Ibrahim Albluwi

Department of Computer Science
Princess Sumaya University for Technology
Amman 11941 Jordan
Email: i.albluwi@psut.edu.jo
Phone: +962 77 9929085

EDUCATION

October 2012 — **PhD in Automatic Systems and Computer Science**
Institut National des Sciences Appliquées (INSA), Toulouse, France.
Research Lab: LAAS-CNRS, Toulouse, France.

May 2009 — **Master of Science in Computer Science**
Sharjah University, Sharjah, United Arab Emirates.
GPA: 3.94/4.0 (Rank: 1st in the computer science department).

May 2006 — **Bachelor of Science in Computer Science**
Sharjah University, Sharjah, United Arab Emirates.
GPA: 3.79/4.0 (Rank: 1st in the computer science department).

EXPERIENCE

September 2022 - Present — **Associate Professor**
Computer Science Department, Princess Sumaya University for Technology, Jordan.

September 2020 - August 2022 — **Assistant Professor**
Computer Science Department, Princess Sumaya University for Technology, Jordan.

September 2016 - July 2020 — **Lecturer**
Computer Science Department, Princeton University, New Jersey, USA.

Summer of 2020 — **Visiting Lecturer**
Beijing Jiaotong University Global Summer School, Shanghai, China.

Summer of 2020 — **Visiting Lecturer**
International Partnership of Education Research and Communication (IPERC) and Saint Louis University - iStar Online Program.

Summer of 2019 — **Visiting Lecturer**
Beijing Jiaotong University Global Summer School, Shanghai, China.

February 2013 - August 2016 — **Assistant Professor**
Computer Science Department, Princess Sumaya University for Technology, Amman, Jordan.

2006 - 2009 — **Teaching Assistant**
Computer Science Department, University of Sharjah, United Arab Emirates.

Summer of 2005 — **Research Intern**
Software Metrics Lab, Department of Computer Science, Institute of Distributed Systems, Otto-von- Guericke University, Magdeburg, Germany.

AWARDS

Teaching Awards

July 2020 **Princeton Engineering Commendation List for Outstanding Teaching** for Spring 2020. Princeton University.

February 2020 **Excellence in Teaching Award** for the School of Engineering and Applied Science. Princeton University.

February 2019 **Excellence in Teaching Award** for the School of Engineering and Applied Science. Princeton University.

August 2016 **Excellent Teacher Award**. Princess Sumaya University for Technology. Awarded annually to one faculty member at the university.

Student Awards

2009 - 2012 **PhD Scholarship**. LAAS-CNRS, Toulouse, France.

May 2006 and May 2009 **Certificate of Academic Excellence**. University of Sharjah. Awarded to students who graduate with a GPA higher than 3.6/4.0.

2006 - 2009 **Graduate Scholarship Award**. University of Sharjah. Awarded annually to 2 students in every college based on academic merit.

May 2006 **Academic Excellence Money Grant**. University of Sharjah. Awarded annually to the student with the highest GPA at every college.

May 2006 **BP's Self-Motivated Leader Award**. British Petroleum (BP), UAE. Awarded to one student at Sharjah University based on excellence in extra-curricular activities.

April 2002 **Excellent Student Award**. Ministry of Education, Sharjah, United Arab Emirates. Awarded based on academic and non-academic excellence in high school.

PROFESSIONAL COURSES & CERTIFICATION

April 2013 **Training of Trainers (ToT)**. Business Development Center, Amman, Jordan. An intensive one-week course on teaching/training methods and course preparation techniques.

March 25th - April 1st 2011 **Interdisciplinary College IK2011**. Gesellschaft für Informatik e.V. (Wissenschaftszentrum) in Günne, Germany. A graduate level spring school on "Autonomy, Decisions and Free Will" discussed from three perspectives: Computer Science, Philosophy and Biology.

June 23rd - July 4th 2008 **9th Summer School on Image and Robotics.** LASMEA, IFMA and Blaise Pascal University in Clermont-Ferrand, France. A graduate level summer school on image processing and robotics.

January 2005 **Sun Certified Programmer** for the Java 2 Platform 1.4.

TEACHING AND ADVISING

- Advised many **undergraduate projects** (1-semester and 2-semester long projects and theses) at Princeton University and at Princess Sumaya University for Technology.
- Served as an **academic advisor** at Princeton University for the School of Engineering and a **faculty fellow** for Butler College (Fall 2018 — Spring 2020).
- Taught and designed material for the following courses:

Semesters	Course	University
F2016 S2017 F2017 S2018 F2018 S2019 F2019 S2020	Intro. to Computer Science Data Structures and Algorithms	Princeton University
Summer-2013 F2013 S2014 F2014 S2015 F2015 S2016 S2021 +F2020 *F2021 *S2022 *S2023 *F2022	Data Structures and Introduction to Algorithms	Princess Sumaya University for Technology
F2015 S2016 F2020 F2021 S2022 F2022 S2023	Design & Analysis of Algorithms	
F2022	Advanced Design & Analysis of Algorithms (graduate course)	
F2020 S2021	OOP	
*S2014 *S2021 F2021	OOP Lab	
S2015 +F2016 +S2016 +F2020 +S2021 +F2021 +S2022 +F2022 +S2023	Structured Programming	
S2013 F2013 S2014 Summer-2013	Multimedia Systems	
F2013 F2014	Data Mining and Machine Learning	
F2020	Introduction to Computer Science	
Summer-2013 S2013 F2014	Programming for Business	
Summer-2019	Intro. to Programming in Java	Beijing Jiaotong University
Summer-2019, Summer-2020	Introduction to Computer Science	
Summer-2020	Intro. to Computer Science in Python	IPERC and Saint Louis University

(S = spring, F = fall, * = course coordinator, + = external examiner)

PUBLICATIONS

Computing Education

- Prather, James, Paul Denny, Juho Leinonen, Brett A. Becker, Ibrahim Albluwi, Michael E. Caspersen, Michelle Craig et al. **"Transformed by transformers: Navigating the AI coding revolution for computing education: An ITiCSE working group conducted by humans."** In Proceedings of the 2023 Conference on Innovation and Technology in Computer Science Education V. 2, pp. 561-562. 2023.

- Albluwi, Ibrahim and Haley Zeng. "**Novice Difficulties with Analyzing the Running Time of Short Pieces of Code**". In Australasian Computing Education Conference (ACE '21), pp. 1—10. ACM, 2020.

- Albluwi, Ibrahim and Joseph Salter. "**Using Static Analysis Tools for Analyzing Student Behavior in an Introductory Programming Course**". Jordanian Journal of Computers and Information Technology (JJCIT) 6, no. 3 (2020): 215-233.

- Albluwi, Ibrahim. "**Plagiarism in Programming Assessments: A Systematic Review.**" ACM Transactions on Computing Education (TOCE) 20, no. 1 (2019): 6:1-6:28.

- Albluwi, Ibrahim. "**A Closer Look at the Differences Between Graders in Introductory Computer Science Exams**." IEEE Transactions on Education 61, no. 3 (2018): 253-260.

- Luxton-Reilly, Andrew, Ibrahim Albluwi, Brett A. Becker, Michail Giannakos, Amruth N. Kumar, Linda Ott, James Paterson, Michael James Scott, Judy Sheard, and Claudia Szabo. "**Introductory programming: a systematic literature review.**" In Proceedings Companion of the 23rd Annual ACM Conference on Innovation and Technology in Computer Science Education, pp. 55-106. ACM, 2018.

  🏅 This article won the "Top 5 in 25" award in ITiCS 2020, which was awarded to 5 working group reports out of the 129 working group reports published in the ITiCSE conference from 1975 to 2019.

Robotics

- Denarie, Laurent, Ibrahim Al-Bluwi, Marc Vaisset, Thierry Siméon, and Juan Cortés. "**Segmenting proteins into tripeptides to enhance conformational sampling with Monte Carlo methods**". Molecules 23, no. 2 (2018): 373.

- Devaurs, Didier, Léa Bouard, Marc Vaisset, Christophe Zanon, Ibrahim Al-Bluwi, Romain Iehl, Thierry Siméon, and Juan Cortés. "**MoMA-LigPath: a web server to simulate protein–ligand unbinding**". Nucleic acids research 41, no. W1 (2013): W297-W302.

- Al-Bluwi, Ibrahim, Marc Vaisset, Thierry Siméon, and Juan Cortés. "**Modeling protein conformational transitions by a combination of coarse-grained normal mode analysis and robotics-inspired methods**". BMC Structural Biology 13, no. S1 (2013): S2.

- Al-Bluwi, Ibrahim, Thierry Siméon, and Juan Cortés. "**Motion planning algorithms for molecular simulations: A survey**". Computer Science Review 6, no. 4 (2012): 125-143.

- Al-Bluwi, Ibrahim, Marc Vaisset, Thierry Siméon, and Juan Cortés. "**Coarse-grained elastic networks, normal mode analysis and robotics-inspired methods for modeling protein conformational transitions**". In 2012 IEEE International Conference on Bioinformatics and Biomedicine Workshops, pp. 40-47. IEEE, 2012.

- Cortés, Juan, and Ibrahim Al-Bluwi. "**A robotics approach to enhance conformational sampling of proteins.**" In International Design Engineering Technical Conferences and Computers and Information in Engineering Conference, vol. 45035, pp. 1177-1186. American Society of Mechanical Engineers, 2012.

- Al-Bluwi, Ibrahim, and Ashraf Elnagar. "**Pursuit evasion in dynamic environments with visibility constraints.**" In International Conference on Intelligent Robotics and Applications, pp. 116-129. Springer, Berlin, Heidelberg, 2010.

- Al-Bluwi, Ibrahim, and Ashraf Elnagar. "**Maintaining visibility of a moving target: Maximizing escape time vs. exposure time.**" In 2010 11th International Conference on Control Automation Robotics & Vision, pp. 982-987. IEEE, 2010.

- Al-Bluwi, Ibrahim, and Ashraf Elnagar. "**Nearest Neighbor Classification Using The Layered Range Tree.**" In iiWAS, pp. 383-388. 2007.

- Al-Bluwi, Ibrahim, and Ashraf Elnagar. "**Tracking an evader in logarithmic time**". In The Fourth International Conference on Computational Intelligence, Robotics and Autonomous Systems. 2007.

SERVICE AND OUTREACH

Scientific Peer-Reviewing

- Reviewed articles for:
    - ACM Inroads.
    - IEEE Transactions on Education.
    - IEEE Transactions on Learning Technologies.
    - ACM Transactions on Education.
    - ACM SIGCSE TS 2017, 2018, 2019, 2023, 2024.
    - ACM ITiCSE 2017, 2018, 2019.
- Associate Program Chair in ACM SIGCSE TS 2020, 2022 and ACM ITiCSE 2020, 2021, 2022.

Outreach and Public Talks

- "How ChatGPT will make my job as a teacher more difficult". TEDxPSUT, Amman, Jordan, March 18, 2022.

- "New tools for automatic generation of code and how they can impact how we teach". An invited talk at Princess Sumaya University for Technology, Amman, Jordan, October 25, 2022.

- Organized and Led a Computing Education Research Reading Group at Princess Sumaya University, involving members from inside and from outside the university. Spring 2022 — Fall 2022.

- "Can everyone learn how to program?". An invited talk at Princess Sumaya University for Technology, Amman, Jordan, May 11, 2022.

- "Can everyone learn how to program?". An invited talk at the ACM Student Chapter at Princess Sumaya University for Technology, Amman, Jordan, August 24, 2019.

- Co-lead in the Advanced Topics summer professional development workshop for high school computer science teachers at Princeton University, August 2017.

- Faculty advisor for "Codability": A series of summer camps for teaching K-12 school students problem solving and programming by undergraduate volunteers, 2014—2016.

Student Activities

- HackPrinceton: Judge. April 2018.
- The Jordanian ACM Collegiate Programming Contest (JCPC): Judge. August 2015.
- The 1st, 2nd and 3rd ACM Programming Contest for the South of Jordan (AmmanCPC): Organizer and Chief Judge. November 2013, November 2014 and July 2015.
- The ACM Programming Contest for the North of Jordan (ArabellaCPC 2015): Chief Judge. April 2015.
- The National Jordanian Olympiad of Informatics for High School Students (JOI 2015): Chief Judge. April 2015.
- Princess Sumaya University for Technology Programming Contest (The Coding Marathon I & II): Supervisor, Organizer and Judge. May 2014 and May 2015.
- The 7th, 8th and 9th Programming Contests at the University of Sharjah: Organizer and IT Specialist, February 2007, 2008 and 2009.
- Faculty advisor for "FikrSpace": A student club for debates at Princess Sumaya University for Technology, 2014—2016.
- Faculty advisor for the PSUT ACM Student Chapter (2014-2016).
  The chapter won the ACM "Outstanding Community Service" award in 2015/2016.

Committees

Served in *many* committees at Princess Sumaya University for Technology across the department, college and university levels. Most notably:

- Coordinated joint programs with the University of Indiana, University of Michigan (Dearborn) and the University of Oakland (2015-2016).
- Coordinated the senior projects program at the computer science department (2015-2016) .
- Member of the University Council for Quality Assurance and Accreditation (2021-2022).
- Head of scientific committee in the computer science department (2022 - 2023).
- Member of a university-level committee studying the impact of ChatGPT on education (2023).