

# CURRICULUM VITAE

## DAVOR KRAJNOVIĆ

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### EMPLOYMENT HISTORY

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**2019 –** Senior Staff Scientists, Leibniz-Institut für Astrophysik (AIP), Potsdam, Germany  
**2016 – 2019** Tenure Track, Leibniz-Institut für Astrophysik (AIP), Potsdam, Germany  
**2012 – 2015** Postdoctoral Associate, Leibniz-Institut für Astrophysik (AIP), Potsdam, Germany  
**2009 – 2012** ESO Fellow, ESO, Garching, Germany  
**2007 – 2009** Extra-ordinary Junior Research Fellow, Queen’s College, Oxford, UK  
**2004 – 2009** Post-doctoral researcher, Oxford Astrophysics, University of Oxford, Oxford, UK

### EDUCATION

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**2000–2004** Leiden Observatory, Leiden University, The Netherlands  
 PhD in Astronomy, 12 October 2004  
 Thesis title: *‘On the nature of early-type galaxies’*  
 Supervisors: Prof. P.T. de Zeeuw, Dr. Walter Jaffe  
**1994–1999** Department of Physics, Faculty of Science, University of Zagreb, Croatia  
 Graduated 12 November 1999  
 Diploma Thesis: *‘Ultra High Energy Cosmic Ray and Greisen-Zatsepin-Kuzmin Cutoff’*  
 Supervisor: Dr. Mladen Martinis, Institute Rudjer Bošković, Zagreb

### RESEARCH ACTIVITIES AND INTERESTS

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- Structure, kinematics and dynamical modelling of galaxies
- Supermassive black holes and their co-evolution with galaxies
- Stellar populations and the role of dark matter in galaxies
- Evolution of stellar angular momentum

### TEACHING

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**2020 -** Lecturer at Potsdam University (“Galaxies and Cosmology”, Master course - Module Galaxies)  
**2015 - 2016** Potsdam University (“Galaxies and Cosmology”, Master course - covering topics of stellar kinematics, dynamics and stellar populations)  
**2010 - 2014** Lecturer at University of Zagreb (“Galactic Astronomy”, graduate course)  
**2008 - 2009** Tutor for Queen’s and Christ Church Colleges (“Stellar Evolution and Cosmology”, undergraduate course)  
**2007 - 2008** Tutor for Queen’s College (“Stellar Evolution and Cosmology”, undergraduate course)  
**2005 - 2007** Tutor for Christ Church College (“Stellar Evolution and Cosmology”, undergraduate course)  
**2001 - 2003** Teaching assistant at University of Leiden (“Active Galaxies”, undergraduate course)  
**1999 - 2000** Tutoring in mathematics and physics of high school students

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**SUPERVISION OF STUDENTS**


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2017 - 2018	Master supervisor ( <b>Kegeler</b> ): <i>Hidden structure of early-type galaxies</i>
2016	Bachelor supervisor ( <b>Vilović</b> ): <i>Fundamental Plane of galaxies in the Abell 1689 cluster</i>
2015 - 2019	PhD supervisor ( <b>Thater</b> ): <i>The interplay of massive black holes and their host galaxies</i>
2013 - 2014	Supervisor on MSc ( <b>Thater</b> ): <i>Modelling of IFU observations of NGC4414</i>
2013	Internship supervisor ( <b>Johnson</b> ): <i>Analysis of the velocity dispersion radial profiles of early-type galaxies</i>
2010 - 2013	Co-supervisor on PhD ( <b>Lagerholm</b> ) (Thesis not completed)
2009	Supervisor on Mphys ( <b>Bourne</b> ): <i>Galaxy kinematics for NGC4414</i>
2008	Supervisor on MSc ( <b>Caris</b> ): <i>Probing supermassive black holes in massive galaxies with cold gas kinematics</i>
2008	Supervisor on Mphys ( <b>Barcely</b> ): <i>Origin of nuclear disks in ATLAS<sup>3D</sup> sample</i>
2007	Supervisor on BA ( <b>Jackson</b> ): <i>Methods for estimating masses of central black holes</i>
2006	Supervisor on Mphys ( <b>Das</b> ): <i>Kinometry on SAURON velocity dispersion maps</i>
2006	Co-supervisor on Mphys ( <b>Tulip</b> ): <i>Mass Models of Boxy Bulges in Spiral Galaxies</i>
2005 - 2008	Co-supervisor on PhD ( <b>Maier</b> ): <i>The Cores of Early-Type galaxies</i>

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**EXAMINATIONS**


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2020	PhD Thesis External Examiner ( <b>Smith</b> ): <i>Weighing supermassive black holes with molecular gas kinematics</i> , University of Oxford, UK
2019	PhD Thesis Examiner ( <b>Thater</b> ): <i>The interplay of massive black holes and their host galaxies</i> , University of Potsdam, Germany
2018	PhD Thesis External Examiner ( <b>Hušak</b> ): <i>Doprinos Ruđera Boškovića u određivanju elemenata Sunčeve rotacije na osnovi opažanja pjega</i> , University of Zagreb, Croatia
2018	Master Thesis External Examiner ( <b>Fiteni</b> ): <i>The impact of bars on the stellar density profiles of disk galaxies</i> , University of Malta, Malta
2015	PhD Examination Committee member ( <b>Oliva-Altamirano</b> ): <i>Brightest Cluster Galaxies As Probes of Galaxy Formation</i> , Swinburne University of Technology, Australia
2009	Junior Assessor of Mphys Thesis at Oxford University
2008	Junior Assessor of Mphys Thesis at Oxford University

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**MEMBERSHIP IN SCIENTIFIC COLLABORATIONS AND SOCIETIES**


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2016 -	MOSAIC Consortium (2021- ) coordinator of SWG3: "Mass assembly of galaxies through cosmic times"
2016 -	NIFS Large Program for measuring masses of supermassive black holes
2014-	MUSE Most Massive Galaxies (M3G) - ( <i>co-Principal Investigator</i> )
2012 -	Mass Assembly of early-Type GaLaxies with their fine Structures - MATLAS
2010 -	MUSE GTO Science team
2009 -	International Astronomical Union
2008 -	Royal Astronomical Society
2007 - 2014	ATLAS <sup>3D</sup> Survey ( <i>co-Principal Investigator</i> )
2005 - 2009	Astrophysics Initiative in Dalmatia
2003 -	SAURON Survey

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**COMMUNITY AND INSTITUTIONAL SERVICES**


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- Member of AIP Internal Science Committee, since 2019)
- Member of AIP LBT Time Allocating Committee, since 2017)
- Member of ESO Observing Programmes Committee, Panel B (Periods 98, 99, 100)
- Graduate and Master Student Advisor, AIP and University of Potsdam, Germany
- Member of a PhD Selection Committee (2015, AIP, Germany)
- Refereeing for astrophysical journals and funding agencies
- Refereeing of observational proposals for GEMINI Observatory

## GRANTS

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2020	Royal Astronomical Society Undergraduate Bursary: £1200
2017	Deutsche Forschungsgemeinschaft (DFG) grant: €195550
2015	Royal Astronomical Society Undergraduate Bursary: £1200
2015	Deutsche Forschungsgemeinschaft (DFG) grant: €121800
2014	German Space Agency (DLR) grant for analysis of HST Cycle 21 observations: €80000
2013	NASA grant for analysis of HST Cycle 21 observations: \$91,433 (granted to the US part of the team)
2012	Lorentz Centre Grant for a workshop - <i>Assembly and Star Formation of Early-Type Galaxies in 3D</i> : €3500
2009	Royal Astronomical Society Undergraduate Bursary: £1700

## AWARDS

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2013	<i>Group Award</i> of the Royal Astronomical Society, as a member of the SAURON team
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## ORGANISATION OF MEETINGS AND CONFERENCES

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2019	Multi-Spin Galaxies (Asiago Astrophysical Observatory, Asiago) - Member of SOC
2014	National Astronomy Meeting (Portsmouth) - Parallel Session: Interplay of Black Holes and Host Galaxies (Chair)
2010	Central Massive Objects workshop at ESO (LOC member)
2009 - 2012	Wine & Cheese Seminars at ESO (monthly)
2008 - 2014	ATLAS <sup>3D</sup> Team bi-annual meetings
2007	International Astronomical Union Symposium 245: Formation and Evolution of Galaxy bulges (LOC member)
2006 - 2007	Split International Winter Schools, SIWA (member of the selection committee)
2004 - 2009	Galaxies group meetings at Oxford (weekly)
1999 - 2000	XV International Conference for Physics Students 2000, Zadar (member of the organising committee)

## OBSERVING

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PI and Co-I on a number of proposals for optical and near-infrared spectroscopy with long-slit and integral-field instruments on 4 - 8m telescopes, as well as on millimetre, radio observations, and space based imaging. Recent projects include (as PI or co-PI only):

- VLT (SINFONI): Does PGC046832 have the most massive central black holes measured to date? (**DDT**)
- VLT (MUSE): Testing the robustness of black holes mass recovery with MUSE and ALMA: the early-type galaxy NGC6958 (**MUSE WFM AO SV**)
- VLT (MUSE): The MUSE Most Massive Galaxies (M3G): pinning down the growth of the heaviest galaxies in the Universe (**GTO Programme**)
- HST (WFC3, ACS): Where cores are no more: Assessing the role of dissipation in the assembly of early-type galaxies (**12 Orbits**)
- VLT (SINFONI): Weighing the Most Massive Black Holes in the Nearby Universe (**38 hours**)
- GEMINI (NIFS): Determining the low-mass end of the local  $M_{BH} - \sigma$  relation (**50 hours**)
- WHT (SAURON): The ATLAS<sup>3D</sup> Survey of early-type galaxies (**38 nights**)

## POPULAR TALKS

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Selected talks can be found on: <http://www.davor.krajnovic.org/talks/index.html>

- *An exponential growth of observatories in 19. century*  
**1 April 2019** AIP, Potsdam (*Talk*)
- *A ZOO of Planets*  
**16 Februar 2018** Internationale Grundschule Potsdam (*Talk and event*)
- *Discovery of Neptune*  
**01 June, 01 July and 01 Sept 2016** AIP, Potsdam (*A series of three popular 20 min talks*)
- *Solar Eclipse 2015*  
**20 March 2015** Kindergarten "Grasshoppers", Potsdam (*Talk and event*)
- *Venus in Sole Visa*  
**31 May 2012** ESO (*Popular talk*)
- *A Fork, A Trident and a Comb: The Hubble classification of galaxies*  
**05 May 2011** ESO (*Popular talk*)
- *On Pancakes and Rugby Balls*  
**18 Feb 2009** St. Edwards School, Oxford (*Popular talk*)  
**25 Nov 2008** Queen's College Symposium (*Popular talk*)
- *Astro pancakes*  
**21 Apr 2008** Yokohama International School (*Interaction with 2nd graders*)

## SEMINARS and COLLOQUIA

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Slides of some past seminars can be found on: <http://www.davor.krajnovic.org/talks/index.html>. Listed here are seminars since 2011.

- *The star is not on the map: German side of the discovery of Neptune*  
**09 February 2021** – DESY, Hamburg, Germany  
**27 January 2021** – DESY, Zeuthen, Germany
- *Formation processes of massive galaxies*  
**16 April 2018** – University of Vienna, Vienna Observatory, Vienna, Austria
- *The kinematics of most massive galaxies*  
**11 Nov 2015** – ESO, Santiago, Chile
- *The origin of kinematically distinct cores*  
**13 Feb 2015** – Macquarie University, Sydney
- *Looking at the Universe in Colour: Commissioning and the first results of MUSE*  
**21 Nov 2014** – University of Zagreb
- *ATLAS<sup>3D</sup>: Connecting early-type galaxies with spirals*  
**19 Dec 2013** – University of Bologna
- *What shapes early-type galaxies*  
**15 Nov 2013** – Leibniz-Institut für Astrophysik Potsdam (AIP)
- *Connecting early-type galaxies with spirals*  
**03 May 2013** Pontificia Universidad Católica de Chile
- *Early-type galaxies in (early-)21st century*  
**03 Feb 2012** MPE, Garching
- *Towards a new paradigm for early-type galaxies*  
**15 Nov 2011** University of Innsbruck
- *Father Rudjer Bošković, the last natural philosopher and his legacy*  
**18 May 2011** ESO
- *What are nearby early-type galaxies?*  
**16 Feb 2011** Astrophysics Research Institute, Liverpool John Moors University  
**25 Jan 2011** Center for Astrophysics, Harvard University, Boston