



Aarhus University
Denmark

+45 -87155635

✉ victor@phys.au.dk

🌐 www.isimba.dk

🐦 [vaguirrebkoch](https://twitter.com/vaguirrebkoch)

📄 [vaguirrebkoch](https://orcid.org/0000-0001-9000-0000)

Víctor Aguirre Børsen-Koch

Stellar structure and evolution, asteroseismology and Galactic Archaeology, galaxy formation theory

Appointments

Associate Professor, *Department of Physics and Astronomy*, Aarhus University, Denmark. **2019-**

Assistant Professor, *Department of Physics and Astronomy*, Aarhus University, Denmark. **2015–2019**

Postdoctoral Researcher, *Department of Physics and Astronomy*, Aarhus University, Denmark. **2012–2015**

Education

PhD in Astronomy, *Max Planck Institute for Astrophysics*, Garching, Germany. **2008–2011**

MSc. Mechanical Engineering, *Pontificia Universidad Católica de Chile*, Santiago, Chile. **2001–2008**

MSc. Astronomy, *Pontificia Universidad Católica de Chile*, Santiago, Chile. **2003–2007**

Publications summary

- More than 170 publications (including six in Nature and two in Science). Over 14,000 citations and an H-index of 57. An up-to-date publication list can be found [here](#)

Teaching experience

Lecturer, *Formation and evolution of the Milky Way*, Aarhus University, 10 ECTS, MSc & PhD level. **2018-**

Lecturer, *Evolution and dynamics of the Milky Way*, Aarhus University, 5 ECTS, MSc & PhD level. **2015-2017**

Lecturer, *Stellar evolution and modelling*, Faial summer school in Astrophysics, MSc & PhD level. **2016**

Lecturer, *Advanced stellar evolution*, Aarhus University summer school, MSc level. **2014**

Academic Services

Principal coordinator , <i>KITP reunion conference Exostar Redux</i> , Online.	2020
Principal coordinator , <i>KITP program Better Stars, Better Planets: Exploiting the Stellar-Exoplanetary Synergy</i> , Santa Barbara, USA.	2019
SOC Co-chair , <i>Lorentz Center workshop Weighing Stars from Birth to Death: How to Determine Stellar Masses?</i> , Leiden, The Netherlands.	2018
SOC chair , <i>TASC4/KASC11 workshop First Light in a new Era of Astrophysics</i> , Aarhus, Denmark.	2018
Large Synoptic Survey Telescope (LSST) , <i>Member of the LSST working group under the Instruments Center for Danish Astrophysics</i> , (IDA).	2017-
SOC member , <i>TASC1/KASC8 workshop Space asteroseismology: the new generation</i> , Aarhus, Denmark.	2015
SOC chair , <i>The Aarhus Red Giants Challenge workshops series</i> , 9 editions to date.	2013–

Leadership and Collaborations

4-metre Multi-Object Spectroscopic Telescope (4MOST) , <i>member of the Milky Way Bulge and Disk High Resolution Survey (4MIDABLE-HR)</i> .	2021-
Maunakea Spectroscopic Explorer (MSE) , <i>member of science team</i> .	2019-
SDSS APOGEE-K2 and Kepler Consortium (APO-K2) , <i>board member</i> .	2016-
TESS Asteroseismology Science Consortium (TASC) , <i>steering committee member</i> .	2015-
TASC Red Giant Working Group , <i>chair of the collaboration</i> .	2015-
KASC Red Giant Working Group , <i>chair of the collaboration</i> .	2014-
PLATO 2.0 Stellar Modelling Tools , <i>work package leader</i> .	2014-
SDSS APOGEE and Kepler Consortium (APOKASC) , <i>core science team member</i> .	2014-
Kepler Asteroseismic Science Operations Center (KASOC) , <i>core science team member</i> .	2012-
Kepler Asteroseismic Science Consortium (KASC) , <i>member</i> .	2009-

Grants and Fellowships

Carlsberg Young Research Fellowship , <i>3S3: 3D Simulations of Stellar atmospheres and oScillations</i> , ~600,000 EUR.	2020–2023
DFF Danish ERC Support , <i>Accurate properties of stars to unveil the history of our Galaxy</i> , ~80,000 EUR.	2019–2020
DFF Sapere Aude , <i>Asteroseismology for Galactic archaeology: rediscovering the Milky Way</i> , ~790,000 EUR.	2018–2022
AUFF starting grant , <i>Understanding new worlds: exoplanets discovered by the TESS mission</i> , ~220,000 EUR.	2016–2019
Villum Young Inverstigator , <i>Galactic archaeology: unraveling the history of the Milky Way</i> , ~540,000 EUR.	2015–2018
NASA K2 Guest Observer Program Award , <i>Co-investigator in several proposals</i> , >800,000 USD.	2015–2019
Research Assistantship in Asteroseismology , <i>Centro de Astrofísica da Universidade do Porto</i> , Portugal.	2011
IMPRS fellowship for PhD studies , <i>Max Planck Institute for Astrophysics</i> , Germany.	2008–2011
LENAC/ALPHA visitor/fellow , <i>Max Planck Institute for Astrophysics</i> , Germany.	2007
Dual Degree scholarship , <i>Pontificia Universidad Católica de Chile</i> , Chile.	2004–2007

Services and memberships

PhD Jury , <i>Asteroseismic characterisation of exoplanet-host stars in preparation for NASA's TESS and ESA's PLATO space missions</i> , Benard Nsamba, CAUP, Portugal.	2020
Det Unge Akademi , <i>Member of the Young Academy of Sciences, an independent unit of the Royal Danish Academy of Science and Letters</i> , Denmark.	2018–
International Astronomical Union , <i>Member of the International Astronomical Union (IAU)</i> .	2015–
External reviewer , <i>ERC Starting Grant, STFC Research Grant, Marie Skłodowska-Curie Fellowships, Swedish National Space Board</i> .	2014–
Journal referee , <i>for ApJ, ApJ Letters, A&A, MNRAS</i> .	2012–
Hiring committee , <i>Member of the hiring committee for PhD and postdocs at the Stellar Astrophysics Centre</i> , Aarhus, Denmark.	2015–
Student Representative , <i>for the International Max Planck Research School (IMPRS)</i> , Garching, Germany.	2008–2011

Supervision

Postdoctoral researcher , Dr. Yixiao Zhou under the project " <i>3S3: 3D Simulations of Stellar atmospheres and oScillations</i> ".	2021-2024
Postdoctoral researcher , Dr. Emanuele Spitoni under the project " <i>Asteroseismology for Galactic Archeology: rediscovering the Milky Way</i> ".	2018-2021
Postdoctoral researcher , Dr. Kuldeep Verma under the project " <i>Understanding new worlds: exoplanets discovered by the TESS mission</i> ".	2016-2019
Postdoctoral researcher , Dr. Timothy White under the project " <i>Galactic archaeology: unraveling the history of the Milky Way</i> ".	2015-2018
PhD student , Mark Lykke Winther, project title " <i>3D magneto-hydrodynamical simulations and asteroseismology</i> ", Aarhus University, main supervisor.	2020-2023
PhD student , Luisa Rodriguez Diaz, project title " <i>Surface convection and 3D simulations</i> ", Aarhus University, main supervisor.	2018-2023
PhD student , Amalie Louise Stokholm, project title " <i>Dissecting the Galactic disk with Asteroseismology</i> ", Aarhus University, main supervisor.	2017-2021
PhD student , Jakob Rørsted Mosumgaard, project title " <i>The physics of convection in stars</i> ", Aarhus University, main supervisor.	2014-2019
PhD student , Ditte Slumstrup, project title " <i>Spectroscopy of red giants</i> ", Aarhus University, co-supervisor.	2014-2019
MSc student , Julie Thiim Gadeberg, project title " <i>Building the Milky Way Halo</i> ", Aarhus University.	2020-2021
MSc supervisor , Mark Lykke Winther, project title " <i>Searching for convective cores in low-mass, main-sequence stars</i> ", Aarhus University.	2019-2020
MSc student , Kristoffer Bested Nielsen, project title " <i>Investigation of the history of the Galaxy using accurate stellar properties determined from space data</i> ", Aarhus University.	2018-2019
MSc student , Christian Sahlholdt, project title " <i>Calibrating asteroseismic scaling relations with Kepler and Gaia</i> ", Aarhus University.	2016-2017
MSc student , Mathias Bojsen-Hansen, project title " <i>Age dissection of the Milky Way disc</i> ", Aarhus University.	2016-2017
MSc student , Main supervisor of Jakob Hjørringgaard, project title " <i>The physical parameters of HD 185351</i> ", Aarhus University.	2014-2015