

DAVID QIXIANG CHEN

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Goal and interests

Neuroscience research.
Computational neuroscience.

Education

Honors Bachelor of Science
Computer Science Software Engineer Specialist
University of Toronto

Publications

Hodaie, M., Quan, I., Chen D.Q. In Vivo Visualization Of Cranial Nerve Pathways In Humans Using Diffusion Based Tractography (Submitted to Neurosurgery)

Abstracts and Posters

M Hodaie, D Q Chen, I Quan. Diffusion based tractography in trigeminal neuralgia: assessment of DTI parameters and possible correlation with laterality of pain. (Neuroscience 2009)

M Hodaie, D Q Chen. Functional anisotropy changes in the trigeminal nerve after Radiosurgery for trigeminal neuralgia (World Society for Stereotactic and Functional Neurosurgery Quadrennial Meeting and 15th Annual Meeting: Organization for Human Brain Mapping)

M Hodaie, D Q Chen, M Tymianski, A Guha. Tractography as an imaging adjunct in microsurgical and radiosurgical treatment of cerebellopontine angle tumors. (World Society for Stereotactic and Functional Neurosurgery Quadrennial Meeting and 15th Annual Meeting: Organization for Human Brain Mapping)

M Hodaie, D Q Chen, I Quan. Cortical thickness analysis in trigeminal neuralgia reflects unique changes related to treatment effect (abstract presented at World Society for Stereotactic and Functional Neurosurgery Quadrennial Meeting and poster at 15th Annual Meeting: Organization for Human Brain Mapping)

Work/Research Experience

Neurosurgical Research Assistant

2008 – Present

Dr. Moji Hodaie

Toronto Western Hospital

- Analysis of brain DTI imaging by the means of streamline and stochastic tractography to perform cranial nerve and tract reconstruction, modeling tumors and perform fractional anisotropy and other diffusivity analysis.
- Perform cortical thickness analysis on patients with neuropathic pain disorders.

Researcher/Developer

2007 – 2008

Professor Ian Spence

Department of Psychology

University of Toronto

- Developed a new web based system for sitemap visualization.
- Responsible for exploring new usability and designs to simplify the navigation of complex high-degree graphs such as those found in large corporate websites.
- Implemented a modified force-directed dynamic navigation system with a combination of Flash Actionscript 3.0, Python and PHP.

Maya MEL/API Support Specialist

2005—2006

Autodesk Corporation, formerly Alias Systems

- Internship position at Autodesk Corporation.
- Communicate with key customers such as Disney, Sony and EA to help with their problems with Maya scripting and plug-in developments. Debug customer plug-ins, script and scene files on a wide variety of issues such as programming, rendering, modeling and animation.
- Responsible for developing and deploying an internal web based communication and resource depository for the Support Department, as well as developing web 2.0 based tools to help with support workflow.
- Worked on the company website, and help to automate the publication of support documentation for customers.

Research Assistant

Summer 2004

Dynamic Graphic Lab, University of Toronto

- Volunteered to help test and improve a balance controller for dynamic physics based human motion simulator.
- Responsibilities included testing, collecting and analyzing data, and devise new methods to improve the performance of the balance controller.

Web Application Developer

Been working since summer 2003

- Developed online maintenance request system for University of Toronto graduate student residence (University of Toronto Graduate House). The system replaced the old paper based system that was used to track maintenance requests of residents.

- Responsibilities included meeting with the client and finding out his needs, designing the system based on these information, and then code and test the system before final deployment.
- Received praises from the client on the ease of use and stability of the system.

Social Works Assistant

Summer 2002

South East Asian Services (SEAS) Centre

- Responsibilities included assisting elderly with welfare applications, general office work, assisting in organize and host social events, and computer lab administration.

Night School Computer Lab Administrator

Worked for the duration of 2001 – 2002 school year

Danforth Collegiate and Technical Institute, TDSB

- Administrated two Windows2000 computer labs. Responsibilities included debugging and fixing software and hardware problems.

Awards

Skills Canada Toronto Competition

Silver medal, Character Animation, 2002.

Skills Canada Ontario Competition

Silver medal, Character Animation, 2001.

Skills Canada Toronto Competition

Gold medal, Character Animation, 2001.

Technical Qualifications

- Proficient with C, C++, Java, JavaScript, PHP, SQL, XML, Maya Expression Language, Maya API, Flash Actionscript.
- Has experience with J2EE, Ruby on Rails, PERL, Python, UML, MVC methodologies.
- Knowledge of OpenGL, C#.
- Very familiar with Windows, Linux and Macintosh environments.
- Skilled at web design. (XHTML, CSS, W3C standard compliancy, etc)
- Skilled with 3ds Max, Maya, Adobe Photoshop, After Effects, Premier, Corel Painter, Corel Draw, Dreamweaver, Flash (Actionscript), Adobe Illustrator.
- Fluently bilingual (English/Mandarin), and can read/write/speak Japanese.

Extracurricular Activities and Hobbies

- Enjoys martial arts, practices Kung-fu, member of U of T Judo and Kendo clubs.
- Instructs at U of T Taichi club.
- Enjoys drawing and painting, creating 3D computer animation and artworks, programming, reading and thinking.

- Layout designer of “Footprint” student newspaper.
- Member and webmaster of “E-studio” student art club.
- Volunteered at 2004 Open Source conference at University of Toronto
- Volunteered at 2007 SIGGRAPH conference.

References

Upon request