

Seyed Amir Hosseini Beghaeiraveri

Laboratory for Foundations of Computer Science - LFCS

School of Informatics

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Education

- **Ph.D.** - Heriot-Watt University, MACS Edinburgh, UK
Major: Knowledge Graph, Big Data, Data Quality, Provenance 2020–2023
Thesis Topic: Towards Automated Technologies in the Referencing Quality of Wikidata
Supervisors: [Dr. Alasdair Gray](#), [Dr. Fiona McNeill](#) (University of Edinburgh)
- **M.Sc.** - Sharif University of Technology (SUT), Computer Engineering Department Tehran, Iran
Major: Big Data and Randomized Algorithms, Computational Geometry, Distributed Systems 2013–2015
GPA: 17.35/20 (3.77/4)
Thesis Topic: Broadcast Efficient Verifiable Secret Sharing
Supervisors: [Dr. M. Izadi](#), [Prof. M. Ghodsi](#) (Internal Examiner)
- **B.Sc.** - Shahid Bahonar University of Kerman (SBUK), Computer Engineering Department Kerman, Iran
Major: Software Engineering, FPGA, Object-Oriented Programming 2007–2012
GPA: 17.07/20 (3.7/4)
Project Topic: Installing Operating System on FPGA Chips
Supervisor: [Dr. V. Sattari](#)

Research Experience

- **LFCS, University of Edinburgh (2023 - present):** Research on reasoning over massive knowledge graphs.
- **SWeL, Heriot-Watt (2020 - 2023):** Research on subsetting, data quality and referencing quality in knowledge graphs, especially Wikidata.
- **R&D at research institutes of SUT: (2016–2019)** Research, design, and development of the Application Layer security tools
- **Disys Lab, SUT (2013–2015):** Research on distributed cryptography, especially in Verifiable Secret Sharing, the effect of adaptive and dynamic adversaries, and round complexity of multiparty computations.

Publications

- **Seyed Amir Hosseini Beghaeiraveri**, Alasdair Gray, and Fiona McNeill. “RQSS: Reference Quality Scoring System for Wikidata” Submitted to the Semantic Web Journal Special Issue on Wikidata: Construction, Evaluation and Applications 2022
- **Seyed Amir Hosseini Beghaeiraveri**, Jose Emilio Labra Gayo, Andra Waagmeester, et al. “Wikidata Subsetting: Approaches, Tools, and Evaluation” Semantic Web Journal Special Issue on Wikidata: Construction, Evaluation and Applications 2023
- **Seyed Amir Hosseini Beghaeiraveri**. “Towards Automated Technologies in the Referencing Quality of Wikidata” In Companion Proceedings of the Web Conference 2022
- **Seyed Amir Hosseini Beghaeiraveri**, Alasdair Gray, and Fiona McNeill. “Reference Statistics in Wikidata Topical Subsets” In 2nd Wikidata Workshop with ISWC 2021
- **Seyed Amir Hosseini Beghaeiraveri**, Alasdair Gray, and Fiona McNeill. “Experiences of Using WDumpster to Create Topical Subsets from Wikidata” In 2nd International KGC workshop with ESWC 2020
- **Seyed Amir Hosseini Beghaeiraveri**, Mohammad Izadi, and Mohsen Rezvani. “Broadcast Complexity and Adaptive Adversaries in Verifiable Secret Sharing” Security and Communication Networks 2020. 2020

Teaching Experiences

Lecturer:

- Advanced Network Security; Heriot-Watt University. (Spring 2023)
- Interaction Design; Heriot-Watt University. (Fall 2022)
- Software Development OOP, Computer Systems; Heriot-Watt University. (Summer 2022)
- Foundations of Computer Science; Carpet Department of SBUK. (Fall 2012)

TA:

- **Heriot-Watt:** Big Data Management, Databases and Information Systems, Database Management Systems (with [Dr. Alasdair Gray](#)) - Hardware-Software Interface (with [Dr. Hans-Wolfgang Loidl](#)) - Advanced Network Security (with [Dr. Sasa Radomirovic](#)) - Computer Network Security (with [Dr. Mike Just](#)) - Introduction to Data Structures and Algorithms (with [Dr. Rob Stewart](#)) - Design and Code Project (with [Dr. Alistair McConnell](#)) - Web Programming (with [Dr. Benjamin Kenwright](#))
- **SUT:** Theory of Distributed Systems (with [Dr. M. Izadi](#))
- **SBUK:** Design of Object Oriented Systems (with [Dr. A. Bahrololoum](#)) - Operating Systems (with F. Afsari)

Talks & Seminars

- Hierarchical Subsetting + Query Partitioning; [Turing IG on KGs](#) (January 2024) and LFCS DB Seminar (November 2023)
- Let's write a schema together; [Wikidata Data Modelling Days](#) (November 2023)
- Introduction to Entity Schemas and Shape Expressions; [Wikidata Data Quality Days](#) (Jul 2022)
- Biohackathon: report on reviewing Wikidata subsetting methods; [Wikidata Data Reuse Days](#) (Mar 2022)
- Creating, maintaining and updating Shape Expressions as EntitySchemas in the Wikimedia ecosystem; [SWAT4HCLS](#) (Jan 2022)
- Referencing Quality Scoring System: Metrics and Pipeline; SWeL (Dec 2021)
- ISWC 2021 Report; SWeL - SICSA (Nov 2021)

Awards & Honors

- James Watt Ph.D. Scholarship Award from the School of Mathematical and Computer Science, Heriot-Watt University 2019
- Top GPA among all the B.Sc. software engineering incoming students of SBUK. Kerman, Iran. 2012
- Ranked 1st in the 8th Kerman laboratory physic Olympiad. Kerman, Iran. 2007

Projects

- Referencing Quality Scoring System (RQSS), Python, [GitHub](#).
- IEF: Content Management System, C#, [GitHub](#)
- PerfectPaint: Simulation of Microsoft Windows 7 Paint, C#, [GitHub](#)
- charter-724: Ticket Reservation System, java (Android Studio).

Technical Skills

- **Languages and Platforms:** Advanced C/C++, Java, Python, .Net (C#, ASP, WPF, ADO), Database (SQL, MongoDB, PostgreSQL), Web (HTML, CSS, Javascript, React, Vue.js), Semantic Web(RDF, SPARQL, ShEx, Neo4J, OWL), Cryptography, Assembly.
- **Technical Softwares:** GCC, Android Studio, MATLAB/Simulink, Jupiter, Microsoft SQL Management Studio, Proteos, Keil, Codevision, Bascom AVR, 80xx assembly compiler.
- **Processors & Controller Devices:** x64/x86, PowerPC, ARM (Raspberry Pi and assembly), AVR.