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(a) Professional Qualifications

Univ. of the Philippines at Los Baños Philippines	B.Sc. Agricultural Engineering, 1982
Univ. of the Philippines at Los Baños	M.Sc. Computer Science, Philippine 1993

(b) Appointments

2012- present **Systems Architect/Enterprise IT Specialist**, Harte Research Institute, Texas A&M University Corpus Christi, TX (USA), and GCOOS co-Data Manager/ DMAC Coordinator as of 2018.

2009 – 2012 **Senior Software Systems Architect**, Center for Computational Science, University of Miami, FL (USA)

2003 - 2009 **Senior Software Engineer**, Rosenstiel School for Marine and Atmospheric Sciences, University of Miami, FL (USA)

2001 - 2002 **Information Technology/Data Management Specialist** (from Jul. 2001), Oversea Agro-Fisheries Consultants (Japan), with cross-appointment with Pacific Rim Innovation and Management Exponent (Philippines) on various ADB and JBIC nationwide IT-projects (Philippines, Indonesia and Sri Lanka).

1999 - 2001 **Information Technology Specialist**, University of British Columbia, Vancouver, Canada, and cross-appointment as **Software Architect** with Food and Agriculture Organization (FAO) of the United Nations, Rome, Italy.

1987 - 1999 **Fisheries Science Programming Specialist**, International Center for Living Aquatic Resources Management (ICLARM; now WorldFish Center, Malaysia)

(c) Products

Van Smirren, Jan, B. Kirkpatrick, **F. Gayanilo**, K. Knee, R. Fratantonio, B. Magnell, B. Williams and S. Dimarco. 2020. GulfHub: Leveraging industry-academic partnership to expand physical oceanographic data availability in the Gulf of Mexico. Global Oceans 2020. IEEE Oceanic Engineering Society. Singapore.

Howard, M.K., **F. Gayanilo**, S. Kobara, and R. Currier. 2016. The Gulf of Mexico Coastal Ocean Observing System: A Decade of Data Aggregation and Services. AGU/ASLO Ocean Science 2016, New Orleans, LA.

Gayanilo, F.C. Jr., Sparre P and D. Pauly. 2005. FAO-ICLARM Stock Assessment Tools II (FiSAT II). Revised version. User's Guide. FAO Computerized Information Series (Fisheries). No. 8. 168p. (Includes a CD-ROM with the software).

F.C. Gayanilo, Jr., G. Silvestre, F. Valdez and D. Pauly 2001. Fisheries Resources Information System (FiRST): User Manual. International Centre for Living Aquatic Resources Management, Penang, Malaysia, 126 p.

Pauly, D., **F.C. Gayanilo, Jr.**, R. Froese and V. Christensen. 1995. Software tools for management of tropical aquatic resources, p. 90-102. *In* G.T. Sakagawa (ed.). Assessment methodologies and management. Proceedings of the World Fisheries Congress, Theme 5. Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi.

Garces L. R., G. T. Silvestre, I. Stobutzki, **Gayanilo F. C.**, F. Valdez, Saupi M., T. Boonvanich, M. Roongratri, P. Thouc, Purwanto, Haroon I., K.N. Kurup, M. Srinath, H.A.B. Rodrigo, M.D. Santos, F.S.B. Tones, M. K. Tan and D. Pauly. 2006, A regional database management system-the fisheries resource information system and tools (FiRST): Its design, utility and future directions. Fisheries Research. 78: (2-3), pp. 119-129.

(d) Synergistic Activities

- GCOOS DMAC Coordinator, co-Data Manager and lead system engineer/developer for the *Gulf of Mexico Coastal Ocean Observing System* (GCOOS; data.gcoos.org) *Data Portal* that is nested in a *National Backbone* of coastal observations to aggregate and disseminate the region's near real-time oceanographic data in close collaboration with data providers from five states that borders the Gulf. Data are streamed from over 250 stations on regular interval and processed in near real-time. These are served in NOAA IOOS compliant ERDDAP servers, OpenGIS Consortium (OGC) Sensor Observation Service (SOS) compliant using the latest schema developed by the *U.S. Integrate Ocean Observing System* (IOOS).
- Systems Architect for the Gulf of Mexico Research Initiative Information and Data Cooperative (GRIIDC; <https://data.gulfresearchinitiative.org/>), that initiated the design and development of the GRIIDC infrastructure, a multi-disciplinary and multi-institutional effort to develop an information system to archive and make available scientific research data from all participating researchers to address issues related to oil spills as it affects the Gulf of Mexico ecosystem using data FAIR principles.
- Author of the FAO-ICLARM Fish Stock Assessment Tools, analytical tools for fisheries management with funding support from DANIDA, FAO of the United Nations, and the World Bank. The package was translated in other languages and distributed by Food and Agriculture Organization of the United Nations. It is still in used and continues to be cited (<http://goo.gl/ql27hK>).
- System design and architecture of the Marine Mammal Health Monitoring and Analyses Platform (MMHMAP), a concept that is now, federally funded for implementation (2020-2025);
- Co-PI to the NSF/EarthCube-funded, Cross-Domain Observation Metadata Environmental Sensing Network (X-DOMES)
- Co-PI to the National Academies of Science and Engineering, Informing the LC Campaign: Data Compilation to Improve Understanding, Simulation and Prediction of the LCS.
- Lead PI to the Shell E&P -funded, Stones Development Data Portal: StonesData, a National Academies of Sciences, Engineering and Medicine, Gulf Research Program to establish a sustained MetOcean Observatory.

Other Notable Membership:

- Member, NSF/EarthCube Technology and Architecture Committee and member of the Council of Funded Projects (2016-present);
- Member, NSF/ESIP Partnership Committee (2019-present)
- Chair, DataONE User Group (2016-2017) and member of the Steering Committee (2014-2016)
- Member, Emergency Disaster Data Management (EDDM), Gold Standard WG
- Member, Steering Committee, Marine Metadata Interoperability (<https://marinemetadata.org>)
- Member of IEEE Computer Society and IEEE Computational Intelligence Society (formerly IEEE Neural Networks Society; since 1999);
- Member, National Center for Coral Reef Research (NCORE) Internal Advisory Committee (2008-2012); and
- Member, U.S. EPA Research and Development Ecosystem Services Research Program (ESRP) Decision Support Framework team (2010-2012).