



# ADITYA CHOPRA

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## PROFILE

I have 12 years of experience in research, project management, data analysis, problem-solving. My undergraduate and postgraduate training comprised a broad cross-section of scientific disciplines including Earth Science, Astronomy, Biology and Chemistry. I have experience working with a diverse range of academics, executives, tertiary students and the media. I have demonstrated strong communication skills, and have had extensive experience presenting research to both in-field experts and the general public. I am confident in leading and actively participating in teams in-person and online.

## EDUCATION HISTORY

### AUSTRALIAN NATIONAL UNIVERSITY

#### PhD (Earth Sciences) | 2015

*The Origin and Evolution of Life on a Pale Blue Dot: Astrophysical, Geochemical and Biological Constraints on Habitability (Supervisor: Charles H. Lineweaver)*

- Quantified element fractionation during planetary formation and processes that led to Earth's biosphere
- Estimated the elemental composition of the Last Universal Common Ancestor from elemental abundances in extant organisms
- Identified fundamental features common to all life on Earth and evaluated constraints for habitable zones
- Presented research in varied formats in the media and at domestic and international conferences

### AUSTRALIAN NATIONAL UNIVERSITY

#### B.Science (Astronomy) - First Class Honours | 2008

### UNIVERSITY OF WESTERN AUSTRALIA

#### B.Science (Chemistry) | 2007

## SOFTWARE SKILLS

Microsoft Office: Word, Excel, PowerPoint, PowerBI  
Adobe Suite: Acrobat, Illustrator, Premiere, InDesign  
Programming: Python, IDL  
Publishing: LaTeX, HTML, WordPress  
GIS: ArcGIS Pro, Google Earth Engine  
Course Management Systems: Moodle, EdX

## PROFESSIONAL EXPERIENCE

### MARIE SKŁODOWSKA-CURIE POSTDOCTORAL FELLOW

#### oLife Programme, University of Groningen | 2020 - present

- EU Funded Postdoctoral Fellowship in the Netherlands to study the co-evolution of planetary atmospheres and life
- Currently developing a state-of-art Earth Observation tool using archived satellite data to study the Earth as an Exoplanet. Early results demonstrate the seasonality of bio-signatures to help inform designs of future telescopes for life-detection missions
- Research also includes the study of the origin and evolution of life on Earth by analysing the elemental composition of extant life, and the role of biology in maintaining habitability of planets

### PROJECT MANAGER

#### Australian National University | 2019 - 2020

- Managed the Tuckwell Scholarship application process, working with multiple stakeholders including IT services and Senior University Executives, to design and implement online application and interview portals that met in line with strategic plans of the Philanthropic Tuckwell Foundation and the university
- Produced briefing documents and reports with quick turnarounds for referees, assessors and a diverse selection panel
- Developed Dashboards to visualise data from ~1400 applications to support multi-step scoring and decision making processes
- Managed scholarship enquiries and provided assistance to prospective candidates, parents, teachers and career advisers
- Assisted Scholars with matters relating to their Scholarship and produced the weekly online newsletter
- Managed invoice payments and reconciliations for auditing, minuted meetings, drafted formal correspondence to stakeholders, organised logistics for recruitment and training

### VISITING FELLOW

#### Australian National University | 2018 - 2020

- Course coordination and teaching of two compulsory Professional Practice courses for ~300 Masters of Engineering and Computing students offered by the Australian National Centre for the Public Awareness of Science
- Managed tutors to facilitate discussions and activities that incorporated personal insights into working in Industry
- Content editing and platform development for a free online 8-Week video course on Astrobiology ([www.arewealone.us](http://www.arewealone.us))
- Hosted 2-day workshops on Publishing with LaTeX for HDR students via the ANU Library and mentored students in an online learning environment during COVID-related campus closures

## ASTROBIOLOGY RESEARCHER

### NASA Frontier Development Lab, SETI Institute | 2018

- Developed a cloud-computing framework to couple generalised biology and atmosphere dynamics to evaluate the potential habitability of a wide range of exoplanetary atmospheres
- Worked with a team of planetary scientists and machine learning experts in an 8-week research accelerator supported by NASA, the SETI Institute and Google Cloud

## ENDEAVOUR POSTDOCTORAL RESEARCH FELLOW

### University of Washington & University of Hawaii | 2016

- Australian Government Fellowship to visit Prof John Baross and Prof Mike Mottl to learn about hydrothermal systems
- Investigated the geochemistry of different hydrothermal systems most likely to host the earliest life forms on Earth

## RESIDENTIAL LIFE MANAGER

### UniLodge@ANU | 2016 - 2018

- Developed policies and procedures around Residential Life as the key pastoral care contact for over 2,000 student residents
- Delivered high-quality customer service and professionalism in responding to critical incidents
- Managed a team of 80 individuals, including 5 junior staff and was responsible for day-to-day finance and HR processes including recruitment and induction
- Provided training and mentorship to students from a wide range of backgrounds residing in on-campus accommodation
- Critically assessed and approved budgets for the Community Spirit Program (\$285,000 fund) and negotiated procurement of goods and services from a range of external providers
- Developed well-being and academic initiatives aligned with the university's vision for world-leading student accommodation
- Implemented new accounting and management processes to enhance the student experience and improve business practices

## PART-TIME EMPLOYMENT

### Australian National University | 2008 - 2015

- Senior IT Coordinator: Provided on-call IT assistance to students and led a team of 4 assistants. Designed advertising material, managed websites and published newsletters
- Project Assistant: Editor for an undergraduate research journal, and implemented a manuscript submission and review portal
- Finance Officer: Annual inventory auditing in laboratories
- Technical Officer: Implemented a Chemical Inventory System
- Outreach Officer: Events for school groups and public events
- Tutor: Completed the ANU Graduate Teaching Program and tutored advanced physics undergraduate courses

## PUBLICATIONS



Refereed articles and abstracts are listed on Google Scholar, copies available on request

<https://scholar.google.com/citations?user=DmUS8fAAAAAJ>

<https://www.adi.life>

## AWARDS AND ACCOLADES

### SCIENCE COMMUNICATION

#### Most Creative Presenter

*NASA Artificial Intelligence Frontier Development Lab (2018)*

#### Most Unusual / Quirky Story Award

*ANU Media Awards (2016)*

#### Best Oral Presentation

*Gordon Research Seminars on the Origins of Life (2016)*

#### Best Postgraduate Oral Presentation Runner Up

*Australian Space Science Conference (2015)*

#### Best Talk Prize

*Mt Stromlo Student Christmas Seminars (2014, 2012 & 2011)*

#### Best Postgraduate Oral Presentation

*Australian Space Science Conference (2012)*

#### First Prize & Audience Favourite Prize

*3 Minute Thesis Competition at ANU (2012)*

#### Best Poster & Talk Award

*European Workshop on Astrobiology (2011)*

#### Research Poster Prize

*ANU ResearchFest (2010)*

#### Best Chemical OH&S Poster

*University of Western Australia (2008)*

#### Most Promising Science Communicator

*Western Australian CSIRO Student Research Scheme (2004)*

### ACADEMIC

#### Robert Hill Memorial Prize

*Excellence in research, communication skills, proven publications record, and the ability to communicate research to a broad audience (2012)*

#### Australian Postgraduate Award

*PhD Scholarship (2009-2015)*

#### Honours Year Scholarship

*Australian National University (2008)*

#### Fluor Foundation Scholarship

*Scholarship America (2008)*

#### Summer Research Scholarship

*Australian National University (2007)*

### COMMUNITY OUTREACH

#### Student of the Year Finalist

*ANU Alumni Awards (2013)*

#### Vice-Chancellor's Award for Community Outreach

*Recognising the contributions of the Student Outreach Team at Mt Stromlo Observatory, ANU (2011)*

#### Resident of the Year & Community Spirit Award

*UniLodge@ANU for outstanding contributions (2011, 2014)*