systems computers, organized first French conference on computer networks, and initiated internation internships for students.
- **Professor, SPCA (School of Planning and Computer Applications), Tehran, Iran**
Consulted with Ministry of Planning on Iran National Development
- **Associate Professor, Fairleigh Dickinson University, Teaneck, New Jersey**
- **Principal Lecture, Hong Kong Polytechnic University, Hong Kong**
Founding member of IEEE Hong Kong, ran HKPU summer school, guided faculty development

Additional Achievements

Professional Activities
- Reviewer for IEEE Press
- Reviewer for ACM Computing Reviews
  - More than twenty published reviews of books and articles.

Education/Degrees
- Ph.D. in Physics of Elementary Particles (K-Pi reactions in bubble chambers), University of Illinois, Urbana-Champaign.
- B. S. in Engineering (Electronics and Physics), California Institute of Technology, Pasadena, California.
- Followed courses and widely read in Business Administration.
- Self-taught at advanced level in economics and statistics.

Additional
- Previous Secret Security Clearance
- Foreign Languages: French (excellent), Spanish (good), German (basic).