

# Maciek Wielgus

Almost complete list of talks. Updated: December 2024

## Professional presentations

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127. 2024-12-20, National Centre for Nuclear Research, Warsaw, Poland  
*Probing strong gravity with black hole images* (invited seminar),
126. 2024-12-10, 26th RAGtime Workshop, Opava, Czechia  
*Testing gravity with images of black holes* (keynote conference talk),
125. 2024-09-13, EHT Gravitational Physics Working Group (online)  
*Asymmetric wormholes*,
124. 2024-07-24, Korea Astronomy and Space Science Institute, Daejeon, South Korea  
*Studying black holes with space VLBI* (invited talk),
123. 2024-07-19, COSPAR 2024: 45th Scientific Assembly, Busan, South Korea  
*Diagnosing horizon-scale plasma with the recent observations of Sagittarius A\* and M87\** (invited talk),
122. 2024-07-14, COSPAR 2024: 45th Scientific Assembly, Busan, South Korea  
*Rapid multi-wavelength variability in flaring Sagittarius A\** (invited talk),
121. 2024-06-20, Physics Department, Ecole Normale Supérieure, Paris, France  
*We'll test strong gravity with space radiointerferometry* (invited talk),
120. 2024-06-13, Paris Observatory, Meudon, France  
*Sagittarius A\* revealed* (invited seminar),
119. 2024-05-29, Institute of Astronomy, UNAM, Mexico City, Mexico  
*Sagittarius A\* revealed* (invited seminar),
118. 2024-05-23, EHT Collaboration meeting, Mexico City, Mexico  
*Diagnosing the accretion flow in Sagittarius A\* with ALMA polarimetry*
117. 2024-05-14, Institute of Radio Astronomy and Astrophysics, Morelia, Mexico  
*Sagittarius A\* revealed* (invited seminar),
116. 2024-05-02, University of Wuerzburg, Germany  
*News from the M87\* black hole* (invited seminar),
115. 2024-03-11, ASIAA, Taipei, Taiwan  
*Radio-bright future of studying black holes* (invited seminar),
114. 2024-02-19, University of Mississippi, Oxford, USA  
*News from the M87\* black hole* (invited seminar),
113. 2024-02-07, Nicolaus Copernicus Astronomical Center, Warsaw, Poland  
*News from the M87\* black hole* (invited seminar),
112. 2023-11-30, 25th RAGtime Workshop, Opava, Czechia  
*Primordial black holes in the Galaxy dark matter* (keynote conference talk),
111. 2023-11-29, 25th RAGtime Workshop, Opava, Czechia  
*Final results of the first EHT observations of M87 - the end of the saga* (keynote conference talk),
110. 2023-11-13, Galaphys Workshop, Paris Observatory, France (invited talk, online),  
*Studying black holes at the horizon-scale (from Bonn to Paris)*,
109. 2023-10-19, Narayan's group meeting, Center for Astrophysics, Cambridge, USA (seminar)  
*Are we really observing hot spots orbiting Sagittarius A\*?*,
108. 2023-10-16, BHI/SAO/EHT Group Meeting, Cambridge, USA  
*Some research updates and invitations to discussion/collaboration*,
107. 2023-09-22, M2FINDERS and Beyond: Magnetic Fields around Black Holes, Ringberg Castle, Germany  
*Physical conditions on the event horizon scale*,
106. 2023-07-17, EHT Polarization WG Meeting, online  
*Internal Faraday screen of Sagittarius A\**,

105. 2023-07-14, EAS Meeting 2023, Krakow, Poland  
*The inner life of blazars revealed with the EHT* (invited conference talk),
104. 2023-07-13, EAS Meeting 2023, Krakow, Poland  
*Event horizon scale variability of Sagittarius A\* probed with millimeter polarized light curves*,
103. 2023-07-12, EAS Meeting 2023, Krakow, Poland  
*Puffy disks: a numerical model of mildly sub-Eddington accretion*,
102. 2023-06-27, EHT Collaboration meeting, Taichung, Taiwan  
*ALMA light curves of Sagittarius A\* from 86 to 230 GHz*,
101. 2023-05-25, Silesian University in Opava, Czechia  
*Observing Sagittarius A\* with ALMA* (invited seminar, online),
100. 2023-05-09, Goethe University, Frankfurt, Germany  
*Observing Sagittarius A\* with ALMA* (invited seminar),
99. 2023-05-02, Radboud University, Nijmegen, Netherlands  
*Observing Sagittarius A\* with ALMA* (invited seminar),
98. 2023-04-18, University of Geneva, Switzerland  
*Observing Sagittarius A\* with ALMA and the EHT* (invited seminar),
97. 2023-03-16, ngEHT Testing Gravity working group telecon  
*A very basic intro to the eht-imaging library* (online tutorial),
96. 2023-03-14, University of Valencia, Spain  
*Observing Sagittarius A\* with ALMA* (invited seminar),
95. 2023-02-21, World Copernican Congress, Toruń, Poland  
*Imaging black holes with the Event Horizon Telescope* (invited conference talk),
94. 2023-02-13, BHI/SAO/EHT Group Meeting, Cambridge, USA  
*Photon ring of a black hole: from theory to observations* (seminar),
93. 2023-02-10, Improving Black Hole Accretion Models with Plasma Theory workshop, Princeton Uni., USA  
*Observing Sagittarius A\* with ALMA* (invited conference talk),
92. 2023-01-12, Reconnection and Sgr A\* flares workshop, Paris Observatory, Meudon, France  
*Orbital motion near Sgr A\* from ALMA data* (invited conference talk),
91. 2022-11-30, Center for Theoretical Physics, Warsaw, Poland  
*First image of the black hole shadow in the Galactic Center* (invited seminar),
90. 2022-11-29, Astronomical Observatory of the University of Warsaw, Poland  
*Event Horizon Telescope observations of Sagittarius A\** (invited seminar),
89. 2022-11-28, Piwnice Astronomical Observatory, Poland  
*Observing hot spots orbiting Sagittarius A\* with ALMA* (invited seminar),
88. 2022-11-24, EHT Europe-Africa plenary meeting (online)  
*Resolving the inner parsec of quasars with the EHT* (invited talk),
87. 2022-11-10, Chandra X-ray Space Telescope Operations Control Center, Burlington, USA  
*Observing hot spots orbiting Sagittarius A\* with ALMA and Chandra* (invited seminar),
86. 2022-11-02, High Energy Astrophysics Division at CfA | Harvard & Smithsonian, Cambridge, USA  
*Observing hot spots orbiting Sagittarius A\* with ALMA* (invited seminar),
85. 2022-10-31, BHI/SAO/EHT Group Meeting, Cambridge, USA  
*Observing hot spots orbiting Sagittarius A\* with ALMA* (seminar),
84. 2022-10-24, Princeton Gravity Initiative, Princeton University, USA  
*Observing hot spots orbiting Sagittarius A\* with ALMA* (seminar),
83. 2022-10-11, Geoplanet Doctoral School, Warsaw, Poland  
*Seeing the invisible: Imaging the supermassive black hole in the center of our Galaxy* (invited inaugural lecture),
82. 2022-10-11, 24th RAGtime Workshop, Opava, Czechia  
*Observing hot spots orbiting Sagittarius A\* with ALMA* (keynote conference talk),
81. 2022-10-04, next generation EHT science of binaries telecon  
*Observing hot spots orbiting Sagittarius A\* with ALMA* (invited virtual seminar),

80. 2022-09-21, EHT-GRAVITY Meeting, Nijmegen, Netherlands  
*Observing hot spots orbiting Sagittarius A\* with ALMA* (invited conference talk),
79. 2022-09-14, 31st Texas Symposium on Relativistic Astrophysics, Prague, Czechia  
*Observing hot spots orbiting Sagittarius A\* with ALMA* (conference talk),
78. 2022-09-06, 22nd Polish-Slovak-Czech Optical Conference, Wojanow, Poland  
*Event Horizon Telescope and the progress in very long baseline interferometry* (invited plenary talk),
77. 2022-08-22, Max Planck Institute for Extraterrestrial Physics, Garching, Germany  
*Polarized millimeter light curves of Sagittarius A\** (invited seminar),
76. 2022-07-21, Instituto de Astrofísica e Ciências do Espaço, Portugal  
*Event Horizon Telescope, black hole shadow and photon rings* (invited lecture at the internship program),
75. 2022-07-18, COSPAR 2022: 44th Scientific Assembly, Athens, Greece  
*Photon ring of a black hole: from theory to observations* (conference talk),
74. 2022-07-07, Paris Observatory, France  
*First image of the black hole shadow in Sagittarius A\** (invited seminar),
73. 2022-07-06, CMB-S4 Workshop, University of Illinois Urbana-Champaign, USA (virtual)  
*Variability of Sagittarius A\* at millimeter wavelengths* (invited conference talk),
72. 2022-06-29, EAS Annual Meeting, Valencia, Spain  
*Variability of the Sagittarius A\* millimeter light curves* (conference talk),
71. 2022-06-21, EHT Collaboration Meeting, Granada, Spain  
*Sgr A\* polarized ALMA lightcurves* (conference talk),
70. 2022-06-09, KIPAC, Stanford University, USA  
*First image of the black hole shadow in Sagittarius A\** (invited seminar, virtual),
69. 2022-06-08, Nicolaus Copernicus Astronomical Center, Warsaw, Poland  
*First image of the black hole shadow in Sagittarius A\** (invited seminar),
68. 2022-06-06, AGN Seminar at NASA Goddard Space Flight Center, USA  
*First image of the black hole shadow in Sagittarius A\** (invited seminar, virtual),
67. 2022-06-02, Event Horizon Telescope Polarimetry Working Group telecon  
*Polarized millimeter light curves of Sagittarius A\** (EHT working group talk),
66. 2022-05-20, 5th Black Hole Initiative Conference, Harvard University, USA  
*Variability of the Sagittarius A\* millimeter light curves* (invited talk),
65. 2022-02-17, AGN Seminar at NASA Goddard Space Flight Center, USA  
*Observing AGN sources with the EHT* (invited seminar, virtual),
64. 2021-12-09, Max Planck Institute for Radio Astronomy, Bonn, Germany (invited seminar)  
*Black hole shadows, photon rings and critical curves - can we test gravity with the EHT images?*,
63. 2021-11-03, next generation EHT Virtual Conference (virtual conference talk)  
*Photon rings of spherically symmetric black holes and robust tests of non-Kerr metrics*,
62. 2021-10-20, Narayan's group meeting, Center for Astrophysics, Cambridge, USA (seminar)  
*Photon rings of spherically symmetric black holes and robust tests of non-Kerr metrics*,
61. 2021-09-16, Polish Astronomical Society annual meeting, Szczecin, Poland  
*Event Horizon Telescope* (virtual conference talk),
60. 2021-09-07, 23rd RAGtime Workshop, Opava, Czechia  
*Current and future tests of gravity with black hole shadows* (invited conference talk),
59. 2021-07-22, Instituto de Astrofísica e Ciências do Espaço, Portugal  
*Event Horizon Telescope, black hole shadow and photon rings* (lecture at the internship program),
58. 2021-07-09, 16th Marcel Grossmann Meeting (virtual, invited conference talk)  
*Shadows of the past, shadows of the future*,
57. 2021-07-06, 16th Marcel Grossmann Meeting (virtual, invited conference talk)  
*Would we know a wormhole if we saw one?*,
56. 2021-07-05, 16th Marcel Grossmann Meeting (virtual, invited conference talk)  
*Event Horizon Telescope Paper VII: imaging the polarized emission around M 87\**,

55. 2021-06-29, EAS Annual Meeting 2021 (virtual, poster)  
*Studying dynamics of the innermost part of the accretion flow in M87 with the EHT,*
54. 2021-05-06, Los Alamos National Laboratory, Center for Theoretical Astrophysics, USA  
*Resolving the polarized emission from the core of the M87 galaxy with the EHT* (inv. seminar),
53. 2021-04-29, Silesian University in Opava, Czechia (invited seminar)  
*Polarized emission around the M87 supermassive black hole,*
52. 2021-04-08, Paris Observatory, France (invited seminar, virtual)  
*Resolving the polarized emission from the core of the M87 galaxy with the EHT,*
51. 2021-04-05, SLAC Seminar, Stanford University, USA (invited seminar, virtual)  
*Polarized emission around the M87 supermassive black hole,*
50. 2021-04-01, Xiamen University, China (invited seminar, virtual)  
*Resolving the polarized emission from the core of the M87 galaxy with the EHT,*
49. 2021-03-12, Institute of Theoretical Physics & Astrophysics, Masaryk University, Brno, Czechia  
*Probing space time geometry with the Event Horizon Telescope* (invited seminar, virtual),
48. 2021-03-09, Faculty of Mechatronics, Warsaw University of Technology, Poland  
*Introduction to Bayesian methods of parameters estimation* (lecture and workshop),
47. 2021-03-03, Fudan University, Shanghai, China  
*Studying compact objects in the age of black hole images* (invited seminar, virtual),
46. 2021-02-25, Science at the Horizon: the Next-Generation EHT Conference (virtual)  
*Photon ring signature of non-Kerr spacetimes* (conference talk),
45. 2021-02-24, Institute of Astronomy and Astrophysics, Academia Sinica, Taiwan  
*Studying compact objects in the age of black hole images* (invited seminar, virtual),
44. 2021-01-11, Tsinghua University, Beijing, China  
*The radio-bright future of studying black holes* (invited seminar, virtual),
43. 2020-12-22, Shanghai Observatory, China  
*Studying compact objects in the age of black hole images* (invited seminar, virtual),
42. 2020-12-15, 4th Black Hole Initiative Conference, Harvard University, USA  
*Monitoring the Morphology of M87\* in 2009-2017 with the EHT* (conference talk, virtual),
41. 2020-11-05, EHT Gravitational Physics Input Working Group  
*Asymmetric wormholes* (online talk),
40. 2020-10-28, Institute of Physics, University of Szczecin, Poland  
*Monitoring M87\* in 2009-2017 with the EHT* (invited seminar),
39. 2020-10-27, National Centre for Nuclear Research Astrophysics, Swierk, Poland  
*Monitoring M87\* in 2009-2017 with the EHT* (invited seminar),
38. 2020-09-21, Cologne / Prague Conference: Exploring of the Universe (virtual)  
*Monitoring M87 in 2009-2017 with the Event Horizon Telescope* (conference talk),
37. 2020-08-12, Astronomical Institute of the Czech Academy of Sciences, Prague, Czechia  
*Monitoring the Morphology of M87 in 2009-2017 with the EHT* (seminar),
36. 2020-05-06, Nicolaus Copernicus Astronomical Center, Warsaw, Poland  
*Puffy accretion disks and how to find them* (invited seminar),
35. 2020-03-11, Nicolaus Copernicus Astronomical Center, Warsaw, Poland  
*Modeling 2009-2013 observations of M87\* with an asymmetric ring* (invited seminar),
34. 2020-02-27, Silesian University, Opava, Czechia  
*Modeling 2009-2013 observations of M87\* with an asymmetric ring* (invited seminar),
33. 2020-02-18, Radboud University, Nijmegen, Netherlands  
*Modeling 2009-2013 observations of M87\* with an asymmetric ring* (invited seminar),
32. 2019-11-07, College of Charleston, USA  
*What can we learn from the first image of a black hole?* (invited seminar),
31. 2019-11-01, NEROC Symposium, MIT Haystack Observatorium, USA  
*Event Horizon Telescope - expansion plans* (conference talk),



30. 2019-10-23, New Horizons in Galactic Center Astronomy and Beyond, Yokohama, Japan  
*Analyzing time variability of Sgr A\* in the Event Horizon Telescope data* (conference talk),
29. 2019-10-11, IAU 356, Addis Ababa, Ethiopia  
*Observing AGN sources with the Event Horizon Telescope* (conference talk),
28. 2019-09-27, University of Waterloo, Canada  
*Optically thick accretion: from theory to the most recent results* (invited seminar),
27. 2019-09-18, 21st RAGtime Workshop, Opava, Czechia  
*Probing GR with the Event Horizon Telescope* (invited conference talk),
26. 2019-05-21, 3rd Black Hole Initiative Conference, Harvard University, USA  
*EHT data set reduction and calibration* (conference talk),
25. 2019-05-15, Department of Physics, University of California in Santa Barbara, USA  
*First results from the Event Horizon Telescope* (invited talk),
24. 2019-05-14, KIPAC, Stanford University, USA  
*First results from the Event Horizon Telescope* (invited seminar),
23. 2019-05-09, 1st CTA Science Symposium, Bologna, Italy  
*Event Horizon Telescope* (conference talk),
22. 2019-05-03, University of Amsterdam, Pannekoek Institute, Netherlands  
*First results from the Event Horizon Telescope* (invited talk),
21. 2019-04-18, Paris Observatory, France  
*First results from the Event Horizon Telescope* (invited seminar),
20. 2019-04-16, Astronomy Department, Yale University, USA  
*First EHT results* (invited seminar),
19. 2019-04-12, Astronomy Department, Tufts University, USA  
*First results from the Event Horizon Telescope* (invited seminar),
18. 2018-02-01, CfA, Harvard & Smithsonian, USA  
*Studying variability of Sgr A\* with the EHT* (colloquium),
17. 2017-10-03, Black Hole Initiative, Harvard University, USA  
*Levitating atmospheres of luminous neutron stars* (colloquium),
16. 2017-04-25, Students' Astronomy Club KNAstr at the University of Warsaw, Poland  
*Event Horizon Telescope* (talk),
15. 2016-09-30, ZARM, Bremen University, Germany  
*Transsonic accretion* (lecture),
14. 2016-04-19, Silesian University in Opava, Czechia  
*Eddington Capture Sphere* (seminar),
13. 2015-09-15, SPIE Correlation Optics conference, Chernivtsi, Ukraine  
*The analytic signal in fringe pattern processing* (conference talk),
12. 2014-12-09, Meeting with Copernicus & Hevelius: confrontations with relat. astroph., Krakow, Poland  
*Levitating super-Eddington atmospheres* (conference talk),
11. 2014-08-26, IAU 312, Beijing, China  
*Levitating atmospheres of luminous neutron stars* (conference talk),
10. 2013-12-10, SPIE Micro+Nano Materials, Devices, and Systems, Melbourne, Australia  
*Nanocrystalline thin films statistical structural analysis by the automatic image processing* (poster),
9. 2013-09-10, Fringe 2013, 7th International Workshop, Stuttgart, Germany  
*Filtering ESPI Fringe Images with Non-local Means Algorithm* (conference talk),
8. 2013-07-15, Narayan's group meeting, Center for Astrophysics, Cambridge, USA (seminar)  
*Eddington capture sphere around luminous stars*,
7. 2013-06-24, Narayan's group meeting, Center for Astrophysics, Cambridge, USA (seminar)  
*On some recent and not so recent developments in signal and image analysis*,
6. 2013-04-03, MRS Spring Meeting & Exhibit, San Francisco, USA (conference talk)  
*Enhanced Measurements of Displacements and Strains in Quasiperiodic Nanostructures*,

5. 2012-10-24, Nicolaus Copernicus Astronomical Center, Warsaw, Poland  
*Eddington capture sphere around luminous stars* (seminar),
4. 2012-09-19, 7th PhD Students and Young Scientists Conference, Warsaw University of Technology, Poland  
*Midpoint-based bidimensional empirical mode decomposition*,
3. 2012-08-23, SPIE Adv. Topics in Optoelect., Microelect. and Nanotech., Constanta, Romania (conf. talk)  
*Continuous Wavelet Transform for D-Space Distribution Analysis in Nanocrystalline Materials*,
2. 2011-09-20, 6th PhD Students and Young Scientists Conference, Warsaw University of Technology, Poland  
*Fringe pattern analysis with bidimensional empirical mode decomposition*,
1. 2010-06-17, 7th Partial Differential Equations Forum, Bedlewo, Poland (poster)  
*Perona-Malik equation in image analysis*

## Outreach talks and public lectures given (incomplete before 2020)

21. 2024-12-19, XL Żeromski High School, Warsaw, Poland  
*Secrets of black holes i inne sprawy* (invited talk for high school students, in Polish),
20. 2024-12-12, 26th RAGtime Workshop, Opava, Czechia (public talk)  
*Secrets of black holes*,
19. 2023-09-02, Astronomy Club Almukantar 40th Anniversary, Frombork, Poland  
*Sagittarius A\*: najmroczniejszy sekret Galaktyki*,
18. 2022-12-09, Astronomy Club at Sacred Heart Preparatory, Atherton, USA  
*Seeing the invisible: Imaging the supermassive black hole in the center of our Galaxy*,
17. 2022-09-13, 31st Texas Symposium on Relativistic Astrophysics, Prague, Czechia (public talk)  
*Seeing the invisible: Imaging the supermassive black hole in the center of our Galaxy*,
16. 2022-05-17, Harvard University Science Center, Cambridge, USA  
*The EHT: Breaking News from the Center of the Milky Way* (public talk and panel discussion),
15. 2021-11-17, XL Żeromski High School, Warsaw, Poland  
*Parę słów o astrofizyce i pracy naukowej* (invited talk for high school students, in Polish),
14. 2021-07-16, Almukantar Astronomy Club Summer Camp, Zalecze Wielkie, Poland  
*Sezon na czarne dziury* (a lecture for a high school astronomy club, in Polish, English: *Season for black holes*),
13. 2021-03-29, N. Copernicus Astronomy Center: Meetings with Astronomy (outreach lecture series)  
*Polarizacja obrazu czarnej dziury w M87* (in Polish, English *Polarization of the image of the M87 black hole*),
12. 2021-01-21, Copernicus Science Center, Warsaw, Poland  
*Prosto z nieba: sezon na czarne dziury* (public lecture in Polish, virtually on YouTube),
11. 2020-11-30, Photo: Science/ Photography and Scientific Discourses Conference, Prague, Czechia  
*Event Horizon Telescope and Black Hole Images* (keynote talk at a photographic conference),
10. 2020-09-20, N. Copernicus Astronomy Center: Meetings with Astronomy (outreach lecture series)  
*Teleskop Horyzontu Zdarzeń* (in Polish, English: *Event Horizon Telescope*),
9. 2020-03-04, Silesian University in Opava, Czechia  
*Shadow of a black hole* (public lecture),
8. 2019-11-06, Mellow Mushroom pub, Charleston, USA  
*The insider's tale of the Event Horizon Telescope* (Astronomy on Tap pub talk),
7. 2019-09-23, PLNOG 23, Cracow, Poland (invited lecture at an IT conference, in Polish)  
*Biblioteka EHT-imaging, regularized maximum likelihood i pierwszy obraz czarnej dziury*,
6. 2019-09-14, PyCon PL 2019, Zawiercie, Poland (keynote lecture at an IT conference)  
*First image of a black hole: Python DIY*,
5. 2019-07-31, Polish Scientific Network in Boston meeting, MIT, Cambridge, USA  
*Imaging a black hole with the Event Horizon Telescope* (popular talk),
4. 2019-04-27, Copernicus Science Center, Warsaw, Poland  
*Teleskop Horyzontu Zdarzeń* (public talk, in Polish),
3. 2019-04-15, Harvard University Science Center, USA (public talk and panel discussion)  
*Photographing Black Holes: First Results from the Event Horizon Telescope*

2. 2017-04-10, N. Copernicus Astronomy Center: Meetings with Astronomy (outreach lecture series)  
*Teleskop Horyzontu Zdarzeń* (in Polish, English: *Event Horizon Telescope*)
1. 2016-05-23, N. Copernicus Astronomy Center: Meetings with Astronomy (outreach lecture series)  
*Testy ogólnej teorii względności* (in Polish, English: *Tests of general relativity theory*)