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Gauteng, South Africa August 12, 2021
www: *https://jarradwright.com*
Publications: *ResearchGate*
Public profile: *LinkedIn*

INTERESTS

- Energy system operations and planning
- Power system dynamics
- Electricity markets, policy and regulation

EDUCATION

University of the Witwatersrand, Johannesburg, South Africa

- BSc.Eng.(Elec), 2004-2007
- MSc.Eng. (Elec.) - with Distinction, 2008-2010
 Dissertation Topic: *Development of a Reluctance Synchronous Machine for Traction Vehicle Applications Using the Finite Element Method*
 Supervisor: Prof. W.A. Cronje
- Ph.D., Electrical Engineering, 2012-2018
 Thesis Topic: *Formulation of a capacity mechanism for the Southern African Power Pool (SAPP) for sustained long-term system adequacy*
 Supervisor: Dr J.M. van Coller

HONORS AND AWARDS

- Most Influential People in African Power 2015 (ESi-Africa.com)
- African Power Elites 2016 (ESi-Africa.com)
- Advisory Board member for African Power Elites: Projects & People 2017-2019 (ESi-Africa.com)
- Best Paper Award (PowerGEN Africa - 2015)
- CIGRE Study COmmittee C5 National Representative: South Africa

PROFESSIONAL EXPERIENCE

The Presidency of South Africa: National Planning Commission, Pretoria, South Africa
Commissioner **Sept. 2015 - Mar. 2021**

- To promote and advance the implementation of the National Development Plan across different sectors of society;
- To undertake detailed planning in a selected number of sectors to be determined from time to time;
 To conduct regular engagements with various sectors of society on all matters pertaining to the long-term development of the country;
- To facilitate stakeholder engagements aimed at forging a social compact towards more effective implementation of the National Development Plan;

- To take a cross-cutting view, undertake research into long-term trends, analyse implementation of short to medium term plans with a view to recommend improvements to Government as well as produce reports to inform policy and planning;
- To contribute to development of international partnerships and networks on national planning.

Council for Scientific and Industrial Research (CSIR), Pretoria, South Africa

Principal Researcher

Dec. 2015 - Aug. 2021

- Manage research, projects and conduct investigations on grid planning, energy systems operations and planning and related topics;
- Provide research direction on energy systems operations and planning;
- Provide leadership in formulating research questions, developing study assumptions;
- Generate technical reports, articles, conference papers and presentations aimed at local and international energy industries;
- Provide training on grid and energy planning related topics to CSIR employees and externally;
- Formulate research proposals and develop relationships with potential clients and collaborators in R&D.
- Key experience in energy system operations and planning, detailed techno-economic long-term capacity expansion planning, high penetration renewable energy system integration, energy demand forecasting, hydrogen production/storage/transportation, full-sector energy modelling, sector-coupling, small-scale embedded generation support, tariff design, electricity market design and regulatory frameworks.

Energy Exemplar (Africa), Johannesburg, South Africa

Senior Consultant, Regional Manager (Africa)

Mar. 2014 - Dec. 2015

- Establishment of the Energy Exemplar (Africa) office to commercialise PLEXOS Integrated Energy Model as the class leading simulation tool of choice for energy market operations and planning into Africa (key experience in Namibia, Malawi, South Africa and Zimbabwe).
- Providing PLEXOS client support to ensure service delivery excellence.
- Consulting on advanced analysis and design of power/energy markets as well as energy planning.
- Training instructor for various clients in Africa.
- Development of African energy market datasets.

Parsons Brinckerhoff (Africa), Johannesburg, South Africa

Candidate Eng., Studies Eng., Senior Eng., Proposals Manager

Apr. 2010 - Feb. 2014

- Key experience in detailed power system modelling, demand forecasting, techno-financial and techno economic modelling, bankable feasibility models, tariff design, ancillary services as well as regulatory and market analysis.
- Experience a range of African countries including Botswana, Ghana, Kenya, Malawi, Mauritius,

Mongolia, Namibia, Rwanda, Seychelles, Tanzania, South Africa, Uganda and Zimbabwe.

COUNTRIES OF WORK EXPERIENCE	- South Africa, Botswana, Ghana, Kenya, Malawi, Mauritius, Mongolia, Namibia, Rwanda, Seychelles, Tanzania, Uganda, Zimbabwe
OTHER TRAINING	<ul style="list-style-type: none">- Power system analysis software including: PSS/E (Advanced), DIGSILENT Powerfactory (Basic, EMT, Harmonics, Intermediate Planning and Stability), ATP/EMTP (Basic), ETAP (Basic), PowerWorld (Intermediate).- Energy modelling and analysis: PLEXOS (Advanced), LEAP (Intermediate), TIMES (Basic), PyPSA (Intermediate), Calliope (Intermediate), OSEMOSYS (Intermediate), System Advisor Model (SAM) (Intermediate).- Finite Element Modelling: ANSYS (Advanced), FLUX (Advanced).- Programming and computational analysis: MATLAB (Advanced), SIMULINK (Advanced), Octave (Advanced), Python (Intermediate), R (Intermediate), git (Intermediate), C and C++ (Basic), Oracle Crystal Ball (Advanced).- GIS: qGIS (Intermediate).- Project feasibility assessments: RETScreen (Basic), custom Excel based modelling.
VOLUNTARY ASSOCIATIONS	<ul style="list-style-type: none">- Professional Engineer (Pr.Eng): Engineering Council of South Africa (ECSA) <i>Member number: 20130705</i> Apr.'10-Present.- Member: South African Institute of Electrical Engineers (SAIEE) <i>Member number: 12355</i> Apr.'10-Present.- Member: Institute for Electrical and Electronic Engineers (IEEE) and IEEE Power and Energy Society <i>Member number: 90381317</i> Jan.'07-Present.- Member: Conseil International des Grands Reseaux Electriques (CIGRE) <i>Member number: 120101037</i> Apr.'10-Present.- Study Committee C5 National Representative: Conseil International des Grands Reseaux Electriques (CIGRE) - Aug.'15-Present.