www.sairac.co.za

JOHANNESBURG REGION

The skills gap in the industry is well known and widely discussed. To bridge this gap, SAIRAC is seeking experienced professionals who are passionate about training and mentorship. This is a unique opportunity for Industry members to share their knowledge and expertise with our members and non-members through these courses.

Our courses are specifically designed to address the gap between artisan/technician-level professionals and engineers. By becoming a Facilitator, you can play a vital role in equipping future industry leaders with the skills they need to succeed.

If you are interested in taking up this challenge and get involved with the presentation of any SAIRAC course, please contact Mariet Pieterse at **082 772 1694** or **johannesburgsecretary@sairac.co.za**.

Join us in bringing invaluable industry experience back into training!

ONLINE FANS COURSE 2025

SAIRAC Johannesburg region is pleased to announce their 2nd online Zoom course for 2025.

Booking & Enquiries:

Contact: Mariet Pieterse
Phone: 082 772 1694
Email: johannesburgsecretary@sairac.co.za

This course will be presented by Francois Schoombie who is a registered N.Dipl. Mech Eng., which he obtained at TUT (Tswane University of Technology) in 2001. Francois studied Mechanical Engineering at previously known Pretoria Technikon, then started with practical training in the HVAC market and is still very involved within the industry. Francois is currently the Technical Manager at EBMPAPST South Africa.

Course Name: **FANS**

Course Outcome:

By completing this course, participants will gain a deeper understanding of the following key topics:

1. Mechanics

- **Part 1:** Static (mass, force, lever), Kinematics (velocity, rotation, speed, torque), Dynamic (work, energy, power, efficiency)

- **Part 2:** Difference between External vs. Internal rotor motors, Test reports (torque characteristics AC- motors), understand balance & balance quality grade

2. Fluid Mechanics

- Theory - physical quantities & SI units, Bernoulli equation, law of continuity, flow resistance, interrelation between physical quantities (air flow, pressure, performance)
- Fluidic flow engines – types, characteristics & features, operating performance (centrifugal, axial, diagonal, tangential)
- Operating Behavior - Series & parallel fan operation, installation effects, disturbance variables
- Mounting examples and possible disturbances – mounting conditions & relevant disturbance variables
- Measurement and test engineering – different measuring methods (air flow, pressure and performance), evaluate results. Types of test rigs (AMCA/DIN/EN/ISO)
- Operating behavior exercises – handle formulas for different characteristics under conditions of: single fan, speed changes, changes of installation characteristics, parallel & serial mounting of fans, possibilities to achieve recommended duty points.

3. Acoustics

- **Part 1:** sound frequencies and determining factors with fans, effect of sound on human hearing, frequency analysis of noise, octave band, effects of several distances, effects number of sources of sound, unwanted noise.

Venue: Online (Zoom link to be provided)
Course Dates: 6, 13 & 20 May 2025
Time: 18h00 – 21h00

Course Fees:

SAIRAC members:	R1,857.00
Non-Members:	R2,404.00

Please note: SAIRAC courses are very popular, and bookings are limited, therefore book early to secure your place.

See attached -> Enrolment Form