

Robert (Robbie) Henry-Keyes

WIRELESS SYSTEMS · TECHNICAL PROGRAMS · RESEARCH · PEOPLE LEADERSHIP

British Columbia, Canada · Pacific time

Portfolio & contact form | [linkedin.com/in/robert-henry-keyes](https://www.linkedin.com/in/robert-henry-keyes)

Engineering leader with nearly eleven years at Apple, progressing from hands-on wireless systems engineering to management of iPad and Wearables performance teams. Combines RF and antenna expertise, measurement automation and published research with experience coordinating concurrent programs, developing engineers and translating technical evidence into decisions. Brings practical depth across laboratory work, user studies, technical communication and research-resource coordination.

Core strengths

Wireless systems and test engineering · Technical program coordination · Research and laboratory operations · Scope and resource planning · Cross-functional collaboration · Distributed team leadership · Coaching and succession · Technical writing and presentations

Professional experience

Apple Inc. | Cupertino, California

November 2014 - October 2025

Engineering Manager, Wireless Performance | Wearables

2022 - October 2025

- Led wireless-performance engineers working on wearable products, balancing engineering delivery, capability development and people leadership.
- Led technical studies and supported engineers in connecting simulation and measurement evidence with wireless-performance questions.
- Coordinated distributed engineering collaboration, onboarding and technical communication across time zones.
- Planned engineering resources and coordinated specialist input, priorities and delivery.
- Supported research-resource planning by clarifying technical requirements and coordinating infrastructure specialists.
- Coached engineers on presentation structure, technical claims, uncertainty and technical ownership.

Engineering Manager, Wireless Performance | iPad

2020 - 2022

- Managed engineers across concurrent iPad wireless-performance programs, coordinating priorities, test planning and communication.
- Helped teams interpret performance evidence and communicate technical risks, assumptions and uncertainty.
- Prepared technical summaries and management updates; balanced testing priorities against available evidence and engineering capacity.
- Mentored engineers and supported delegation, succession planning and leadership development.

Engineering and research experience

Wireless Systems Engineer | Apple Inc.

November 2014 - 2020 | iPad technical team lead from 2015

- Designed and executed conducted RF and over-the-air test plans and served as an iPad wireless-performance technical lead.
- Performed regular and on-body OTA testing, field testing and user studies, relating controlled measurements to practical device performance and user experience.
- Measured radiated power, isotropic sensitivity, throughput, antenna efficiency, gain, radiation patterns, impedance, conducted power and receiver sensitivity.
- Developed RF measurement and automation capabilities, with experience in chamber testing, calibration, repeatability and laboratory operations.
- Wrote Python and Perl measurement-automation scripts and analytical tools for tracking RF performance; used RF instruments and automated chamber systems to investigate measurement and device issues.
- Worked with antenna and design engineers to evaluate changes and communicate recommendations, relating system and user-facing metrics to RF and physical-layer behavior.

Graduate Researcher & Teaching Assistant | University of Calgary

Research: September 2012 - October 2014 | Teaching: 2012 - 2014

- Designed, simulated, fabricated and measured two substrate-integrated-waveguide leaky-wave antenna architectures that scan through broadside, comparing theoretical predictions and HFSS simulations with experiments.
- Applied S-parameter, radiation-pattern and gain measurements, including thru-reflect-line calibration and de-embedding.
- Demonstrated a non-inverting antenna with 32% impedance bandwidth and measured gain above 10 dB over an 86-degree scan range; a phase-reversal design achieved 34% bandwidth and gain above 9 dB over a 72-degree scan range.
- Published two IEEE journal papers and coauthored international conference papers; documented methods and findings in a master's thesis and research presentations.
- Prepared electromagnetics laboratories and supported undergraduate students in ENEL 475 (Electromagnetic Fields and Applications) and ENEL 476 (Electromagnetic Waves and Applications).

Undergraduate Researcher | University of Calgary

May - September 2011

- Investigated wireless channel-impulse-response measurement using USRP2 software-defined radios, Python and GNU Radio; organized and tested RF and microwave laboratory equipment.
- Through an IEEE MTT-S scholarship project, investigated post-measurement VNA calibration for microwave imaging, analyzed effects of sensor repositioning and cable flex, and documented findings in a technical report.

Process Safety Management Summer Student | Nexen

May - September 2010

- Conducted a high-level business-process review of how process-safety information flowed across the company and its assets.

Technical capabilities

Wireless and measurement: Conducted RF; regular and on-body OTA; LTE, WLAN, Bluetooth and UWB performance research and validation; throughput and rate-versus-range; antenna characterization; peer-to-peer links; user studies; calibration and measurement repeatability.

Instruments and test systems: Vector network analyzers, spectrum analyzers, cellular callboxes, automated anechoic and reverberation chambers.

Software and analysis: Python and Perl for professional measurement automation and analytical tools; MATLAB for academic and performance analysis; HFSS for graduate antenna simulation; GNU Radio for SDR research. Technical summaries and program reporting; leadership of engineering analysis and simulation work.

Engineering and program methods: Test planning; comparative experiments; simulation-to-measurement comparison; regression analysis; risk and uncertainty communication; scope negotiation; resource planning; vendor coordination; hiring, onboarding and mentoring across time zones.

Additional academic design experience: ADS WLAN transmitter design and RF circuit laboratories; a Cadence CMOS voltage-reference project; digital VLSI design; micro/nanosystems fabrication laboratories. These are academic projects from 2011-2013.

Education and distinctions

M.Sc., Electrical Engineering | University of Calgary

2015 | Antenna-design research | GPA 4.0

B.Sc., Electrical Engineering, with distinction | University of Calgary

2012

- **APEGA Past Presidents' Gold Medal (2012):** highest combined third- and fourth-year academic standing in Electrical Engineering.
- NSERC Alexander Graham Bell Canada Graduate Scholarship, master's level (2013); IEEE MTT-S Undergraduate Scholarship (2011); NSERC Undergraduate Student Research Award (2011).

Additional education: Certificate in Desktop Music Production, Stylus College (2009); Teaching Assistant Preparedness Workshop, University of Calgary (2012).

Selected publications

Published as **Robert Henry**, with Michal Okoniewski.

A Broadside Scanning Substrate Integrated Waveguide Periodic Phase-Reversal Leaky-Wave Antenna. IEEE Antennas and Wireless Propagation Letters 15, 602-605 (2016).

A Broadside-Scanning Half-Mode Substrate Integrated Waveguide Periodic Leaky-Wave Antenna. IEEE Antennas and Wireless Propagation Letters 13, 1429-1432 (2014).

Half Mode Substrate Integrated Waveguide Periodic Leaky Wave Antenna With Antipodal Tapered Slots. IEEE AP-S/USNC-URSI (2014).

A New Half Mode Substrate Integrated Waveguide Leaky Wave Antenna. EuCAP (2014).

Current context

Career break since November 2025 following family relocation to British Columbia, with parenting and independent technical learning. Open to roles, projects and collaborations.