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CURRENT AFFILIATIONS

Vice President for the Loyola Schools, Ateneo De Manila University (April 2010 – Present)

Professor, Department of Information Systems and Computer Science,
School of Science and Engineering, Loyola Schools, Ateneo De Manila University
(April 2006 – Present)

AREAS OF EXPERTISE

Information Systems Consulting
Software Development (Database Systems, Java, C, C++)
Training, Research, and Development in Computer Science—Areas of Specialization: Software
Engineering, Object-Oriented Systems Development, Algorithms, Bioinformatics.

EDUCATION

- Ph.D. Computer Science and Applications, 1997
Virginia Tech—Virginia Polytechnic Institute and State University
(Blacksburg, Virginia, U.S.A)
Graduate Student Award Recipient: Scholarly Performance in Graduate Study
- M.S. Computer Science and Applications, 1990
Virginia Tech
- B.S. Mathematics/Computer Science, 1986
Ateneo de Manila University
National Science and Technology Agency Scholar
- Philippine Science High School, 1982

HONORS AND AWARDS RECEIVED

- 2001 Outstanding Young Scientist
July 2001 National Academy of Science and Technology
Republic of the Philippines
- DuPont Miracles of Science Award
July 2001 DuPont Far East, Inc., Philippines
- Scholarly Performance in Graduate Study
May 1997 Department of Computer Science
Virginia Tech, Virginia, U.S.A.

ACADEMIC POSITIONS HELD

Ateneo De Manila University (Administration)

- Vice President for the Loyola Schools April 2010 to present
- Vice President for Administration & Planning April 2009 to March 2010

DISCS (formerly CS Program), School of Science and Engineering Loyola Schools, Ateneo De Manila University

- Professor April 2006 to present
- Department Chairman April 2008 to March 2009
- Associate Professor April 2000 to March 2006 (sabbatical leave 2003-04)
- Department Chairman April 1998 to March 2002
- Assistant Director June 1997 to March 1998
- Assistant Professor April 1997 to March 2000
- Officer-in-Charge April 1993 to June 1993
- Instructor June 1991 to March 1997 (study leave 1994-97)
- Assistant Instructor April 1986 to August 1988

Graduate Program Division, Ateneo Information Technology Institute (formerly ACTC)

- Associate Director July 2001 to March 2006
- Lecturer June 1997 to present
June 1991 to October 1993
- Program Coordinator October 1997 to March 2001

Ateneo Graduate School of Business

- Cluster Chair for Information Technology August 2005 to March 2010
- Lecturer May 2007 to present

Department of Computer Science, Virginia Tech

- Visiting/Adjunct Professor January 2008 to May 2008
June 2003 to May 2004
May 2001 to July 2001
May 2000 to July 2000
May 1999 to July 1999
- Instructor July 1994 to December 1996
- Graduate Teaching Assistant January 1989 to May 1991

CONSULTING ENGAGEMENTS

- Consultant, CARANA Corporation/Bureau of Internal Revenue (BIR)
September 2008
 - Managed the implementation of a Performance Management Information System for BIR Offices
- Consultant, CARANA Corporation/Bureau of Internal Revenue
June 2008 to August 2008
 - Managed the development of a zonal value encoding system (systems developed in PERL and Visual Basic for Microsoft Excel and Access)
- Consultant, CARANA Corporation/Bureau of Internal Revenue
January 2008
 - Assisted the BIR in the process reengineering of filing and payment processes
- Consultant, CyberSoft Data Networks Inc.
July 2007 to October 2007
 - Managed the development of an image analysis program (in C) for detecting ads in yellow pages
- Lead Consultant, Economic Policy Reform and Advocacy (EPRA) /
Bureau of Internal Revenue
June 2007 to November 2007
 - Assisted the BIR in the process reengineering of filing and payment processes
- Consultant/Subject Specialist for Information Technology, EPRA / BIR
January 2007 to July 2007
 - Provided technical oversight and review on ICT projects
- Consultant, CARANA Corporation / Bureau of Customs
March 2007 to May 2007
 - Developed a rewards framework for performance management
- Consultant/Team Leader, AIM SRF / Land Transportation Office (LTO)
April 2006 to October 2006
 - Assisted the LTO in the process reengineering of vehicle registration transactions
- Consultant/Systems Integrator, CARANA Corporation / Bureau of Internal Revenue
April 2006 to June 2006
September 2006 to present
 - Managed the design and development of an information system for performance management for the BIR
 - Developed a rewards framework for performance management
- Consultant, INQ7 Interactive Inc
August 2005 to November 2005
 - Managed the development of web-based modules for the administration of content (stocks, currencies, weather, ads, and polls) for inq7.net.
- Consultant/Systems Integrator, CARANA Corporation / Bureau of Internal Revenue
April 2005 to October 2005
 - Managed the design and development of an information system for performance management in the Large Taxpayer Service of the BIR
 - Developed a rewards framework for performance management
 - Served as officer-in-charge of the performance management system project
- Consultant, Change Consultants, Inc. / National Anti-Poverty Commission (NAPC)
May 2003 to June 2003
 - Assisted the National Anti-Poverty Commission in the reengineering of its processes

- Consultant/Systems Integrator, Development Alternatives, Inc. / Bureau of Internal Revenue
November 2001 to May 2003
 - Assisted the BIR in the reengineering of its tax administration processes
 - Assisted the Commissioner and the BIR in the evaluation of IT-related projects
- Research and Development Consultant, Pygmalion Software Corporation
June 1997 to May 2003
 - Developed Application Program Generators (in C and Java) for Informix-NewEra, Microsoft Visual Foxpro, and Oracle, for a Fund Management System
 - Conducted Research and Presentations on Business Processing Models Using INCOME Software
- Systems Consultant, Financial Software Technologies / Bureau of Treasury
February 2000 - April 2000
 - Designed and developed a Bid Server Interface (in Java)
- Systems Consultant, SmithKline Beecham Philippines
March 2000
 - Designed and developed a Budget Management System
- Systems Consultant, Marketing Group, BPI Family Bank
August 1997 to December 1999
 - Designed and developed a Budget Management System
 - Designed and developed several Customer Monitoring Systems
- Systems Consultant, Financial Software Technologies, Inc.
April 1999
 - Developed a Report Formatter for Stock Certificate Printing (in Informix 4-GL)
- Systems Consultant, Searle
May 1998
 - Developed an interactive Question-and-Answer Computer Game (in Java)
- Consultant/Lecturer, American International Underwriters Corporation---RDC
January 1997
 - Conducted Training on "Object-Oriented Systems Development"
- Consultant/Lecturer, AxSys Philippines Inc.
August 1996
 - Conducted Training on "Relational Database Design"
- Systems Consultant, Pygmalion Software Corporation
May 1995 to August 1995
 - Developed Menu and Report Program Generators (in C) for Informix-4GL
- Consultant/Lecturer, AxSys Philippines Inc.
August 1995
 - Conducted Training on "Object-Oriented Systems Development"
- Consultant/Lecturer, Strategic Partners International
June 1995
 - Conducted Training on "Object-Oriented Database Design"
- Systems Consultant, Sara Lee Philippines Inc.
July 1993 to August 1993
 - Developed a Menu System and a Menu Generator (in C) for Progress-4GL
- Systems Consultant, RCT International (Chicago, Illinois, U.S.A.)
June 1992 to August 1993
 - Conducted a system study and managed a team that developed a prototype for a Travel Consolidation System (in Progress-4GL)

- Systems Consultant, United Automation/San Miguel Corporation
June 1991 to December 1993
 - Designed and developed a Stock Transfer System (in Informix-4GL)
- Systems Consultant, La Campana Fabrica de Tobaccos
November 1991 to March 1992
 - Conducted a system study for the company's Manufacturing, Sales, and Marketing Departments
- Systems Consultant, Fasttrack - Consumer Access Technology
December 1991 to August 1994
 - Designed and developed several Consumer Monitoring Systems

COURSES TAUGHT

- DISCS, Ateneo De Manila University
 - Introduction to Computing (Pascal, C, Java)
 - Introduction to Software Engineering
 - Data Structures and Algorithms
 - Automata and Formal Languages
 - Combinatorics and Graph Theory
 - Database Systems
 - Object-Oriented Systems Development
 - Computer Graphics
 - Computational Complexity
 - Methods of Research
 - Introduction to Bioinformatics
 - Cryptography and Network Security
 - Artificial Intelligence
 - Programming Languages and Paradigms
 - Introduction to Data Mining
 - Theory of Computation
 - Object-Oriented Software Design and Implementation
 - Introduction to Applications Development (C#)
 - Enterprise Systems Programming (Java Enterprise Edition)
 - Introduction to Statistical Analysis
- Information Technology Cluster, Ateneo Graduate School of Business
 - Business Intelligence for Managers
- Graduate Program Division, Ateneo Information Technology Institute
 - Java Programming and Object-Oriented Languages
 - Theory of Algorithms
 - Compiler Design
 - Organization of Databases
 - Programming Paradigms
 - Object-Oriented Programming
- Department of Computer Science, Virginia Tech
 - Introduction to Computer Science
 - Programming in Pascal
 - Programming In C/C++
 - Operating System Tools (Windows and FreeBSD Unix)
 - Object-Oriented Software Design and Construction
 - Data Structures and File Management
 - Introduction to Programming in Java
 - Data Structures and Object-Oriented Development

LECTURES AND TALKS GIVEN

- “Modeling Linear Orders with Partial Orders: Applications”, presented at the Workshop on Mining Orders from Linear Orders and Chains, Ateneo de Manila University, November 2009.
- “Poset Cover Problems: Modeling Linear Orders with Partial Orders”, presented at the 4th Symposium on the Mathematical Aspects of Computer Science (SMACS 2008), University of the Philippines-Cebu Colleges, August 2008.
- “Research and Innovation: Data Mining Research”, presented at the Trend-Micro eCamp 2008, Legenda Hotel, Subic Bay, July 2008.
- “Monte Carlo Simulation”, presented at the Seminar-Workshop in Computational Finance, Ateneo de Manila University, December 2007.
- “On Linear Extensions of Posets”, presented at the Algorithms and Combinatorics Conference 2006, Ateneo de Manila University, April 2006.
- “Graph Algorithms and Computational Biology”, presented at the Philippine Science High School Foundation Week, PSHS, September 2005.
- “Bioinformatics from the Computational Point of View”, presented at the 24th NAST Annual Scientific Meeting, Manila Hotel, Manila, July 2002.
- “Bioinformatics”, presented at the Science Information Forum of the National Academy of Science and Technology, Ateneo de Manila University, September 2001
- “Introduction to Bioinformatics”, presented at specials seminars in Ateneo De Manila University and University of the Philippines, February 2001
- “Genetic Algorithms”, presented at the Seminar on High Performance Scientific Computing, Ateneo De Manila University, September 2000.
- “A Practical Approach to Designing and Implementing Object-Oriented Applications”, presented at a seminar conducted by PSSI, Heritage Hotel, Manila, March 1999.
- “Mathematics in Computer Science”, presented at the Mathematics Teachers Association of the Philippines-DECS NCR Convention and Seminar-Workshop, Stella Maris College, October 1998.
- “Developing Windows-based and Web Solutions in Java”, presented at Microsoft Developer Days '98, Dusit Hotel, Makati City, September 1998
- “Linking IT Education with Industry and the World of Work”, presented at the Bikol Foundation for Higher Education Annual General Assembly, Colegio de Santa Isabel, Naga City, August 1998
- “Strategies for IT Curriculum Development”, presented at the PSITE First Monthly Membership Meeting, ACEED Conference Center, Makati City, April 1998.
- “Freshman Java: Incorporating Object Technology in Undergraduate Computer Science Curricula”, presented at the 9th Information Technology Week, University of the East, February 1998.
- “How Far are Humans from Mice—Unraveling the Tangles of Evolution”, presented at the Virginia Tech CS Seminar Series, Virginia Tech, April 1996.

CONFERENCE PAPERS

- “Web-based Business Game Engine Using a Cross-Impact Matrix”, presented (by Jal De Vera) at the International Simulation and Gaming Association (ISAGA 2009) 40th Annual Conference, July 2009 (Joint Research with J.A. De Vera and M.V. Gonzalez).
- “Automated Image Analysis for Microarray Experiments”, presented at the 1st Annual Bioinformatics Conference and NIMBUS Convention, IRRI, Los Banos, October 2004.
- “Sorting By Short Swaps”, presented at the DLSU Computing Conference 1999, De La Salle University, December 1999.
- “Computational Problems and Algorithms in Molecular Biology”, presented at MODEL '99—Workshop and Conference on Modeling, Simulation, and Scientific Computing, Ateneo De Manila University, November 1999.
- “Edge-packing Planar Graphs by Cyclic Graphs”, presented at the Eighth SIAM Conference on Discrete Mathematics, Johns Hopkins University, June 1996.
- “Sorting by Bounded Block-moves”, presented at the Computational Biology Conference to honor the 50th Anniversary of ENIAC, Princeton University, May 1996.
- “Subsequence and Run Heuristics for Sorting by Transpositions”, presented at the Fourth DIMACS Algorithm Implementation Challenge, Rutgers University, August 1995 (Joint research with S.A. Guyer and L.S. Heath).

RESEARCH PUBLICATIONS

- L.S. Heath and J.P. Vergara, “Sorting by Short Swaps”, *Journal of Computational Biology* 10:5 (2003), 775-789.
- P.I. Echevarria, J.C. Punzalan, J.P. Vergara, “Microarray Image Analysis Program”, *Loyola Schools Review* 2 (2003), 1-14.
- L.S. Heath and J.P. Vergara, “Sorting by Short Block-moves”, *Algorithmica* 28 (2000), 323-352.
- L.S. Heath and J.P. Vergara, “Edge-packing Planar Graphs by Cyclic Graphs”, *Discrete Applied Mathematics* 81 (1998), 169-180.
- L.S. Heath and J.P. Vergara, “Sorting by Bounded Block-moves”, *Discrete Applied Mathematics* 88---Special Issue on Computational Biology (1998), 181-206.
- L.S. Heath and J.P. Vergara, “Edge-packing in Planar Graphs”, *Theory of Computing Systems* 31 (1998), 629-662.
- J.P. Vergara, “Mathematical Induction in Computer Algorithms”, *Matimyas Matematika*, 16:3 (1993), pp. 18-29.
- A. D. Del Rosario and J.P. Vergara, “A PC-Based Text Retrieval System”, *Proceedings of the South East Asian Regional Computer Conference*, Bali, Indonesia, December 1991.

MISCELLANEOUS

- PhD Advisor to Proceso Fernandez, DISCS, ADMU (PhD Thesis defended April 2008)
- Member, Board of Directors, Human Capital Asia
- Member, Board of Advisors, Vinta Systems, Inc.
- Coach, Ateneo ACM Programming Team, 2004-2008
- Rapporteur, 24th NAST Annual Scientific Meeting, 2002
- Member, Task Group on Faculty Development (2002), Commission on Higher Education
- Finals Judge, Fourth Philippine Web Awards, 2001
- Member, Outstanding Young Scientists, Inc.
- Member, Computer Science Honor Society (Upsilon Pi Epsilon), Virginia Tech Chapter.
- Member, Association for Computing Machinery
- Member, Institute of Electrical and Electronics Engineers
- Member, Information Technology Technical Panel, DOST-Philippine Council for Advanced Science and Technology
- Member, Board of Judges, PCASTRD Outstanding R&D Award in Advanced Science and Technology (1999, 2008)
- Director and Faculty Development Committee Chair, Philippine Society for Information Technology Education (PSITE), 1998-1999.
- Referee for the following journals:
 - Discrete Applied Mathematics
 - Information Processing Letters
 - International Journal of Foundations of Computer Science
 - Journal of Algorithms
 - Journal of Parallel and Distributed Computing
 - Journal of Theoretical Computer Science
 - Loyola Schools Review