

# STEPHEN SEBASTYAN

**P** 613-929-5347

**E** [stephen@cs.queensu.ca](mailto:stephen@cs.queensu.ca)  
[s.sebastyan@queensu.ca](mailto:s.sebastyan@queensu.ca)

**A** 1439 Evergreen Drive,  
Kingston, ON K7P0H5

**W** [stephensebastyan.com](http://stephensebastyan.com)

## PROFESSIONAL WORK EXPERIENCE

### 2022-present Queen's University – Vice Principal of Research Office Research System Specialist

- Leading a team of data analysts for QRDN, and a support analyst for TRAQ
- Project Management: Provide workflow and strategic guidance. Develop department SOPs. Schedule and assign work, and oversee its completion
- Liaise and consult with vendors, IT groups and stakeholders
- Data migration and validation into new platforms, leading and organizing UAT
- Data Analytics, Web & platform analytics, and report generation
  - Implemented a Fuzzy and linguistic matching algorithms to reconcile datasets without unique identifiers and perform matching of conceptual terms
- System administrator and act as a senior technical expert for [TRAQ](#), [CAYUSE](#) and [QRDN](#)
- ServiceNow committee member

### 2017-2022 Queen's University – Faculty of Art & Science Instructional Designer & Multimedia Analyst Learning System Specialist

- Expertise in:
  - Web Development: HTML, CSS, JavaScript, VueJS, Bootstrap, PHP
  - Learning management systems & Education technology Platforms
  - Media/graphic design: Camtasia, Adobe Photoshop and Premiere Pro, Handbrake, Audacity, GIMP
- Project management: course development life cycle
- Quality assurance, technical writing and editing
- Familiarity with AODA, CASL and GDPR guidelines

### 2011-2015 ESG Solutions - Software Development Engineer

- Developed automated reporting software suite (C++/C#/SQL)
- Developed novel software for P and S microseismic waves arrivals detection and wave polarity.
- Contributed to libraries for signal filtering and processing
- Contributed to software (C++/VTK) that generated 3D model of the mining sites and sensor deployment

## EDUCATION

Queen's University

*Ph.D candidate – Computing (2015-)*

- [Thesis: Image Guided Catheter Ablation: Anatomic and Electromagnetic Error Compensation](#)
- Supervised by Dr. James Stewart, with Dr. Damian Redfearn MD.
- GPA 3.87

Queen's University

*M.Sc. – Computing (2010-13)*

- Thesis : [Computer Assisted Mosaic Arthroplasty – A Bone Model Trial](#)
- Supervised by Dr. James Stewart and Dr. Manuela Kunz with Dr. David Bardana MD
- GPA 3.84

Queen's University

*Dual Degree (2006-10)*

*B.Sc.Eng.H – Electrical & Computer Engineering*

*B.Sc. Physics*

- Senior Project: Monte Carlo Simulations Parallel Processing on CellBE processor
- Graduated Cum Laude (honors)

---

## 2010- Computing Research Assistant – Queen’s University

- Develop software for cardiac and orthopedic tissue modelling, real-time surgical instrument tracking and guidance instrument, and analyzing biomedical data sets (C++/VTK/OpenGL, MATLAB, Python)
- [teaching experience over 10 different course offerings.](#)

## PUBLICATIONS & PATENTS

---

Sebastyan, S. Redfearn, D., Stewart, A.J. (pre-publication 2023), Patient-specific cardiac and respiratory phase model of the left atrium.

Sebastyan, S. Redfearn, D., Stewart, A.J. (pre-publication 2023), Positional variance modelling of abnormal endocardial tissue.

[Sebastyan, S., Kunz, M., Redfearn, D., Stewart, A. J., \(2019\) Reference misalignment detection and correction for atrial fibrillation catheter ablation, CARS 2019 Proceedings, Supplement of the IJCARS](#)

[Sebastyan, S., Kunz, M., Stewart, A. J., & Bardana, D. D. \(2015\). Image-guided techniques improve accuracy of mosaic arthroplasty. International journal of computer assisted radiology and surgery, 1-9.](#)

Sebastyan S Image-Guided Techniques Improve Accuracy in Mosaic Arthroplasty Cartilage Repair, Conference speaker at 33rd Annual William Ersil Resident Research Day

[Sebastyan, S. \(2013\). Computer-assisted mosaic arthroplasty: A femur model trial.](#)

## AWARDS RECEIVED

---

- R.S. McLaughlin Fellowship 2015-16
  - Queen’s University Teaching Fellowship Award (2017)
  - Queen’s University - Graduate Award – (2010-2017)
  - NSERC CREATE research award (summer 2010)
  - NSERC USRA (summer 2009)
  - Royal Canadian Military College Scholar Award (summer 2009)
  - Dean of Applied Science Scholarship - Queen's University ('06)
- 

## COMPTER LANGUAGES

- C++, C#
- MATLAB
- PYTHON
- JAVA
- R

## PROGRAMMING LIBRARIES

- OPENGL
- OPENCV
- VTK
- ITK
- PCL
- NUMPY, SCIPY, PANDA, ANACONDA

## WEB DEVELOPMENT SKILLS

- HTML, CSS
- JAVASCRIPT, VUE, NODEJS, BOOTSTRAP
- PHP
- MYSQL, POSTGRESQL, DB2

## TECHNICAL SKILLS

- TABLEAU AND POWERBI
- MS OFFICE PLATFORMS (EXCEL, WORD, POWERPOINT, VISIO...)
- MATERIALISE PLATFORMS
- SOLIDEDGE, SOLIDWORK, RHINO
- MEDIA PROCESSING: ADOBE SUITE, GIMP, CAMTASIA
- 3D GRAPHICS RENDER