John C. Gentile

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I'm a hard working, self-driven engineer & team leader that excels in whatever task is given. I have broad spectrum product development & life-cycle experience from the board level to the digital and software domains.

# Professional Experience

## National Instruments- Austin, TX

### Staff Product Support Engineer – FlexRIO & High-Speed Serial Aug 2016 – Present

* Sole R&D support & product quality owner for NI FlexRIO and High-Speed Serial product lines. Provide direct, top-tier support to customers & key accounts with high-speed communications/protocols & DSP applications.
  + Direct-to-customer, paid consulting on custom FlexRIO Modules that interface with high-speed ADCs/DACs or other interfaces such as proprietary bus or SERDES protocols. Services encompass: board level & VHDL design reviews, constraint generation & advanced timing analysis, integrated debugging, signal integrity analysis and some mixed-signal design.
* Leads team of 3 other PSEs in their daily tasks and projects as PSE Team Leader using an Agile methodology.
* Participated in rigorous internal and 3rd party courses on subjects such as Digital Design Best Practices (covering advanced VHDL development, test-benches in Modelsim, static timing analysis and common pitfalls which culminated to creating a PCI data acquisition board), Board Level Best Practices & High-Speed PCB Design (high-performance board design and layout techniques with signal integrity using HyperLynx) and Analog Design Best Practices (best practices for electrical engineers on high-precision instrumentation devices).
* Active teacher and speaker- to internal engineers and customers- on subjects such as High-Throughput FPGA Development and integrating custom IP into LabVIEW FPGA. Presented at NI Week Conference on Advanced Debugging & Simulation techniques using Xilinx Virtual Cable and Vivado ILAs.
* Leverage marketing and sales resources to create customer application example code and technical white papers covering new FPGA development techniques and industry best-practices. Notable, published projects: [FlexRIO Peer-to-Peer GPU](https://forums.ni.com/t5/NI-Labs-Toolkits/FlexRIO-Peer-to-Peer-GPU/ta-p/3660064), [Remote FPGA Debugging with ChipScope, XVC and LabVIEW](https://forums.ni.com/t5/NI-Labs-Toolkits/Remote-FPGA-Debugging-with-ChipScope-XVC-and-LabVIEW/ta-p/3546726), [JESD204B Simple Streaming](https://forums.ni.com/t5/Examples-and-IP-for-Software/JESD204B-Simple-Streaming-Example-for-the-PXIe-6591R-High-Speed/ta-p/3647880), [Serial RapidIO Simple Communication](https://forums.ni.com/t5/Examples-and-IP-for-Software/Serial-RapidIO-Simple-Communication-Example-for-the-PXIe-6592R/ta-p/3646335) and [High-Speed Serial Streaming to Disk](https://forums.ni.com/t5/Examples-and-IP-for-Software/High-Speed-Serial-Streaming-to-Disk/ta-p/3668207).

### Applications Engineer Sep 2015 – Aug 2016

* Provided world-class customer support and technical knowledge for a wide variety of automated test and high-performance embedded products (i.e. RF test & communication prototyping, open-FPGA, and high-speed serial devices) to a large array of customers that spanned nearly every industry of science and engineering.
  + Designated RF & FPGA Subject Matter Expert in Applications Engineering to help educate other Applications Engineers.
  + Worked and developed test & prototyping systems with RF & High Speed Serial devices for applications such as Radar, 802.11, LTE, Bluetooth, High-Performance DSP,10G Ethernet, Aurora, JESD204B, etc.
* Acted as a pre-sales consultant for product selection and system proof-of-concept as well as post-sales system set-up, continuous troubleshooting/debug and code review/example-development.
  + Languages and IDEs used: LabVIEW, VHDL/Verilog, TestStand, Vivado, Visual Studio and C/C++/C#
  + Assisted sales engineering generate new leads for key companies by making true connections with customers and focusing on their company and how to help them achieve their strategic goals.

# Degrees & Certifications

## Bachelor of Science- Electrical Engineering, Virginia Polytechnic Institute & State University May 2015

* *Organizations:* Corps of Cadets, President Theta Chi Fraternity Eta Lambda Chapter, IEEE, Student Government Association & Intelligence Community Center of Academic Excellence

**Certified TestStand Developer (CTD)** (200-916-10026)February 2016

**Certified LabVIEW Developer (CLD)** (100-916-10189) March 2016

**Certified LabVIEW Associate Developer (CLAD)** (100-315-12914) November 2015