

# András Halbritter

Professor

## Appointments

2015-	<b>Professor</b> <i>Budapest University of Technology and Economics, Department of Physics</i>
2008- 2015	<b>Associate Professor</b> <i>Budapest University of Technology and Economics, Department of Physics</i>
2004-2008	<b>Assistant Professor</b> <i>Budapest University of Technology and Economics, Department of Physics</i>
1998-2002	<b>Regular visiting fellow at the University of Nijmegen (6 months in total)</b>

## Leadership

2023-	<b>Deputy head of the Institute of Physics</b> <i>Budapest University of Technology and Economics</i>
2012- 2024	<b>Head of the Department of Physics</b> <i>Budapest University of Technology and Economics</i>
2023-	<b>Head of the new Physicist-Engineer bachelor program</b> <i>Budapest University of Technology and Economics</i>

## Degrees

2015	<b>Doctor of the Hungarian Academy of Sciences (DSc)</b>
2003	<b>PhD in Physics</b> <i>Budapest University of Technology and Economics, Department of Physics</i> Advisor: Prof. György Mihály
1999	<b>Engineering Physicist MSc</b> <i>Budapest University of Technology and Economics, Department of Physics</i>



## Contact

### Address

Department of Physics,  
Budapest University of  
Technology and Economics,  
1111 Budapest, Budafoki  
street 8, Hungary

### Phone

(+36) 1-463-3850

### E-mail

[halbritter.andras@ttk.bme.hu](mailto:halbritter.andras@ttk.bme.hu)

## Publications

<https://m2.mtmt.hu/gui2/?type=authors&mode=browse&sel=10001642>

## Honors And Awards

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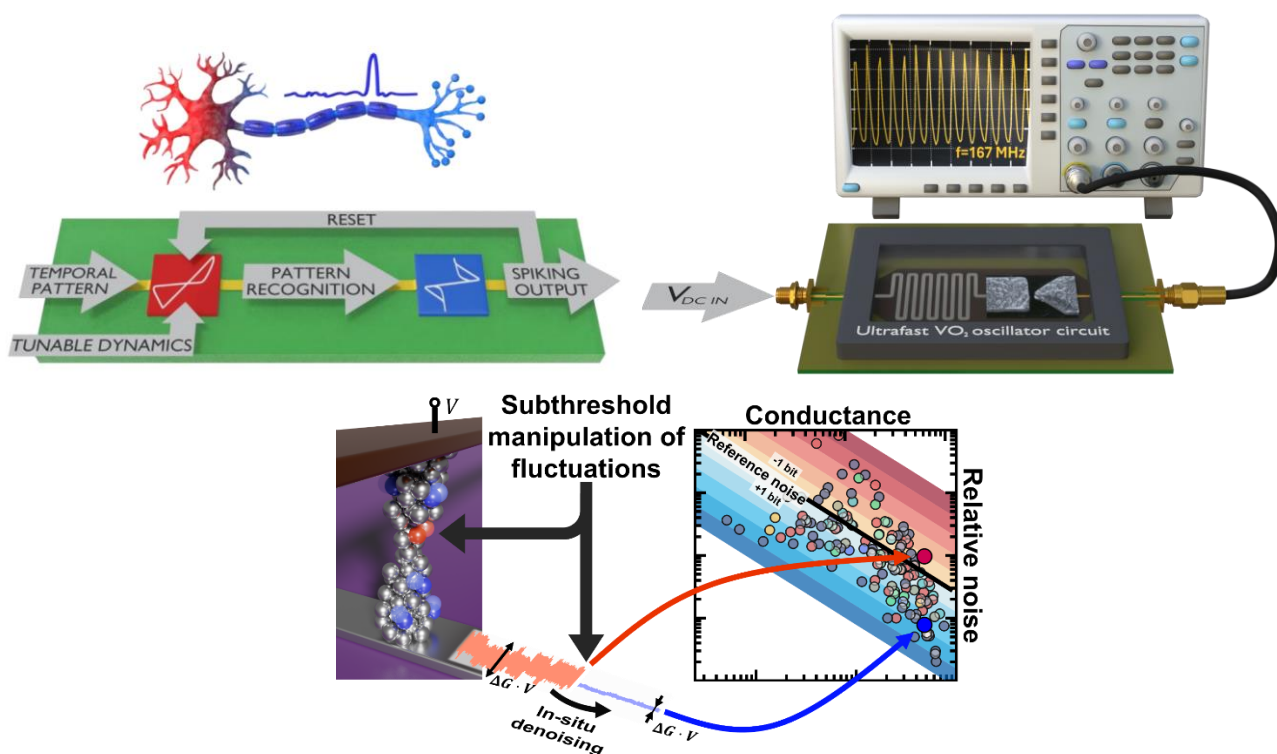
- **Award for "Outstanding PhD/DLA works" (2004)**  
by: Foundation for the Hungarian Higher Education and Research
- **Young Scientist Award of the Academy (2005)**  
by: Hungarian Academy of Sciences
- **Bolyai Janos Research Fellowship (2005-2008, 2009-2012)**  
by: Hungarian Academy of Science
- **Award for supervisors within the undergraduate researcher (TDK) program (2011)**  
by: Budapest University of Technology and Economics
- **Habilitation (2012)**  
by: Budapest University of Technology and Economics
- **Master Teacher Gold Medal (2017)**  
by: National Council of Student Research Societies
- **Award for supervisors within the undergraduate researcher (TDK) program (2018)**  
by: Pro Progressio Foundation
- **Physics Prize (2019)**  
by: Hungarian Academy of Sciences
- **Academy Prize (2025)**  
by: Hungarian Academy of Sciences

## Teaching Activity

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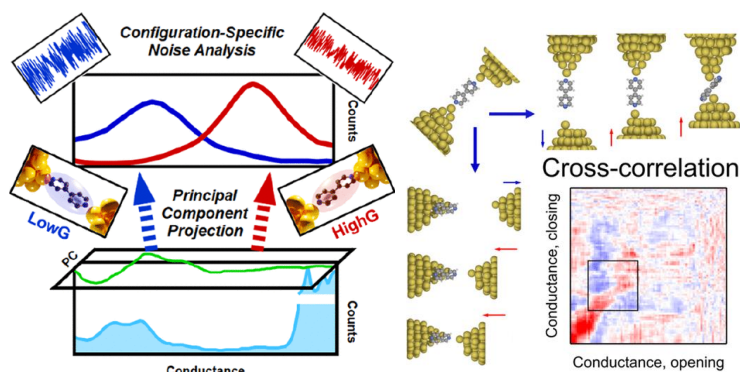
- Measurement Techniques (Physicist Engineer BSc)
- Measurement Techniques (Physicist Engineer BSc)
- Data Collection and Evaluation (Physicist Engineer BSc)
- Measurement Design and Laboratory Exercises (Physicist Engineer BSc)
- Measurement Techniques Laboratory (Physicist Engineer BSc)
- Measurement techniques (BSc in Physics)
- Basic laboratory exercises (BSc in Physics)
- Advanced laboratory exercises (MSc in Physics)
- Nanotechnology laboratory (MSc in physics)
- Applied solid state physics (BSc in Physics)
- Fundamentals of Nanophysics (MSc and PhD in Physics)
- Transport in complex nanostructures (MSc and PhD in Physics)
- Nobel prize physics in everyday application (elective course)
- Solid state physics exercises (BSc in physics)
- Nobel-prize experiments for highschool students
- Head of the Nanotechnology and Materials Science specialization (MSc in Physics)

## Research Expertise (Memristive Devices)



- Oscillatory circuits and neural circuits of memristive devices
- Noise analysis, denoising, and noise harvesting in memristive devices
- Ultrafast time-resolved analysis of memristive devices
- Quantum transport properties of memristive devices

## Research Expertise (Atomic and Molecular Electronics)



- Graphene nanogap devices
- Correlation analysis and Machine-learning-based analysis of single-molecule device
- Noise analysis of single-molecule devices