

Soner Albayrak

University of Amsterdam, Institute of Physics
1098 XH Amsterdam
Netherlands

Email : s.albayrak@uva.nl
Skype: [albayrak.soner](https://www.skype.com/people/albayrak.soner)
Mobile : +90-506-445-8923
soneralbayrak.com

Academic Positions

University of Amsterdam, Amsterdam, Netherlands	2021-present
Onderzoeker (Researcher)	(Contact: Daniel Baumann)

Academic and Professional Preparation

Yale University, New Haven, CT	2016-2021
Doctor of Philosophy in Physics	(Advisor: David Poland)
Dissertation title: Analytical Studies in the Fermion Conformal Bootstrap	
Master of Philosophy in Physics	
Master of Science in Physics	

California Institute of Technology, Pasadena, CA	2018-2019
Visiting Student Researcher	(Host: David Simmons Duffin)
Simons Bootstrap Collaboration Graduate Student Exchange	

Middle East Technical University, Ankara, Turkey	2008-2016
Master of Science in Physics	(Advisor: İsmail Turan)
Thesis: A Lorentz Violating Theory: Its Nonminimal Extension in the Photon Sector	
Bachelor of Science in Physics	
Bachelor of Science in Electrical & Electronics Engineering	

Peer Reviewed Publications

- S. Albayrak, Rajeev Erramilli, Zhijin Li, David Poland and Yuan Xin, Bootstrapping $N_f = 4$ conformal QED₃, [Phys.Rev.D 105 \(2022\)](#)
- S. Albayrak, S. Kharel and D. Meltzer, On duality of color and kinematics in (A)dS momentum space, [JHEP 03 \(2021\) 249](#)
- S. Albayrak, C. Chowdhury and S. Kharel, On loop celestial amplitudes for gauge theory and gravity, [Phys.Rev.D 102 \(2020\)](#)
- S. Albayrak and S. Kharel, Spinning loop amplitudes in Anti-de Sitter space, [Phys.Rev.D 103 \(2021\) 2](#)
- S. Albayrak, D. Meltzer and D. Poland, The Inversion Formula and 6j Symbol for 3d Fermions, [JHEP 09 \(2020\) 148](#)
- S. Albayrak, C. Chowdhury and S. Kharel, Study of momentum space scalar amplitudes in AdS spacetime, [Phys.Rev.D 101 \(2020\) 12](#)
- S. Albayrak and S. Kharel, Towards the higher point holographic momentum space amplitudes. Part II. Gravitons, [JHEP 12 \(2019\) 135](#)
- S. Albayrak, C. Chowdhury and S. Kharel, New relation for Witten diagrams, [JHEP 10 \(2019\) 274](#)

S. Albayrak, D. Meltzer and D. Poland, More Analytic Bootstrap: Nonperturbative Effects and Fermions, [JHEP 08 \(2019\) 040](#)

S. Albayrak and S. Kharel, Towards the higher point holographic momentum space amplitudes, [JHEP 02 \(2019\) 040](#)

Current Research Interests

Conformal bootstrap	AdS/CFT
Cosmological bootstrap	Scattering amplitudes

Conferences & Presentations

20 th Workshop on Quantization, Dualities and Integrable Systems, online seminar	Apr 2022
Talk: Conformal QED in 3d: The Numerical Bootstrap Approach	
Holography@D-ITP meetings, Utrecht University	Apr 2022
Invited Talk: Conformal QED in 3d: The Numerical Bootstrap Approach	
Case Western Reserve University, online seminar	Apr 2022
Invited Talk: Conformal QED in 3d: The Numerical Bootstrap Approach	
Boundaries and Defects in CFT and Holography, online school	Mar 2022
ICTP – School on Superstring Theory and Related Topics, online school	Oct 2021
University of Amsterdam String Theory Journal Club	Oct 2021
Talk: Fermions in CFTs: The Analytic Bootstrap Approach	
International Society for Quantum Gravity, online meeting	Oct 2021
All Lambdas Holography @ Prague, online workshop	Oct 2021
ATITPhysics 2021, online school	Sep 2021
Lecture Series: Conformal Symmetry in Field Theories	
Bootstrap 2021, online conference	Jul 2021
19 th Workshop on Quantization, Dualities and Integrable Systems, online seminar	Apr 2021
Talk: Fermions in CFTs: The Analytic Bootstrap Approach	
THK University, online seminar	Mar 2021
Invited Talk: Simetriler: Niçin evrenimiz böyle?	
Porto University, online seminar	Feb 2021
Invited Talk: On Witten diagrams in momentum space	
Bootstrap 2020, online conference	Jun 2020
Middle East Technical University, online seminar	Nov 2020
Invited Talk: Recent Developments in Conformal Bootstrap	
Zoomplitudes 2020, online conference	May 2020
Online seminar series in theoretical physics in Turkey	May 2020
Talk: Recent Developments in Conformal Bootstrap	
Developments in the Numerical Bootstrap, SCGP-Stony Brook	Nov 2019
Bootstrap 2019, Perimeter Institute	Jul 2019

Bootstrap 2018, California Institute of Technology	Jul 2018
Analytic approaches to the bootstrap, Azores	May 2018
Particle theory group student talk: On Wess-Zumino-Witten model, Yale	Mar 2018
Signals for Nonminimal Lorentz and CPT Violation, IUCSS	Jun 2015
Poster presentation: CPT-odd Photon in Vacuum-Orthogonal Model	
Ankara High Energy Physics Days, METU	Feb 2015
Talk: CPT Violating QED and Beyond	
Recent Developments in High Energy Physics, METU	May 2013

Awards and Scholarships

National Graduate Study Scholarship	2014
by Scientific and Technological Research Council of Turkey	
Graduate Courses Performance Award	2014
by Middle East Technical University	
Dean's Honor and High Honor Lists	2009-2013
Outstanding Success Scholarship's	2008
by METU, by Turkish Educational Foundation, and by Ministry of Youth and Sports	

Experience

Teaching Assistant, Yale University	2017-2021
PHYS 181: University Physics	Spring 2018, Spring 2020, Spring 2021
PHYS 180: University Physics	Fall 2017, Fall 2019, Summer 2020, Fall 2020
PHYS 166L: General Physics Laboratory	Spring 2017
Teaching Assistant, Middle East Technical University	2014-2016
PHYS 502: Analytical Mechanics	Fall 2015, Spring 2016
PHYS 408: Particle Physics II	Spring 2015, Spring 2016
PHYS 407: Particle Physics I	Fall 2014, Fall 2015
PHYS 311: Classical Mechanics	Fall 2014, Spring 2015, Fall 2015, Spring 2016
PHYS 105 - LAB: General Physics I	Fall 2014
Intern, PROMOD R&D Software, Ankara	Jul & Aug 2013
worked for object tracking and camera calibration problems	
Intern, SÖKTAŞ Textile, Aydın	Aug & Sep 2012
worked in the control department	

Other Activities

Organizer, ATITPhysics Online School Series
Advising Committee, Joint Seminar Series in Theoretical Physics (Boun&METU&UTAA)
Physics Outreach (in Turkish), Evrin Ağacı

References

Available upon request