

# MERIN RAJU JACOB

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## PROFILE

Urban Transitions | Africa's place in the future | Sustainability | Justice

I am 1) a systems "nudger" with 7+ years of experience in interdisciplinary and transdisciplinary research in the Global South, 2) a purpose-driven generalist with a roll-up-her-sleeves attitude who thrives on saying YES to unusual and varied challenges, and 3) a writer enamoured with the power of narratives.

Sharp and creative, I work well under pressure. I bring people together as a team to solve problems and my team values me because I get things done. I've moved between military development projects, disaster management and energy transition work within the research space, drawn to projects and people rooted in the complexities of development. My intellectual project is currently grounded in South Africa's energy transition.

Grounded first and foremost in research, I am committed to expanding the frontiers of knowledge emerging from the African continent because as the world becomes less predictable, more polycultured, requiring creativity and agility to navigate, there is much that the world can learn from Africa.

This emerging knowledge is then used to leverage action and grapple with the energy system through experimental interventions at multiple levels (from the individual to institutions to the wider system), drawing together invested actors, building more knowledge, and enabling learning, capacity building, and the agility to pivot as we learn.

## EDUCATION

- **MPhil Sustainable Development Planning and Management** (2023 - 2024) | CST, Stellenbosch University  
*Thesis title *Future Cities of the Global South: An exploration of socio-technical and socio-ecological imaginaries in African science fiction**
- **Transdisciplinary Design for Transformation Module** (Cum Laude) (2021) | CST, Stellenbosch University  
On the role of design and redesigning the material world through the lens of sustainability
- **Postgraduate Diploma in Future Studies** (2017) | USB, Stellenbosch University  
Coursework included Understanding the World, Principles of Future Studies, Applied Systems Thinking, Change Management, Applied Philosophy, and Measurement and Evaluation
- **BEng Mechanical Engineering** (2011 - 2015) | University of Pretoria  
Specialties included an elective in nuclear engineering, and design and research final year projects in aeronautical engineering
- **Entrepreneurial Fellowship Programme** (2011 - 2015) | Allan Gray Orbis Foundation

## EXPERIENCE

**Research Officer, Centre for Sustainability Transitions (CST), Stellenbosch University** | October 2020 - present

- Researcher and project manager on energy projects within the CST's Just Energy Transition portfolio which aims to intervene in the energy system at multiple levels:
  - **Lead and initiator of the Renewables-led Industrialisation research area** which aims to understand upsteam industrialisation spurred on by a burgeoning renewables industry (2021 - present). Has developed the renewables-led industrialisation research capability within the CST through 1) formalising partnerships with research institutes, across departments within Stellenbosch University and with professionals within the field, and 2) producing an exploratory report on localisation capacity in South Africa, 3) exploring and co-authoring reports on renewable energy technologies value chain localisation potential with the CSIR, and 4) collaborating with the SU Industrial Engineering Department to produce a research paper detailing the localisation potential of the wind value at the bill-of-materials level.
  - **Research topic 1 lead for the Just Energy Transition Platform project** (2023 - 2024) located at three national universities leading the research and thought leadership on the just transition. The project track aims to produce a commissioned research paper on *Dynamics of SA's Just Transition: from decarbonization to inclusive climate resilient development*, one public debate, one roundtable discussion, and one policy brief.
  - **Project PI for the Shifting Policy Landscape for the Energy Transition project** 2022 - 2023 (having secured the funding ~R1.6 million). This project aims to study the shifting policy landscape for the energy transition, looking in particular at procuring renewables in a reformed supply industry. This project has built knowledge and learning partnerships with key actors, produced reports on Power Sector Reform and the financial viability of municipalities, and partially funded the CST to co-host the International Sustainability Transitions Conference 2022.
  - **Researcher and acting project PI on the Geopolitics of Energy Futures project in collaboration with the South African Institute for International Affairs (SAIIA)** from 2022 - 2023 (having secured the funding ~R444 000). The research aims to explore the uncertainties, disruptions and opportunities in the geopolitical energy landscape and the implications for South Africa by applying a strategic foresight and systemic innovation approach to reimagine South Africa's energy futures and develop an anticipatory framework for navigating the energy transition to achieve a climate resilient and socially-equitable economy by 2050. The project aims to produce a literature review, and a policy brief following five stakeholder workshops.
  - **Researcher looking at Jobs and the Just Transitions**
  - **Research assistant looking at Financing the Just Transitions**
  - **Researcher on project looking to support Eskom during the energy transition**
  - **Writer and support for Prof Mark Swilling with reports and papers funded by UNEP (IRP Think Piece), and UNECA (Fostering Leadership and Transformative Change for Economic Diversification in Central Africa).**
  
- Support and development of the PGDip in Sustainable Development programme at the CST.
  - **Successfully co-designed, co-convened and facilitated five modules within the Stellenbosch University Postgraduate Diploma in Sustainable Development programme from 2020 - 2023.** The modules take place full time over five days with class sizes varying from 15 - 45 students with multiple guest lecturers, industry experts and civic leaders leading sessions. Of note is the success of the transition to the online environment for the first time in the programme's history.
    1. Sustainable Development I (2021 - 2022)
    2. Sustainable Development II (2021 - 2023) - aimed at students outside of the PGDip in Sustainable Development
    3. Sustainable Cities (2020- 2023)
    4. Sustainable Economic Policy Options (the evolution of Applied Economics) (2020- 2022)
    5. Globalisation, Governance and Development (2021)

- **Organizer of the IST Conference 2022: Stellenbosch Regional Hub Coordinator and overall conference coordination, with international brand value for the Centre for Sustainability Transitions.**
  - Effectively organized the 13<sup>th</sup> International Sustainability Transitions Conference, hosting more than 250 speakers across 10 parallel tracks and three time zones. [IST2022](#) was the first time the conference was co-hosted by three universities: Stellenbosch University (South Africa), Georgetown University (USA) and Monash University (Australia). As a key member of the IST Organising Committee and lead organizer of the Stellenbosch Regional Hub Event, was responsible for the development of the virtual platform that hosted the three online days of IST2022, and one of the three in-person regional hubs hosted for the first time on African soil.
- **CST institutional development**
  - **CST Knowledge Exchange Co-ordinator** (2021 - 2023). Coordinating, leading, and facilitating the Knowledge Exchange programme across research groups at the CST, and across organisations with external partners. Exploring opportunities for increasing the CST's public presence and intellectual contribution.
  - **Short Courses Co-ordinator** (2022 - 2023). Exploring opportunities for increasing the CST's intellectual reach and possibilities for different income streams by spinning out modules of the PGDip in Sustainable Development as short courses.
- **CST representative in Community of Practice on Social Learning and Sustainable Development (Phase 1) from 2021 - 2022:**
  - This collaborative effort from leading research centres across South Africa looked at transformative social learning that supports knowledge co-development, and knowledge uptake and use for solution oriented sustainable development actions. Co-author of the case study paper of the CST Postgraduate Diploma course (working paper).
- **Representative of the CST and the Global South at international sustainability conferences and workshops.**
  - **Environmental Justice Conference** from 21 - 25 August 2022 at Lassalle-Institut, Switzerland. Speaker at the [international conference](#) jointly organized with Georgetown University, Stellenbosch University and Leuphana University titled [Environmental justice: What is the value of the future - perspectives to govern the socio-ecological transformation](#). Presented and facilitated a discussion on "Energy transition as a pathway towards economic development in South Africa". The conference offered an interdisciplinary platform for dialogue between the scientific community, ethicists and philosophers concerned with the imperative of justice.
  - **Social-Ecological Systems Methods Hackathon** from 23 - 25 May 2022 at the Stockholm Resilience Centre, Stockholm University. Developed a supportive case study video for the [Futures Analysis methods](#) section which collates methods for knowledge co-production and effecting system change, and prepared supporting material for the [SES Research Methods website](#) which is a companion and additional resource to *The Routledge Handbook of Research Methods for Social-Ecological Systems*. The handbook aims to provide a synthetic guide to the range of methods that can be employed in social-ecological systems research.

**Research Assistant, CST, Stellenbosch University** | August 2020 - September 2020

Research Assistant and Learning Facilitator working closely with Prof Mark Swilling on his research and teaching commitments, and co-ordinator of the CST energy team.

**Independent Contractor** | April 2020 - July 2020

Writer and researcher for the Bowmans Africa Insights series. See publication list.

**Engineer, Defence, Peace, Safety and Security (DPSS), Council for Scientific and Industrial Research (CSIR)** | February 2016 - March 2020

## • Mechanical Engineering responsibilities

- Specialised in small scale, research driven, rapid prototyping [secret classified] (warhead Finite Element Analysis, motor design, up-armouring of navy fleet).
- Designed, manufactured, and assembled SANDF landward development projects looking at vehicle design, weapon mount design, and partial crash-test dummy design, for Armscor.
- Designed and fabricated a battle damage system (physical system and inspection process) that is used to determine the readiness of military vehicles which was successfully implemented and deployed in Spain.
- Designed, manufactured, and assembled multiple SANDF landward development projects specialising in small scale, research driven, rapid prototyping.
- Mechanical Design, Testing and Commissioning
- Ballistics testing, bevel testing, and vehicle testing for the SANDF.
- Organising member of the *CSIR Live!* international event which hosted international military technology organisations on the CSIR Pretoria campus for DPSS technology demonstrations across our research areas from Landward Sciences, Special Operations, and Radar and Electronic Warfare.
- Deputy chairperson of the Young Professionals Forum in Landward Sciences, DPSS.

## • Project Manager responsibilities

- Project Manager and Technical Lead for the design of a logistics system for the SANDF. Secured R3.5 million worth of contracts for the CSIR in the first phase and an expected R15 million for the second phase of this multiyear project, while managing approximately 40 stakeholders.
- Project Manager for the *Rising Complexity in Security* project aimed to encourage international collaborative research.

## • Futurist-in-training for Rising Complexity in Security project

- Co-authored an environmental scan looking at the rising complexity in security which identified risks for the country and the CSIR by analysing trends and patterns within the international, regional and national environments in terms of technology, economy, social, environment and political areas. Superbugs and pandemics were mentioned in the 2018 report.
- Used complex systems and future studies techniques to map out, and determine interventions to, problems within fields as diverse as wildlife crime, disaster management, food security, cash-in-transit, infrastructure theft, and community vulnerability to contribute to the complex systems capability within the CSIR.
- Under the rising complexity in national security project, researched, mapped and designed interventions for problems within fields as diverse as wildlife crime, disaster management, food security, cash-in-transit, infrastructure theft, and community vulnerability.
- Part of the team that developed a business case for an integrated disaster management approach for the Gauteng Provincial Disaster Management Centre spanning implementation of technological solutions up to a co-ordinated cross-department approach. The project team included complexity experts, disaster management officials, engineers, and scientists.

## PUBLICATIONS

- Transitioning to sustainable academic conferences needs more experimentation and reflection: A reflection on IST2022 (working paper)

- UCLG. (2022). *Pathways to Urban and Territorial Equality: Addressing inequalities through local transformation strategies* (VI; GOLD). [www.uclg.org](http://www.uclg.org)
- Swilling, M., Nygaard, I., Kruger, W., Wlokas, H., Jhetam, T., Davies, M., Jacob, M., Morris, M., Robbins, G., Funder, M., Hansen, U., Olsen, K., Davy, E., Kitzing, L. & Khan, B. 2022. Linking the energy transition and economic development: a framework for analysis of energy transitions in the global South. *Energy Research and Social Science*, <https://doi.org/10.1016/j.erss.2022.102567>
- Callaghan, N., Swilling, M., Jacob, M. (2021), 'Chapter 21 Africa and Covid-19: Ways forward', in Pieterse, J.N., Lim, H. and Khondker, H. eds., 2021. *Covid-19 and Governance: Crisis Reveals*. Routledge.
- Callaghan, N., Jacob, M., Swilling, M. (2020), *The African Continental Free Trade Area: Developmental accelerator or more of the same?*, Africa Insights, 7th Edition: Bowmans, [https://bowmanslaw.com/wp-content/uploads/2020/10/Africa\\_Insights\\_7th\\_edition.pdf](https://bowmanslaw.com/wp-content/uploads/2020/10/Africa_Insights_7th_edition.pdf).
- Jacob, M., Callaghan, N., Swilling, M. (2020), *Urban Development: The Transformation of African Cities*, Africa Insights, 6th Edition: Bowmans, [https://bowmanslaw.com/wp-content/uploads/2020/08/Africa\\_Insights\\_6th\\_edition.pdf](https://bowmanslaw.com/wp-content/uploads/2020/08/Africa_Insights_6th_edition.pdf).
- Imagine no load shedding, it's easy if you try – no hell below us, above us only sky; Daily Maverick Op-ed <https://www.dailymaverick.co.za/article/2021-06-20-imagine-no-load-shedding-its-easy-if-you-try-no-hell-below-us-above-us-only-sky/>

## VOLUNTEER EXPERIENCE

### Member of the Stellenbosch Homelessness Network (2023)

Founding member of the forum which is mobilizing efforts to assist day-strollers and children within Stellenbosch. Stellenbosch representative in the National Homelessness Network.

### Africa Week Co-ordinating Committee member (18 – 25 May 2023)

The aim of the week was to mobilise conversations around *Africa in Transition: Finding inspiration for the Africa we want in the Africa that exists*, to connect individuals and organisations working towards Africa's development, and to situate South Africa within it's wider continental context. Events during the week will focus on:

- Celebrating Africa through beauty and music
- Institution building & leadership
- Regenerative agriculture
- Entrepreneurship, creativity & innovation
- Agency & active citizenry
- Quality education with context
- Energy-Food-Water nexus
- Sustainable development & climate action
- Human rights & decoloniality
- Arts and culture, heritage & identity
- Spirituality, religion & nature
- Trauma, rage and grief

### Mapping of Macassar Informal Settlement project (2022 – present)

Building relationships with families living in Macassar Informal Settlement, understanding the systems and structures within which these families living below the poverty line exist, providing relief for burning problems, and piloting, and experimenting with, developmentally oriented projects to assist families to break out of poverty.

## Founding member of The Symbiotes writing group (2020 – present)

50 percent of The Symbiotes' members have since been traditionally published in online publications and through international competitions.

## Co-curator of TEDxWaterfallDrive 2020

Effectively founded and organized the first [TEDxWaterfallDrive](#) chapter titled *Standing Nation* hosting eight speakers and 200 attendees. Led the seven-man team that worked over 3 months to bring the event to life following the stringent rules of the internationally acclaimed TEDx brand. Oversaw the logistics of the event, marketing, speaker selection and preparation and video requirements, with some videos garnering more than 4000 views.

- [The Future of Work | Valter Adão | TEDxWaterfallDrive](#)
- [Curing Our Healthcare | Sujay Nair | TEDxWaterfallDrive](#)
- [Toxic Shame | Katlego Mabusela | TEDxWaterfallDrive](#)
- [Active Citizenship 101 | Catherine Constantinides | TEDxWaterfallDrive](#)
- [The Politics of Power | Liz Letsoalo | TEDxWaterfallDrive](#)
- [Bad Blood | Candice Chirwa | TEDxWaterfallDrive](#)
- [Standing Nation: A New Age Uprising | Cassandra Moodley | TEDxWaterfallDrive](#)
- [Africa and Technology | Priaash Ramadeen | TEDxWaterfallDrive](#)

## HONOURS AND AWARDS

- Member of the Association of Allan Gray Orbis Fellows.
- Winner of the Innovation Challenge at the WomEng Fellowship Conference.
- Master of Ceremonies for the Defence, Peace, Safety and Security Excellence Awards at the CSIR.
- Member of Golden Key International Honour Society.
- Founding Committee of Engineers Without Borders (EWB) at the University of Pretoria.

## INTERESTING THINGS ABOUT ME

Solo travelled Japan and Eastern Europe

Skydived

Tried ballet at the age of 27

Science fiction and magical realism writer

My 30-year plan is to drive a global soft power movement focused on African Excellence

Like Captain America I place my faith in individuals