CURRICULUM VITAE — PROFESSOR JOHANN ANTON ZENSUS

Global Scientific Leader • Architect of Modern & Space VLBI • Founding Chair of the Event Horizon Telescope Board • Coordinator of European Radio Astronomy

EXECUTIVE SUMMARY

Professor Johann Anton Zensus is a world-leading astrophysicist whose pioneering scientific contributions and strategic leadership have fundamentally shaped modern radio astronomy. Over four decades, he has been at the forefront of research on active galactic nuclei (AGN) and relativistic jets, producing key discoveries that advanced our understanding of supermassive black holes, jet formation, and extreme physical conditions in the Universe. His group has long been recognized as one of the world's foremost centers for AGN astrophysics, combining innovative observational techniques with major scientific breakthroughs.

In parallel with his scientific achievements, Professor Zensus has transformed the technical and organizational foundations of ultra-high-resolution astronomy. His department at the Max Planck Institute for Radio Astronomy (MPIfR) defined the modern field of millimetre and space Very Long Baseline Interferometry (VLBI), achieving critical milestones such as the first European and transatlantic 1.3 mm VLBI detections, the creation of the Global mm-VLBI Array (GMVA), and essential contributions to the integration of ALMA into VLBI. These developments were pivotal in enabling horizon-scale imaging of black holes.

As the Founding Chair of the Event Horizon Telescope (EHT) Board, he united a previously fragmented international community into a coherent and effective global collaboration. His scientific vision, diplomatic skill, and ability to build consensus across institutions worldwide were essential in delivering the first images of a black hole (M87*, 2019) and the Milky Way's central black hole (Sgr A*, 2022). These achievements represent landmark moments in the history of astrophysics.

Beyond the EHT, Professor Zensus has been a central architect of European and global radio astronomy. For a decade, he led Europe's preparations for the Square Kilometre Array (SKA) as Chair of the European SKA Council and as a member of the SKA Science and Engineering Committee (SSEC) and the International SKA Steering Committee (ISSC). He initiated the first international LOFAR station at the Effelsberg observatory, laying the foundation for what became the International LOFAR Telescope (ILT), and he helped

establish the Joint Institute for VLBI in Europe (now JIV-ERIC), securing a unified European framework for long-baseline interferometry.

Through his scientific work, international collaboration, and sustained leadership of large-scale initiatives, Professor Zensus has played a central role in the development of global radio astronomy. He is recognized for his contributions to international research infrastructures and for helping shape collaborative frameworks that support long-term scientific progress.

KEY SCIENTIFIC ACHIEVEMENTS

Pioneering Global Ultra-High-Resolution Astronomy

• Advanced VLBI into a global, Earth-sized instrument through leadership in mm-VLBI, space VLBI, and international coordination.

• Achieved the first 1.3 mm VLBI fringes in Europe and across the Atlantic, enabling horizon-scale imaging.

Founding Architect of the Event Horizon Telescope (EHT)

• Unified the global mm-VLBI community into a coordinated collaboration.

• Led MPIfR's foundational technical and scientific contributions to the first black hole images.

Seminal Research on Relativistic Jets and Black Hole Physics

• Co-discovered double-helical jet structure in 3C 273, supporting magnetohydrodynamic jet models.

• Influential studies of brightness temperatures exceeding theoretical limits.

• Led one of the world's foremost AGN research groups, producing major discoveries on jet dynamics and AGN structure.

Strategic Leadership in Space VLBI

• Key scientific and organizational roles in VSOP and RadioAstron, enabling unprecedented baselines and high-resolution findings.

Architect of International Radio Astronomy Infrastructure

• Founder of the GMVA; key contributions to the ALMA Phasing Project.

• Initiated the first international LOFAR station at Effelsberg, creating the path toward the International LOFAR Telescope.

• Helped found the Joint Institute for VLBI in Europe (now JIV-ERIC).

• Established European coordination via RadioNet and contributed to European VLBI, LOFAR, SKA, and ngVLA development.

LEADERSHIP & GOVERNANCE (SELECTED)

Executive and Institutional Leadership

• Director, Max Planck Institute for Radio Astronomy (1997–2026); now Emeritus

• Executive Director, MPIfR (multiple terms)

• Founding Chair, Event Horizon Telescope Board

• Coordinator, European RadioNet Alliance

Strategic Roles within the Max Planck Society

• Advisor to the MPS President on Transatlantic Cooperation

• Chair, MPS Roundtable North America

• Member: MPS China Council, MPS Roundtable Europe, Open Science Roundtable, MP Academy Scientific Advisory Council

European & International Scientific Governance

• Chair of the European SKA Council for a decade; member of SKA SSEC and ISSC

• Chair, Italian INAF Institute for Astronomy

• Member, Scientific Advisory Board of the Korean KASI Institute

• Member, Senior Review of Manchester University Physics

• Member, UK SRC Advisory Committee on Astronomy

• Member: ngVLA Science Advisory Group; AUI Astronomy Committee; KoWi Council; University of Bonn Scientific Advisory Council

• Member: Shanghai Astronomical Observatory International Committee

Coordination of Radio Astronomy Networks & Missions

• Chair, EVN Board of Directors (2013–2015)

• Council Member, JIV-ERIC

• Member, RadioAstron & VSOP International Science Councils

• Coordinator: RadioNet/FP7, RadioNet/Horizon 2020, ORP

HONORS & DISTINCTIONS (SELECTED)

Major Individual Awards

- CAS President's International Distinguished Scientist Fellowship (2025)
- Karl Schwarzschild Medal (2024)
- Tycho Brahe Medal (2023)
- ERC Advanced Grant (2021)
- Max Planck Research Award (1999)
- Alexander von Humboldt Research Award (1994)

Awards Associated with EHT

- Frontiers of Science Award (2025)
- RAS Group Achievement Award (2021)
- AAS Bruno Rossi Prize (2020)
- Einstein Medal (2019)
- Breakthrough Prize in Fundamental Physics (2019)
- NSF Diamond Award (2019)

Additional Honors

- KASI Distinguished Scholar (2015)
- Golden Medal, Institute of Applied Astronomy (2013)
- RadioAstron Bronze Medal (2012)

CAREER HISTORY

1958 Born in Bremerhaven, Germany

1976–1984 Studies in Physics & Astronomy, Cologne, Münster, Bonn

1982 Diploma, University of Münster

1984 Doctorate, University of Münster

1985–1988 Postdoctoral Fellow, Caltech

1988–1991 Jansky Fellow, NRAO

1991–1997 Staff Scientist, NRAO (Tenured 1996)

1995–1997 Research Professor, University of Virginia

1997–2026 Director, MPIfR

2001–present Adjunct Scientist, NRAO

2005–present Honorary Professor, University of Cologne

2026 Emeritus Director and Scientific Member, MPIfR

TEACHING, TRAINING & MENTORING

- Founder & Speaker, International Max Planck Research School (IMPRS)
- Mentor: Elisabeth-Schiemann-Kolleg; Humboldt Network
- Certified in systemic supervision (2021, 2023)
- Teaching at University of Cologne

SERVICE TO SCIENCE & THE INTERNATIONAL COMMUNITY

- Leadership roles across Europe, Asia, and the Americas
- Advisor to scientific agencies and research ministries
- Builder of multinational collaborations and advanced research schools
- Shaper of next-generation facilities including SKA, LOFAR, ngVLA

PUBLICATIONS

Full publication list (NASA ADS): https://tinyurl.com/4777yuua