

Artem Dementyev

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EDUCATION

Massachusetts Institute of Technology, Cambridge, Massachusetts, USA

Doctor of Philosophy (Ph.D.) in Media Arts and Sciences Sep 2013 – Jul 2018

- Adviser: Professor Joseph Paradiso
- Research areas: Sensor networks, human computer interactions, robotics.
- Cumulative GPA: 5.0 / 5.0

University of Washington, Seattle, Washington, USA

Master of Science (M.S.) in Electrical Engineering Sep 2011 – Aug 2013

- Adviser: Professor Joshua R. Smith
- Thesis: Applications of RF-powered computing systems: wearable EEG monitor and bistable display tag

University of Maryland, College Park, Maryland, USA

Bachelor of Science (B.S.) in Bioengineering Sep 2006 – Jul 2009

RESEARCH EXPERIENCE

Media Lab, Massachusetts Institute of Technology

Graduate Research Assistant Sep 2013 – Present

- Adviser: Professor Joseph A. Paradiso

Microsoft Research, Redmond, UK

Intern Jun 2016 – Aug 2016

- Supervisors: Christian Holz
- The internship lead to a publication in Ubicomp conference and a patent

Sensor Systems Lab, University of Washington

Graduate Research Assistant Sep 2012 – Sep 2013

- Developed a battery-free EEG recording system, powered by UHF RFID
- Worked on wirelessly powered bistable displays
- Adviser: Professor Joshua R. Smith

Microsoft Research, Cambridge, UK

Intern Jun 2012 – Aug 2012

- Supervisors: Dr. Steve Hodges, Stuart Taylor
- Prototyped input devices for mobile phones and researched the efficiency of wireless protocols. The internship lead to a publication.

National Institute of Biomedical Imaging and Bioengineering (NIBIB), National Institutes of Health (NIH)

Postbaccalaureate Research Fellow Sep 2009 – Sep 2011

- Supervisors: Dr. Alexander Gorbach
- Designed miniature wireless sensors for real time data display, storage, transmission for long-term skin and ambient temperature.
- Conducted clinical research in non-invasive imaging, and did data analysis by applying digital signal processing, and medical statistics.

TEACHING

Teaching Assistant, MIT

- MAS.500: Intro to Applied Machine Learning Module
- MAS.S63: Silicon Menagerie: From Bioinspiration to Biomimetics,
- MAS.836: Sensor Systems for Interactive Environments

Teaching Assistant, University of Washington

- EE399: Design of Digital Circuits and Systems,
- EE542: Advanced Embedded Systems Design,
- EE447: Control Systems Analysis

PUBLICATIONS

JOURNALS

- 1) A. Dementyev, and C. Holz, “DualBlink: A Wearable Device to Continuously Detect, Track, and Actuate Blinking For Alleviating Dry Eyes and Computer Vision Syndrome,” in *Proc. of IMWUT'17 (previously Ubicomp)*

CONFERENCE PUBLICATIONS

- 1) K. Nakagaki, A. Dementyev, S. Follmer, J. Paradiso, and H. Ishii, "ChainFORM: A Linear Integrated Modular Hardware System for Shape Changing Interfaces," in *Proc. of UIST'16*
- 2) A. Dementyev, C. Kao, and J. Paradiso, "SensorTape: Modular and Programmable 3D-Aware Dense Sensor Network on a Tape," in *Proc. of UIST'15*
- 3) A. Dementyev, C. Kao, I. Choi, D. Ajilo, M. Xu, J. Paradiso, C. Schmandt, and S. Follmer. "Rovables: Miniature On-Body Robots as Mobile Wearables," in *Proc. of UIST'16* **Best Paper Award**
- 4) N. Zhao, G. Dublon, N. Gillian, A. Dementyev, J. Paradiso, "EMI Spy: Harnessing electromagnetic interference for low-cost, rapid prototyping of proxemic interaction," in *Proc. of BSN'15*
- 5) C. Kao, A. Dementyev, J. Paradiso, and C. Schmandt "NailO: Fingernails as an Input Surface," in *Proc. of CHI'15* **Honorable Mention Award**
- 6) A. Dementyev, and J. Paradiso, "WristFlex: Low-power gesture input with wrist-worn pressure sensors," in *Proc. of UIST'14*
- 7) A. Dementyev, J. Gummesson, D. Thrasher, A. Parks, D. Ganesan, J. R Smith, A. P Sample "Wirelessly powered bistable display tags" in *Proc. of UbiComp'13* **Honorable Mention Award**
- 8) A. Dementyev, and J. R Smith, "A Wearable UHF RFID-Based EEG System" in *Proc. of RFID'13*
- 9) A. Dementyev, S Hodges, S Taylor, and J. R Smith, "Power Consumption Analysis of Bluetooth Low Energy, ZigBee and ANT Sensor Nodes in a Cyclic Sleep Scenario" in *Proc. of IEEE IWS'13*
- 10) A. Dementyev, A. Behnaz, and A.M. Gorbach, "135-Hour-Battery-Life Skin Temperature Monitoring System Using a Bluetooth Cellular Phone" in *Proc. of IEEE BioWireless'13*

PATENTS

- 1) M. Aziz, L. Considine, A. Dementyev, N. Olivares, A. Adekoya, J. Rustag, "Quick-release self-contained medical electrode", *U.S. patent. US20130172724, 2013.*

AWARDS

- UIST Best Paper Award, 2016
- CHI Honorable Mention Award, 2015
- UbiComp Honorable Mention Award, 2013
- NSF Graduate Research Fellowship, 2012
- NIH Outstanding Post-Baccalaureate IRTA Award. 2011

PROFESSIONAL AFFILIATIONS & ACTIVITIES

- Reviewer**
- CHI 2015, 2016, 2017
 - UIST 2016
 - Augmented Human 2015, 2016
 - DIS 2016, 2017

MEDIA COVERAGE

- Fast Company**, MIT Has Invented The Crazy, Sensor-Loaded Duct Tape of The Future, 2016
Fast Company, MIT's Weird Snake Bot is Now Modular and Expandable, 2016
Recode, These tiny, wearable robots can cling to your clothes and drive around your body, 2016
MIT News, Thumbnail track pad, 2015
Extreme Tech, E-ink display wirelessly powered by NFC, offers a second screen for your second screen, 2013

**OTHER WORK
EXPERIENCE**

MIT Manufacturing Bootcamp, Shenzhen, China

Student

Jun 2015 – Jul 2015

- Learned about mass manufacturing of hardware under supervision of *bunnie (Andrew) Huang*.

Human Biosciences Inc, Gaithersburg, MD

Intern

Jun 2009 – Sep 2009

- Programmed and repaired electrical systems of production equipment, for manufacture of collagen based medical wound dressings.

Food and Drug Administration (FDA), , College Park, MD

Intern

Jan 2007 – Jan 2008

- Determined whether products such as canned soup and sauces were free of harmful microorganisms.

LANGUAGES

Russian: Native language.

English: Fluent (speaking, reading, writing).

SKILLS

- **CAD Software:** SolidWorks, Rhino3D
- **Circuit Design:** Altium, Eagle, Cadence
- **Computing software:** MATLAB
- **Programming Languages:** C, C++, C#, Java

REFERENCES

Upon request

[CV compiled on 2017-02-26]