



CERTIFICATE

This is to certify that

Albert Einstein

born March 14th, 1879, Ulm, Germany

has undertaken and completed the graduate training program offered at the *International Max Planck Research School for Astronomy and Cosmic Physics* in the course of the doctoral studies at the *Heidelberg University*.

Subject of Thesis Research:

A New Determination of Molecular Dimensions

IMPRS Thesis Committee:

Dr. Knud Jahnke, Max Planck Institute for Astronomy, Heidelberg

Dr. Nadine Neumayer, Max Planck Institute for Astronomy, Heidelberg

Prof. Dr. Jochen Heidt, Center for Astronomy of Heidelberg University

Heidelberg, October 11th, 2022

Prof. Dr. H.-W. Rix
IMPRS spokesperson
MPI for Astronomy

Prof. dr. ir. S. Hekker
IMPRS spokesperson
Heidelberg University & HITS

Prof. Dr. Ch. Fendt
IMPRS coordinator
MPI for Astronomy

CERTIFICATE SUPPLEMENT

Albert Einstein

born March 14th, 1879, Ulm, Germany

At the *International Max Planck Research School*¹ (IMPRS) doctoral students have the opportunity to work on their research theses in the framework of a structured program providing excellent research conditions along with a broad and deep education in astronomy and astrophysics. Courses attended before entering the IMPRS program² are credited if compatible with the IMPRS curriculum. Lectures are held in English.

List of courses Albert has attended during the IMPRS curriculum:

IMPRS seminars:

Research Seminar (SS 2019): *Unveiling nuclear star cluster formation and their connection to galaxy properties*

Literature Seminar (WS 2019/20): *Weak Lensing as a Tool to Constrain Dark Energy*

Workshop Seminar (WS 2020/21): *Probing the Nature of High-z Weak Emission Line Quasar*

List of course lectures:

Introduction to GPU Accelerated Computing (WS 2018/19), Astronomical-Astrophysical Laboratory Course (WS 2018/2019), 45th Heidelberg Physics Graduate Days (WS 2020/21), Theoretical Astrophysics (WS 2020/21), Cosmology (WS 2020/21)

Schools & Conferences:

Conference: *Stellar halos across the cosmos, Heidelberg, 2018, talk*

São Paulo School of Advanced Science on First Light: Stars, Galaxies and Black Holes in the Epoch of Reionization, São Paulo, 2019, talk

IMPRS-HD Summer School: *Instrumentation for Ground-based Optical & Infrared Astronomy, Heidelberg, 2019*

Conference: *The Art of Measuring Galaxy Physical Properties, Milan, 2019, talk and poster*

School: *Multi-Messenger Astrophysics, Asiago Astronomical Observatory 2020*

Workshop: *Black Holes and Galaxies at the Edge of the Universe, Ringberg Castle, 2020, talk*

International Advanced Euclid School, Les Houches, 2020

Symposium: *Dynamical Evolution of Dense Stars Clusters with and without central black holes, Jülich, 2020, poster*

Workshop: *Dynamical Reconstruction of Galaxies, Leiden, 2020, talk*

Workshop: *Quasars and Galaxies through Cosmic Time, Santiago, 2022 (online)*

European Astronomical Society Annual Meeting, Valencia, 2022, poster

Teaching activities:

Tutorial: *Astronomy Laboratory Course (WS 2019/20), Heidelberg University*

List of astronomy courses attended before and accepted for the IMPRS curriculum:

Ulm University: *Introduction to Astronomy, Galaxies/Extragalactic Astronomy, Stellar Physics*

¹The International Max Planck Research School for Astronomy and Cosmic Physics at the University of Heidelberg: www.imprs-hd.mpg.de/.

²The IMPRS program requests students to study all aspects of astronomy and astrophysics (stellar physics, galaxies, cosmology, instrumentation & observational methods, theoretical astrophysics), and also to gain knowledge in specific fields of astrophysics different from their thesis topic.