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Time	Surname	Init	Topic	Advisor	2nd examiner	Convenor
08:00	VILJOEN	JP	Analysis and Design of an Impulse Generator for Transformer Frequency Response Analysis	Mwaniki, Fred	Bekker, Nelius	Kamper, Maarten
08:45	JONKER	TFVDB	Cubli: A Momentum Exchange Based Inverted Pendulum	Steyn, Herman	Engelbrecht, Japie	Mouton, Toit
09:30	VAN WYK	W	Designing of a circuit that works in collaboration with a static bicycle to charge cell phones as a LCD display	Steyn, Herman	Visagie, Lourens	Mouton, Toit
10:15	DU TOIT	PF	Solar Concentrating Heliostat	Steyn, Herman	Fourie, Coenrad	Mouton, Toit
11:00	ZYLSTRA	I	Spinning Wire Boom Control	Steyn, Herman	Engelbrecht, Japie	Mouton, Toit
11:45	BURGER	EM	Design and Implementation of a Mini Electronic Musical Keyboard	Garner, Karen	Mwaniki, Fred	Engelbrecht, Herman
12:30	CASSIEM	M	Home-brew Variable Frequency Drive for Single-Phase Induction Machines	Garner, Karen	De Villiers, Dirk	Engelbrecht, Herman
14:00	DYAMOND	WP	Analysis of Random Linear Network Coding for throughput improvement of a multisource multicast network	Engelbrecht, Herman	Du Preez, Johan	De Villiers, Dirk
14:45	DE LANGE	L	Automatic Plant Disease Recognition	Engelbrecht, Herman	Visagie, Lourens	Van Daalen, Corne
15:30	ABRAHAMS	A	Network Enabled Power Circuitry for Raspberry Pis	Engelbrecht, Herman	Strauss, Johann	Kamper, Herman
16:15	SMITH	MH	Path finding in an Emulated Minecraft Client	Engelbrecht, Herman	Kamper, Herman	Gilmore, Jacki

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Time	Surname	Init	Topic	Advisor	2nd examiner	Convenor
08:00	STEYN	KC	Centralized Home Energy Management System with Wireless Communication and Weather Control	Beukes, Johan	Booysen, Thinus	Wang, Rong-Jie
08:45	VAN DEVENTER	JG	Development of a Solid-State Hybrid Circuit Breaker for Small Grid-Connected PV Inverters	Beukes, Johan	Booysen, Thinus	Wang, Rong-Jie
09:30	HEYNS	K	Harmonic impact of photovoltaic inverters on the network	Beukes, Johan	Strauss, Johann	Booysen, Thinus
10:15	SABAD	TM	Maximum Power Point Tracking Boost Converter	Beukes, Johan	Booysen, Thinus	Mwaniki, Fred
11:00	UYS	PJ	Power quality using smart meters with communication	Beukes, Johan	Garner, Karen	Booysen, Thinus
11:45	PASTELLIDES	SG	Design and application of a bi-directional converter	Gule, Nathie	Kamper, Maarten	Beukes, Johan
12:30	DANIEL	FM	Design of a Contactless Energy Transfer System for an Electrically Excited Synchronous Machine	Gule, Nathie	Kamper, Maarten	Beukes, Johan
14:00	MDAKANE	LP	Development of a Load Compensation Device	Gule, Nathie	Garner, Karen	Mwaniki, Fred
14:45	HUTTON	T	Low Voltage Ride Through on Doubly Fed Induction Generators	Gule, Nathie	Strauss, Johann	Mwaniki, Fred
15:30	SADIE	A	Power Electronic Converter Emulator	Mouton, Toit	Bekker, Nelius	Mwaniki, Fred
16:15	CHINGWENA	MT	Thyristor-based starter for induction motors to improve starting torque quality	Mouton, Toit	Mwaniki, Fred	Strauss, Johann

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Time	Surname	Init	Topic	Advisor	2nd examiner	Convenor
08:00	DU TOIT	Z	Coaxial Material Property Measurement	Wiid, Gideon	Van Niekerk, Carlo	Botes, Elmine
08:45	HORAK	RR	Current probe calibration	Wiid, Gideon	Van Niekerk, Carlo	Van Daalen, Corne
09:30	MUKADDAM	MR	PCB Line-Coupling Demo Development	Wiid, Gideon	Botes, Elmine	Perold, Willem
10:15	SOLOMONS	LA	Single Port Antenna Characterization	Wiid, Gideon	De Villiers, Dirk	Bekker, Nelius
11:00	VAN ECK	WL	Design, build and testing of an optimised running tag	Meyer, Petrie	Wiid, Gideon	Bekker, Nelius
11:45	ACKER	AJ	Receiver Antenna for a Race Timing System	Meyer, Petrie	Wiid, Gideon	Bekker, Nelius
12:30	BEKKER	I	The Theremin	Meyer, Petrie	Wiid, Gideon	Bekker, Nelius
14:00	BOSHOFF	WH	Design and Build a Camera Payload with FreeRTOS for a CanSat Deployed from a High-Altitude Balloon	Jordaan, Willem	Gilmore, Jacki	Wiid, Gideon
14:45	MEYER	JE	Design and Launch of a CanSat at High Altitude	Jordaan, Willem	Steyn, Herman	Wiid, Gideon
15:30	VAN DER STOKKER	LH	Practical Star Gazing Application	Jordaan, Willem	Visagie, Lourens	Steyn, Herman
16:15	JORDAAN	LH	Vibration Control in a Robotic Arm	Jordaan, Willem	Engelbrecht, Japie	Booysen, Thinus

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Time	Surname	Init	Topic	Advisor	2nd examiner	Convenor
08:00	PALMER	L	Design and Simulation of Collision Avoidance Algorithms for Multiple Drones	Engelbrecht, Japie	Wiid, Gideon	Engelbrecht, Herman
08:45	COETSEE	D	High-performance integrated 3-axis CNC Controller	Engelbrecht, Japie	Jordaan, Willem	Steyn, Herman
09:30	KATIYAR		Optimal Deep Stall Recovery using Sampling-Based Trajectory Planning	Engelbrecht, Japie	Van Daalen, Corne	Jordaan, Willem
10:15	LATEGAN	LS	Smartphone-Controlled Battery-Powered Automated Bluetooth Door Locking System	Engelbrecht, Japie	Steyn, Herman	Jordaan, Willem
11:00	LOCHNER	JN	Automated Ball Catcher	Van Daalen, Corne	Mouton, Toit	Jordaan, Willem
11:45	SWART	R	Design and implementation of Atari 2600 Space Invaders controller	Van Daalen, Corne	Mouton, Toit	Jordaan, Willem
12:30	CORDEIRO	K	Localisation of Robot with Unknown Correspondence	Van Daalen, Corne	Mouton, Toit	Du Preez, Johan
14:00	ROBINSON	DL	Normalized Differential Vegetation Index Mapping	Van Daalen, Corne	Barnard, Arno	Kamper, Herman
14:45	VENTER	BH	Automated Electrical Geyser Efficiency Test System	Bekker, Nelius	Barnard, Arno	Kamper, Herman
15:30	DE LANGE	HJ	Design and implementation of a IoT based energy monitoring system	Bekker, Nelius	Barnard, Arno	Van Daalen, Corne
16:15						

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Time	Surname	Init	Topic	Advisor	2nd examiner	Convenor
08:00	DE VILLIERS	DBB	Adaptive Modulation Using the B210 Software Defined Radio	Versfeld, Jaco	Gilmore, Jacki	Du Preez, Johan
08:45	NORTJE	AD	Direction of Arrival Determination of Radio Sources using the USRP-2901 Software Defined Radio	Versfeld, Jaco	Gilmore, Jacki	Van Niekerk, Carlo
09:30	DU PREEZ	B	Forward Error Correction code construction based on FIR and IIR Filters	Versfeld, Jaco	Fourie, Coenrad	Van Niekerk, Carlo
10:15	KRUSE	CD	Soft-decision Decoding of Short to Medium Length Binary Codes	Versfeld, Jaco	Gule, Nathie	Van Niekerk, Carlo
11:00	PEREIRA INGLES	JMD	Cow Dung Sniffer	Booysen, Thinus	Strauss, Johann	Garner, Karen
11:45	MITCHELL	LE	Online Water Heater Energy Calculator with Recommendations	Booysen, Thinus	Wang, Rong-Jie	Garner, Karen
12:30	LOUBSER	DM	Development of a Disk-Type Magnetic Gear	Wang, Rong-Jie	Gule, Nathie	Garner, Karen
14:00	FARRELL	M	Implementation of shielded windings designed to eliminate harmful bearing currents in electrical machines	Wang, Rong-Jie	Gule, Nathie	Kamper, Maarten
14:45	LANDMAN	C	Mitigating common mode currents that cause premature bearing failure	Wang, Rong-Jie	Kamper, Maarten	Van Daalen, Corne
15:30	GERBER	S	Study and Design of a 3-Phase Written-Pole-Machine	Wang, Rong-Jie	Kamper, Maarten	De Villiers, Dirk
16:15						

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Time	Surname	Init	Topic	Advisor	2nd examiner	Convenor
08:00	HOMAN	D	Analysis of an RSFQ Placement-and-Routing Tool	Fourie, Conrad	Perold, Willem	De Villiers, Dirk
08:45	ENGELBRECHT	E	Superconductive circuit layouts to FastCap Model generator	Fourie, Conrad	Perold, Willem	Meyer, Petrie
09:30	OOSTHUIZEN	HLG	Digital Beamforming Receiver using Software De ned Radio	Gilmore, Jacki	Botes, Elmine	Wiid, Gideon
10:15	STEGMANN	ME	Light-Based 2x2 Multi-Input Multi-Output Communications Channel	Gilmore, Jacki	Wiid, Gideon	Botes, Elmine
11:00	BOTHA	CF	Portable Spirometry	Gilmore, Jacki	Beyers, Ryno	Wiid, Gideon
11:45	VAN DER BERG	AW	Design of a Gap Waveguide Package for X-band Microstrip Filters	Botes, Elmine	Beyers, Ryno	Meyer, Petrie
12:30	REYNARD	MJ	Design of a Low-Pass Harmonic Suppression Filter for Wireless Power Transfer Applications	Botes, Elmine	Beyers, Ryno	Meyer, Petrie
14:00	BESWICK	RC	Efficient Analysis of Antenna Arrays Through the use of Macro-basis Functions	Botha, Matthys	Van Niekerk, Carlo	Beyers, Ryno
14:45	ERASMUS	AP	Physical Optics with Edge Corrections for Scattering Analysis	Botha, Matthys	De Villiers, Dirk	Beyers, Ryno
15:30	VAN VEIJEREN	D	Design of an ultrasound attenuating polymer coated needle for coronary artery angiography	Perold, Willem	Gilmore, Jacki	Botes, Elmine
16:15	LAUBSCHER	WA	The design of a biosensor based on an inkjet printed MOSFET on paper	Perold, Willem	Gilmore, Jacki	De Villiers, Dirk

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Time	Surname	Init	Topic	Advisor	2nd examiner	Convenor
08:00	VON WIELLIGH	C	Generative Adversarial Networks	Du Preez, Johan	Engelbrecht, Herman	Steyn, Herman
08:45	VERBURGH	CA	PGM-based Edge Detection and Image Segmentation	Du Preez, Johan	Van Daalen, Corne	Steyn, Herman
09:30	VAN DE MERWE	CV	Azimuth Control of a Weather Balloon Payload Box during Ascent	Visagie, Lourens	Steyn, Herman	Strauss, Johann
10:15	LOMBARD	FN	Design and Build of an Amateur Satellite Ground Station	Visagie, Lourens	Jordaan, Willem	Perold, Willem
11:00	NGCOYA	AA	Educational toy that teaches programming principles	Visagie, Lourens	Fourie, Coenrad	Barnard, Arno
11:45	WAGNER	D	Multi-satellite telemetry data decoder and web interface	Visagie, Lourens	Versfeld, Jaco	Barnard, Arno
12:30	DE VILLIERS	R	Reception and demodulation of Amateur satellite signals using Software Defined Radio	Visagie, Lourens	Versfeld, Jaco	Barnard, Arno
14:00	MOWZER	MYB	CanSat	Barnard, Arno	Versfeld, Jaco	Visagie, Lourens
14:45	MWILA	AM	Dual Channel 100 Nanosecond TTL Pulse counter with Ethernet Interface	Barnard, Arno	Versfeld, Jaco	Visagie, Lourens
15:30	BROWN	KJ	Robust, Dual Redundant OBDH Core for a CUBESAT	Barnard, Arno	Jordaan, Willem	Visagie, Lourens
16:15	BONNET	J	UV-Visible Light Device for Phenol Quantification in Red Wine	Barnard, Arno	De Villiers, Dirk	Visagie, Lourens

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Time	Surname	Init	Topic	Advisor	2nd examiner	Convenor
08:00	GOPAL	H	Permanent Magnet Synchronous Generator	Kamper, Maarten	Wang, Rong-Jie	Beukes, Johan
08:45	KLOPPERS	C	Wound Rotor Synchronous Generator	Kamper, Maarten	Vermeulen, Johan	Wang, Rong-Jie
09:30	NIEUWOUDT	R	Fotovoltaïese module demonstrasie eenheid	Rix, Arnold	Beukes, Johan	Vermeulen, Johan
10:15	PETERMANN	H	High frequency induction annealer for application of work hardened small arms ammunition casings	Rix, Arnold	Vermeulen, Johan	Garner, Karen
11:00	HEYNS	M	Solar Powered Air Conditioner	Rix, Arnold	Beukes, Johan	Vermeulen, Johan
11:45	BRUCE	DR	Design of a water-level monitoring system	Strauss, Johann	Beukes, Johan	Vermeulen, Johan
12:30	NOTHNAGEL	AE	Dual-Axis Solar Tracker	Strauss, Johann	Vermeulen, Johan	Beukes, Johan
14:00	SMIT	AP	Automatic Text Grading Using Image Processing and Machine Learning Techniques	Du Preez, Johan	Fourie, Coenrad	Kamper, Herman
14:45	MCGREGOR	F	Bayesian Multinomial Logistic Regression	Du Preez, Johan	Kamper, Herman	Vermeulen, Johan
15:30	VAN BILJON	E	Creating Intelligent Agents with Reinforcement Learning	Du Preez, Johan	Kamper, Herman	Engelbrecht, Herman
16:15	MULLIN	MT	Feature Extraction and Image Clustering Using Autoencoders	Kamper, Herman	Engelbrecht, Herman	Gilmore, Jacki

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Time	Surname	Init	Topic	Advisor	2nd examiner	Convenor
08:00	MTETHO	N	Circular electric mode waveguide 3 dB hybrid coupler	Beyers, Ryno	Botes, Elmine	Meyer, Petrie
08:45	KOTZé	AP	Evanescent-mode waveguide filter	Beyers, Ryno	Meyer, Petrie	Botes, Elmine
09:30	MCCULLOUGH	MJ	Smoke Detector Activation Sensor	Beyers, Ryno	Fourie, Coenrad	Meyer, Petrie
10:15	DE SMIDT		Investigating the use of lumped inductors as a means to miniaturize Electrically Small Antennas	Van Niekerk, Carlo	Meyer, Petrie	Du Preez, Johan
11:00	VAN DER MERWE	RH	The design of an active receive antenna for commercialWi-Fi applications	Van Niekerk, Carlo	Meyer, Petrie	Gule, Nathie
11:45	NAUDé	AK	Wheeler Cap – Experimental Analysis	Van Niekerk, Carlo	De Villiers, Dirk	Gule, Nathie
12:30	KRIEL	SGH	Design and Optimisation of a Feed Horn for a Small Parabolic Reflector to Achieve Maximum Directivity	De Villiers, Dirk	Beyers, Ryno	Gule, Nathie
14:00	NARAINDASS	Y	Design of a Focal Plane Parabolic Reflector Feed	De Villiers, Dirk	Beyers, Ryno	Gule, Nathie
14:45	SETATI	T	Design of Coaxial Marchand Baluns	De Villiers, Dirk	Van Niekerk, Carlo	Beyers, Ryno
15:30	NDAYI	VD	Multi-mode Sonar Demonstrator	De Villiers, Dirk	Meyer, Petrie	Beyers, Ryno
16:15						

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Time	Surname	Init	Topic	Advisor	2nd examiner	Convenor
08:00	BURCHER-JONES	JD	DEVELOPMENT AND IMPLEMENTATION OF A LOW POWER, LOW COST DATA RETRIEVAL NETWORK	Vermeulen, Johan	Versfeld, Jaco	Gilmore, Jacki
08:45	STATT	CP	Investigation into the use of Accelerometers in trains	Vermeulen, Johan	Mwaniki, Fred	Strauss, Johann
09:30	JANSE VAN VUUR	CY	Temperature Distribution Measurement System	Vermeulen, Johan	Wang, Rong-Jie	Strauss, Johann
10:15	RUMANEY	H	The Investigation and Performance Evaluation of Frequency Tracking Algorithms for Power System Applications	Vermeulen, Johan	Strauss, Johann	Kamper, Maarten

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Time	Surname	Init	Topic	Advisor	2nd examiner	Convenor
08:00	SCHWALB	AJ	Generating music with neural networks	Kamper, Herman	Du Preez, Johan	Engelbrecht, Japie
08:45	ANASTASSIOU	A	Query-by-example speech search using a visually-grounded deep neural model	Kamper, Herman	Van Daalen, Corne	Engelbrecht, Japie
09:30	APRIL	J	Shazam for Whale Songs: Marine Mammal Detection Through Query-by-Example	Kamper, Herman	Du Preez, Johan	Engelbrecht, Japie
10:15	ELOFF	RP	Teaching a robot to interpret natural language navigation instructions	Kamper, Herman	Engelbrecht, Herman	Engelbrecht, Japie