Romain Nith

Ph.D. Student in Computer Science, University of Chicago
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Research interests

Human-computer interaction (HCI), haptics, force feedback, wearables, virtual/augmented reality (VR/AR), robotics

Education

University of Chicago, Chicago, U.S.A — 2020 – Current
Ph.D., Computer Science
Advisor: Prof. Pedro Lopes

McGill University, Montreal, Canada — 2013 – 2019
B.Eng., Computer Engineering

Research and work experience

Human Computer Integration Lab – **University of Chicago** — Sept 2020 – Current, Chicago, USA
Research Assistant in HCI and Teaching Assistant
Advisor: Prof. Pedro Lopes

TMW Center for Early Learning + Public Health — Oct 2020 – Current, Chicago, USA
Part-time Research Assistant

Human Computer Integration Lab – **University of Chicago** — June – Aug 2019, Chicago, USA
Visiting Research Assistant in HCI
Advisor: Prof. Pedro Lopes

Sony Computer Science Laboratories — May – Aug 2018, Tokyo, Japan
Research Assistant Intern in HCI
Advisor: Prof. Jun Rekimoto

Shared Reality Lab – McGill University — Jan – Dec 2018, Montreal, Canada
Senior engineering research project
Advisor: Prof. Jeremy Cooperstock, in collaboration with Prof. Pedro Lopes

Sony Computer Science Laboratories — May – Aug 2017, Tokyo, Japan
Research Assistant Intern in HCI
Advisor: Prof. Jun Rekimoto

Publications

DigituSync: A Dual-User Passive Exoskeleton Glove That Adaptively Shares Hand Gestures
Jun Nishida, Yudai Tanaka, **Romain Nith**, Pedro Lopes
To appear in ACM CHI 2022 Paper

DextrEMS: Increasing Dexterity in Electrical Muscle Stimulation by Combining it with Brakes
Romain Nith, Shan-Yuan Teng, Pengyu Li, Yujie Tao, Pedro Lopes
ACM UIST 2021 Paper - **Best Demo Award (people's choice)**

Touch&Fold: A Foldable Haptic Actuator for Rendering Touch in Mixed Reality
Shan-Yuan Teng, Pengyu Li, **Romain Nith**, Joshua Fonseca, Pedro Lopes
ACM CHI 2021 Paper – **Best Paper Honorable Mention Award** (top 10%)

MagnetIO: Passive yet Interactive Soft Haptic Patches Anywhere
Alex Mazursky, Shan-Yuan Teng, **Romain Nith**, Pedro Lopes
ACM CHI 2021 Paper

Stereo-Smell via Electrical Trigeminal Stimulation
Jas Brooks, Shan-Yuan Teng, Jingxuan Wen, **Romain Nith**, Jun Nishida, Pedro Lopes
ACM CHI 2021 Paper

A stretchable and strain-unperturbed pressure sensor for motion interference–free tactile monitoring on skins
Qi Su, Qiang Zou, Yang Li, Yuzhen Chen, Shan-Yuan Teng, Jane T Kelleher, **Romain Nith**, Ping Cheng, Nan Li, Wei Liu, Shilei Dai, Youdi Liu, Alex Mazursky, Jie Xu, Lihua Jin, Pedro Lopes, Sihong Wang
Science Advances 2021

Falconer: A Tethered Aerial Companion for Enhancing Personal Space
Romain Nith, Jun Rekimoto
IEEE VR 2019 Workshop and CHI HDi 2019 Workshop

Teaching

Teaching assistant

Inventing, Engineering and Understanding Interactive Devices (CMSC 23220) — Spring 2021
Department of Computer Science, The University of Chicago

Engineering Interactive Electronics onto PCB (CMSC 23230/33230) — Spring 2021
Department of Computer Science, The University of Chicago

Introduction to Human Computer Interaction (CMSC 20300) — Fall 2020
Department of Computer Science, The University of Chicago

Services

Reviews ISWC 22, UIST 22, CHI 22, DIS 22, CHI 21, ISWC 21, SIGGRAPH ASIA 21

Extra-curricular activities

McGill Formula Racing Team FSAE — Montreal, Canada
(SAE International Formula Program: Engineering design competition consisting of designing, building, and racing a formula race car)

Electronics Advisor of an electric racing car — 2018 – 2019
- Designed custom CAN node PCB and software to facilitate data acquisition and transfer across devices on the car
- Lead team strategies for dynamic events at competitions such as setup, battery management, driver order
- Lead testing sessions for car's durability and implementation of new features

Electronics Subteam Leader of an electric and a combustion racing car — 2016 – 2018
- Lead and managed the electronics subsystem as well as took part in the upper-level decisions of the team
- Collaborated with other subsystems to meet requirements and improve performance
- Mentored new members by teaching design and manufacturing skills

Electronics Subteam Member of a combustion racing car — 2013 – 2016
Designed and manufactured complete electronic system with custom built motorsport-grade electronic harness and PCBs with NX (CAD) and Altium (PCB)

Language proficiencies

Fluent	French (Native), English (TOEFL – Cambridge Proficiency in English CPE)
Intermediate	Mandarin Chinese, Spanish

Skills

Software	Siemens NX (CAD), Altium Designer (PCB Design), Unity3D, Android Studio, Altera Quartus
Programming	Java, C, Embedded C, C++, C#, Python, VHDL
Industrial	Fabrication (3D Printing, Basic Machining, Laser Cutter, Printed Circuit Board, Soldering), Electrical Wiring Design and Manufacturing