Bektur Ryskeldiev

PhD Candidate, Mobile Developer
ryskeldiev.b@gmail.com | d8171101@u-aizu.ac.jp

EDUCATION

UNIVERSITY OF AIZU
PhD candidate in Computer Science
expected to graduate in March 2018

UNIVERSITY OF AIZU
MS in Computer Science
2013–2015

AMERICAN UNIVERSITY OF CENTRAL ASIA
BA in Software Engineering
2008–2012

LINKS

Web: apolotary.com

SKILLS

TECHNOLOGIES

- Mobile Development
- VR/MR Development
- Media streaming
- Telepresence
- Indoor Positioning
- Spatial Audio
- Signal Processing

PROGRAMMING

Over 5000 lines:
Objective-C • Python • Shell
C# • Pure Data • LaTeX
Over 1000 lines:
C • C++ • Praat • Assembly

EXTRACURRICULAR

FOUNDER OF:

Japan Mechanical Keyboard Group
Tokyo Mechanical Keyboard Meetup
Top Clack: Mechanical Keyboard podcast

PRESENTER AT:

Tokyo iOS Meetup (2014–2017)
Tokyo Mechanical Keyboard Meetup (2016-2017)
Top Clack: Mechanical Keyboard podcast (since 2016)
The Board podcast (2016)

EXPERIENCE

NTT LABORATORIES | Research Intern at Musashino R&D Center
Research internship on video streaming quality control.
August - September 2017

ACM SIGGRAPH
International Resources Committee Team Leader (since 2017)
Managing the Audio Guides and Podcasts Team
Student Volunteer Program Team Leader (2016-17)
Managing Student Volunteers at Emerging Technologies and VR Village sections
Student Volunteer Program (2015-2017)
Student Volunteer at ACM SIGGRAPH and ACM SIGGRAPH Asia conferences
since 2015

UNIVERSITY OF AIZU | Research & Teaching Assistant
Teaching courses on Computer Music, Sound & Audio, Human Interface & VR
since 2013

HELIUM9 GAMES | Mobile Consultant, Unity Developer
Integrated proprietary AI technology for iOS-based Unity game project
2015–2016

AIZULAB | iOS Developer
Developed application for control of distributed smart house systems.
2014–2015

SIBERS | iOS Developer
Image and audio processing, beta-testing, training and supervision of junior developers
2011–2013

RESEARCH

UNIV. OF APPLIED SCIENCES DÜSSELDORF | Visiting Researcher
February 2017
Worked at **Prof. Jens Herder**'s laboratory on setup and configuration of realtime broadcasting in Virtual Reality studios, telepresence, evaluation of user experience in VR interfaces.

COMPUTER ARTS LABORATORY | Research Assistant
since 2013
Working with **Prof. Michael Cohen** and **Prof. Julián Villegas** on spatial audio rendering for wirelessly connected mobile devices and control of distributed multimodal displays.

AWARDS AND SCHOLARSHIPS

2017 University of Aizu Graduate School Information Fair, Best Poster 2nd Place
2017 ACM SIGGRAPH Turing Award Celebration Grant
2017 First place in IoT Section at FUKUSHIMA Hackathon 2017
2016 First place in IoT Section at IoT x Security Hackathon 2016
2015 Best Poster award 3rd prize at ACM SIGGRAPH VRCAI Conf.
2015 MEXT Scholarship for PhD program
2013 Best Paper prize at Tohoku-Section Joint Convention
2013 MEXT Scholarship for Master's program

PUBLICATIONS AND OTHER ACADEMIC WORKS

PAPERS

[1] M. Cohen, Y. Nagayama, and B. Ryskeldiev. Metering black holes: networking stand-alone applications for distributed multimodal synchronization. In *Proceedings of the 18th ACM International Conference on Multimodal Interaction*, pages 396–397. ACM, 2016.

[2] M. Cohen, R. Ranaweera, B. Ryskeldiev, T. Oyama, and A. Hashimoto. Twhirleds: Spun and whirled affordances controlling multimodal mobile-ambient environments with reality distortion and synchronized lighting to preserve intuitive alignment. In *Scientific Phone Apps and Mobile Devices Journal*, 2017.

[3] M. Cohen, R. Ranaweera, B. Ryskeldiev, T. Oyama, A. Hashimoto, N. Tsukida, and T. Miyaji. Mixed virtuality transducer: virtual camera relative location displayed as ambient light. In *SIGGRAPH Asia 2014 Mobile Graphics and Interactive Applications*, page 23. ACM, 2014.

[4] M. Cohen, R. Ranaweera, B. Ryskeldiev, T. Oyama, A. Hashimoto, N. Tsukida, and T. Miyaji. Multimodal mobile-ambient transmedial twirling with environmental lighting to complement fluid perspective with phase-perturbed affordance projection. In *SIGGRAPH Asia 2014 Mobile Graphics and Interactive Applications*, page 15. ACM, 2014.

[5] B. Ryskeldiev, M. Cohen, and J. Herder. Demo: Applying rotational tracking and photospherical imagery to immersive mobile telepresence and live video streaming groupware. In *SIGGRAPH Asia Mobile Graphics and Interactive Applications, Bangkok*, 2017.

[6] B. Ryskeldiev, M. Cohen, and J. Herder. Streamspace: Pervasive mixed reality telepresence for remote collaboration on mobile devices. In *Journal of Information Processing Society of Japan*, 2017 (conditionally accepted for publication).

[7] B. Ryskeldiev, M. Cohen, and J. Villegas. Rendering spatial audio through dynamically reconfigurable smartphone loudspeaker arrays. *14th ACM SIGGRAPH Int. Conf. on VR Continuum and Its Applications in Industry, Kobe*, 2015.

[8] B. Ryskeldiev, J. Villegas, and M. Cohen. Exploring virtual sound environments with mobile devices. *Tohoku-Section Joint Convention of Institutes of Electrical and Information Engineers, Japan*, June 2013.

[9] N. Tsukida, B. Ryskeldiev, and M. Cohen. Lights, camera, action!: Ambient lighting extending photospherical display. *14th ACM SIGGRAPH Int. Conf. on VR Continuum and Its Applications in Industry, Kobe*, 2015.

THESES

Realtime spatial sound rendering using streamed audio displayed through mobile device loudspeakers
Master's thesis | 2015
This research project's prototype won Best Paper prize at Tohoku-Section Joint Convention in 2013.

Image processing and gesture recognition software development for control of musical instruments
Bachelor thesis | 2012

PAPER REVIEWS

ARTECH 2017
2016-2017
Reviewing papers on Digital Arts and Virtual Reality.

Journal of Virtual Reality and Broadcasting
2016-2017
Reviewing papers on Computer Graphics and Virtual Reality.

DEMOS

University of Aizu Graduate School Information Fair
2016-2017
Presented posters and live demonstrations of current research projects on applications of spatial data to social media streaming.

International Symposium on Spatial Media
2015
Presented a demo for "Exploring Virtual Sound Environments with Mobile Devices " paper