Tom Christiansen

Profile

A self-driven entrepreneur, inventor, leader, and designer of several productized board level and integrated analog circuits with industry-leading performance. Employed in the electronics field since 1991.

Education

University of Calgary. Calgary, Canada. Bachelor of Arts in Psychology (honours). 2019. GPA: 3.62/4.00.

Honours thesis: The Influences of Acetylcholine on the Circadian Clock.

University of Washington. Tacoma, USA. Non-matriculated student. 2013. GPA: 3.90/4.00.

Managing Organizations, Introduction to Psychology, Human Cognition.

University of Washington. Seattle, USA. Master of Science in Electrical Engineering. 2002. GPA: 3.76/4.00.

Thesis: "Conductivity Imaging System".

Specialty: Semiconductor Devices & MEMS. Passed Ph.D. qualifying exam.

Engineering College of Copenhagen. Ballerup, Denmark. Bachelor of Science in Electrical Engineering (honours). 1999.

Honours thesis: 500 W Switch-Mode Power Supply for Audio Amplifier.

Experience

Neurochrome Audio. Calgary, Canada. 2010 - Present.

Owner, Circuit Design Engineer.

- Designing and productizing ultra high-end audio amplifiers with industry-leading performance.
- Developing and maintaining customer relations.
- Driving marketing, sales, and branding.
- Consulting on clients' audio projects.

Texas Instruments. Federal Way, USA. 2011 - 2015.

Senior Circuit Design Engineer.

- Leading the development of an analog delay circuit with infinitesimal delay steps. Noise floor improved by 25 dB over currently productized implementations. Managing intern implementing the circuit.
- Developing tuneable crystal oscillator with industry-leading phase noise performance.
- Developing ultra-low noise voltage reference circuits with metal-programmable temperature coefficient.

National Semiconductor (acquired by Texas Instruments in 2011). Federal Way, USA. 2005 - 2011.

Senior Circuit Design Engineer.

- Design Team Lead on the LMP2021 precision op-amp with industry-leading noise performance.
- Design Team Lead on test chip exploring new VCO topologies. Mentoring recent college graduate who developed into an independent VCO designer within six months.

TOM CHRISTIANSEN

- Design Lead increasing the maximum operating frequency of a clock distribution chip by 30 % for a key customer by changing only one low-cost layout mask.
- Design Lead successfully collaborating with the Packaging Technology Group in implementing a fully monolithic clock generation solution in a custom package.
- Productizing crystal oscillator achieving industry-leading phase noise performance, reducing the customer's solution cost tenfold.

University of Washington. Seattle, USA. 1999 - 2005.

Pre-doctoral lecturer, research assistant.

- Performing lesson planning, teaching capstone class of 35 college seniors analog circuit design using op-amps. Managing Teaching Assistant.
- Researching and developing high-performance analog circuit blocks for medical and space applications.

Køge Gymnasium. Køge, Denmark. 1991 - 1995.

Electronics technician.

- Repairing, implementing equipment used in physics and chemistry labs. Managing computer networks.

VOLUNTEER LEADERSHIP

Rainier Hockey League. Tacoma, USA. 2006 - 2015.

- Team Manager, Captain of two adult ice hockey teams. Solved inter-personal conflicts, handled league politics. Goalie Coach for Tacoma Tomahawks youth ice hockey team.

Sea Scout Ship Propeller. Seattle, USA. 2001 - 2004

- Captain, Navigator of $1.5M, 65-foot Sea Scout power vessel with 16-person crew, carrying up to 49 passengers. Led 10-day cruises in Canadian and US waters with youth crew as well as all-adult crew.

PATENTS

- Zhang, B., Christiansen, T., & Schell, C.A. (2013). Apparatus and Method to Hold PLL Output Frequency When Input Clock is Lost. *US Patent no. 8446193*.

PUBLICATIONS

- Foster, S., Christiansen, T., Antle, M.C. (2019). Modeling the Influence of Synaptic Plasticity on After-effects. *Journal of Biological Rhythms* (in print).

LANGUAGES

- English (fully fluent)
- Danish (native)