

IEEE AP-S Distinguished Lecturer Series – University of Waterloo Edition

Topic: Antennas, Electromagnetics, Radar, RF Systems, and Sensing

Date: July 9, 2026

Location: PSE Faculty Hall, E7 (PSE 7363), University of Waterloo, Canada

Attendance: Approximately 25 participants in person

Audience Profile: Undergraduate, graduate, and postdoctoral researchers; faculty.

Sebastian Ratto Valderrama

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Supervised by Prof. George Shaker and Prof. Omar M. Ramahi | srattova@uwaterloo.ca



Executive Summary

On July 9, 2026, the University of Waterloo hosted the IEEE AP-S Distinguished Lecturer Series, a four-speaker program on antennas, electromagnetics, radar, RF systems, and sensing. The event formed part of the IEEE Antennas and Propagation Society Distinguished Lecturer program led by Prof. Levent Sevgi. Local coordination was carried out by the University of Waterloo AP-S, MTT-S, and EMC Student Branch Chapters, with IEEE Young Professionals and the IEEE Sensors Council.

The event was opened by Sebastian Ratto Valderrama, who welcomed participants, introduced each speaker, and moderated the program. He emphasized the team effort of Amirbahador Mansoori, Jake Peters, and the broader volunteer group responsible for planning, promotion, logistics, and on-site delivery.

Scientific Program

The series featured four internationally recognized speakers whose lectures connected foundational electromagnetics with current research and applications, ranging from engineering education and computation to integrated antennas and electromagnetic sensing for health monitoring:

1) Electromagnetic Engineering Education: Prof. **Levent Sevgi**, IEEE Fellow and former IEEE AP-S Distinguished Lecturer (Istanbul Technical University, Türkiye), presented “From Engineering Electromagnetics to Electromagnetic Engineering: Teaching/Training Next Generations.” He described the shift from classical instruction toward broader engineering practice and emphasized connecting theory, computation, design, and real-world systems.

2) Computational Electromagnetics: Prof. **Özlem Özgün**, IEEE AP-S Distinguished Lecturer (Hacettepe University, Türkiye), delivered “Computational Electromagnetics: From

Basics to Mastery.” She traced the progression from fundamental field concepts to advanced numerical approaches and showed how modeling choices, validation, and physical interpretation support difficult propagation and scattering problems.

3) On-Chip Antennas and RF Integration: Prof. **Atif Shamim** (King Abdullah University of Science and Technology, Saudi Arabia) presented “On-Chip Antennas: The Last Barrier to True RF System-on-Chip.” He discussed barriers to full RF integration and highlighted antenna, packaging, materials, and system-level considerations for compact, highly integrated wireless platforms.

4) Applied Electromagnetics for Health Monitoring: Prof. **George Shaker** (University of Waterloo, Canada) presented “Reimagining Health Monitoring using Applied Electromagnetics.” He showed how radar, wireless sensing, and electromagnetic technologies can support unobtrusive monitoring and practical healthcare and assisted-living applications, while prompting discussion on deployment, privacy, and clinical use.

Interaction and Participation

The series was highly engaging, with active questions, detailed answers, and informal discussion. Participant comments follow:

- 1) “The series showed how electromagnetic theory connects with current applications in antennas, sensing, health monitoring, and RF systems. The range of topics made the event especially valuable.” — **Shishangbo Yu**, PhD Student, Electrical and Computer Engineering.
- 2) “The discussions following the lectures were highly engaging. The opportunity to exchange ideas directly with the speakers opened possibilities for future research collaboration.” — **Mohammad Omid Bagheri**, Postdoctoral Fellow.
- 3) “Bringing four distinguished lecturers together created a valuable experience for students. The active questions, networking, and informal conversations made the event much more than a traditional seminar.” — **Jake Peters**, MASc Student, Electrical and Computer Engineering.

Discussion continued beyond schedule and over refreshments, supporting networking, collaboration, and planning for the 2026 IEEE AP-S/USNC-URSI meeting in Detroit. Prof. André B. J. Kokkeler joined during a Waterloo visit to collaborate with Prof. Shaker’s Wireless Sensors and Devices Lab.

Conclusion

The Waterloo edition was a successful collaboration among local AP-S, MTT-S, EMC, Young Professionals, and Sensors Council groups.

The lectures expanded exposure to electromagnetics, RF integration, computation, and sensing, while active discussions encouraged new research connections. The event strengthened visibility for AP-S at Waterloo, generated interest in future lectures, and supported continued

collaboration with visiting researchers and preparation for the 2026 IEEE AP-S/URSI symposium in Detroit. Event video: [YouTube recording](#).

IEEE AP-S Distinguished Lecturer Series

4 DISTINGUISHED SPEAKERS AT THE UNIVERSITY OF WATERLOO

Antennas, Electromagnetics, Radar & RF Systems

Thursday, July 9, 2026 | 9:00 AM - 1:00 PM EDT

University of Waterloo | PSE Faculty Hall, E7 | PSE 7363

FREE ADMISSION

09:30 AM

Prof. Levent Sevgi



ITU / Istanbul
Technical University,
Turkey

From Engineering
Electromagnetics to
Electromagnetic
Engineering:
Teaching/Training Next
Generations

REGISTER



10:30 AM

Prof. Özlem Özgün



Hacettepe University,
Ankara, Turkey

Computational
Electromagnetics:
From Basics to
Mastery

REGISTER



11:30 AM

Prof. Atif Shamim



KAUST University,
Saudi Arabia

On-Chip Antennas:
The Last Barrier to
True RF System-on-
Chip

REGISTER



12:30 PM

Prof. George Shaker



University of Waterloo,
Canada

Reimagining Health
Monitoring using
Applied
Electromagnetics

REGISTER



Hosted by

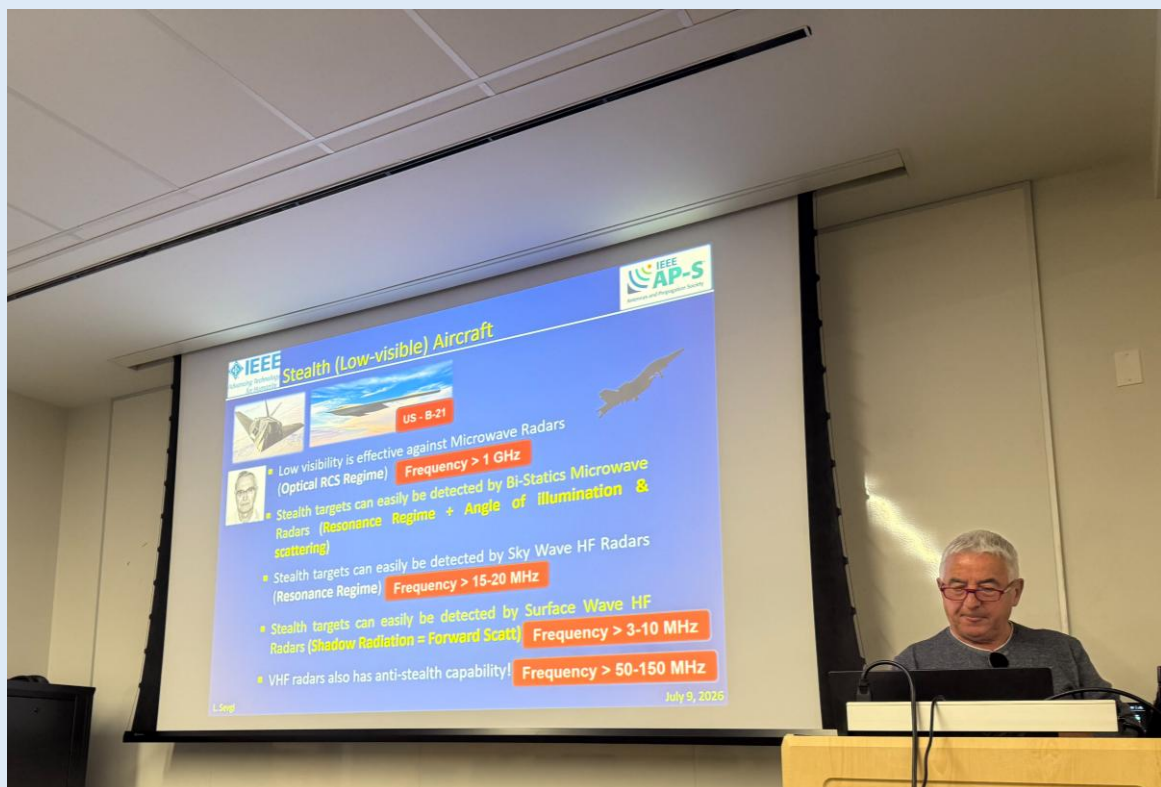
University of Waterloo AP-S, MTT-S, EMC, IEEE Young Professionals,
and IEEE Sensors Council



Picture 1: Official flyer for the IEEE AP-S DL Workshop Canada Series.



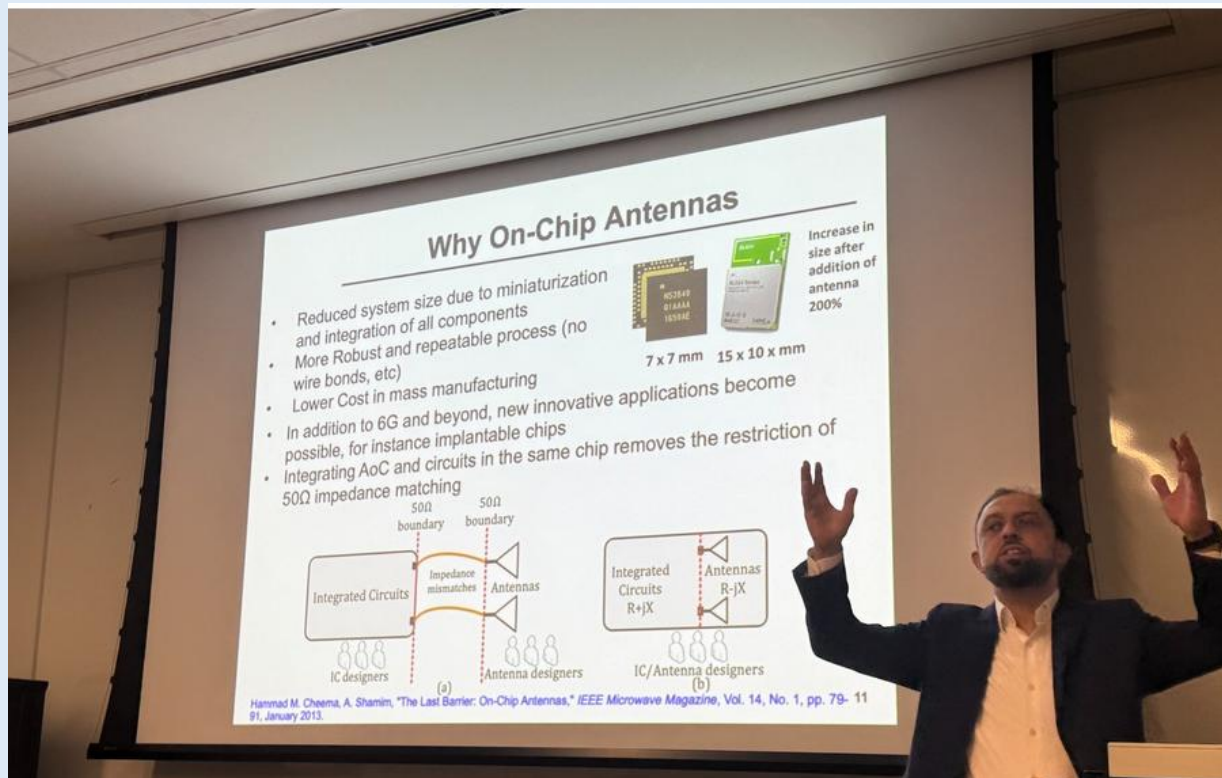
Picture 2: A group photo of the distinguished lecturers, organizers, volunteers, and participants at the University of Waterloo IEEE AP-S Distinguished Lecturer Series.



Picture 3: Prof. Levent Sevgi discussing electromagnetic scattering and radar detection of stealth aircraft during his lecture.



Picture 4: Prof. Özlem Özgün presenting “Computational Electromagnetics: From Basics to Mastery.”



Picture 5: Prof. Atif Shamim presenting on on-chip antennas and RF system integration.



Picture 6: Prof. George Shaker presenting applied electromagnetics for health monitoring.



Picture 7: Selection of photos and selfies from the workshop.



Picture 8: Another selection of photos and selfies from the workshop.