

CURRICULUM VITAE

DINO BOUSSO

Department of Mechanics
Technion - Israel Institute of Technology

Date and Place of Birth

Born January 21, 1933, Alexandria, Egypt. Immigrated to Israel, January 1951.
Married, one child.

High School Attended: Victoria College, Alexandria.
Oxford and Cambridge School Certificate, June, 1949.

Academic Degrees

B.Sc. in Mechanical Engineering, October 1958, Technion, Magna cum laude.
M.Sc. in Mechanics, June, 1960, Technion, Magna cum laude.
D.Sc. in Mechanics, January, 1963, Technion.

Academic Career

Assistant from October 1958 to September 1960, Technion.
Instructor from October 1960 to February 1963, Technion.
Lecturer from March 1963 to September 1964, Technion.
Senior Lecturer from October 1964, Technion.
Research Fellow, Department of Engineering Science, Oxford University, from October 1965 to September 1967.

Teaching Experience

Academic year:

1958-59 Class exercises in "Dynamics and mechanical vibrations, 3rd year, M.E."
"Strength of Materials", 2nd year.

1959-63 Class exercises in "Dynamics and mechanical vibrations", Lectures and
C.E. in "Statics", 1st year.

1963-64 As above and lectures and exercises in "Dynamics to 3rd year students in
"Aeronautical Engineering.
Course of "Advanced Dynamics" to a group of engineers working in Israel.
Ministry of Defence.
Design of Models for demonstration purposes in "Dynamics," "Mechanical
Vibrations" and "Strength of Materials".

- 1964-65 Lecturer in "Dynamics of Machinery" and "Mechanical Vibrations" to 3rd year Mechanical Eng. and Agricultural Eng. students.
- 1965-67 Lecturer in "Dynamics of Machines", Dept. of Eng. Science, Oxford University.
- 1967-69 Lectures in "Theory of Machines" and "Mechanical Vibrations" to 3rd year Mechanical Engineering students.
- Course "Dynamics of the Gyroscope" to post-graduates.
- "Mechanical Vibrations" to post-graduates.

5. Research Experience

1. The centripetal effect in gases and liquids (in collaboration with Prof. M. Reiner) 1958-59.
2. The viscosity of air at high rates of shear. M.Sc. Thesis, 1959.
3. The self-acting airbearing effect. M.Sc. Thesis, 1959-60.
4. The development of a new relaxometer for dough (in collaboration with Dr. R. Reiner-Schoefeld and Dr. L. Shelef), 1960-61.
5. The stability of high-speed shafts. D.Sc. Thesis, 1961-62.
6. Improvements in the techniques of prestressing concrete (Housing Ministry research project in collaboration with Dr. O. Ishai) 1963-65. Project MS-21.
7. The physical interpretation of dynamic phenomena (Departmental Research Project) 1963-64.
8. On Elastic Hysteresis as the main factor in rolling friction (with M. Shnuely), 1964-65.
9. Developments in powered prostheses. 1965-67.
10. Developments in gas-powered arm prostheses. 1967-69. Project 120.063.
11. Development of a three degree-of-freedom gas-powered cosmetic hand prosthesis (with A. Livni). 1968-69. Project 120-063.
12. On the use of myo-electric signals for multiple degree-of-freedom arm prosthesis control (with G. Ishai). 1967-69. Project 120-063.
13. A feasibility study of a new anti-skid braking system for motor vehicles (with D. Keini). Project 120-078.
14. The testing of mechanical properties of miniature bone specimens (with A. Simkin) 1967-69. Hadassah University Project.
15. On the dynamical behaviour of a horizontal rotor suspended on and driven by a belt (with N. Ben-Amots). 1967-69. Project 120-066.

16. On the stability equations for a linear multiple-sac actuator (with U. Shohet). 1967-69. Project 120-061.
17. On the performance of a new class of rolling wheel analog computers (with O. Yehezkiel 1967-69. Project 120-062.
18. The design equations of the pouch element in a rotary inflatable pouch actuator. 1969-70.
19. The development of miniature and heavy duty pouches for use in a rotary actuator. 1969-70.

6. Professional Experience

Consultant to ZIM, Israel Navigation Company, Israel, from May 1963 to September 1965

Consultant to Dunlop Engineering Group, New Products Division from October 1969 to September 1970.

7. Administrative Posts

Secretary to the "Israel Society for Theoretical and Applied Mechanics", June 1964 to June 1965.

8. Prizes

1. Top award in competition organized by the Israel Hydraulics Institute for a dual capacity flushing system. July 1965.
2. Outstanding design award in the above mentioned competition.
3. Gold medal with jury's felicitations for a Rotary Actuator submitted at the Brussels International Inventors' Exhibition.
4. Gold medal with jury's felicitations for a Tensor Calculator submitted at the 1967 Brussels International Inventors' Exhibition.
5. Commendation received for essay submitted to the Royal Society of Arts under the Howard Award. Essay title: "Some aspects of the design of a new rotary actuator."
6. Gold medal with Jury's felicitations for powered artificial arm submitted at the 1968 Brussels International Inventors' Exhibition.
7. Commemorative plaque from the Brussels Commerce for an outstanding invention at the above mentioned exhibition.
8. Countess Marianne Bernadotte award for the best invention for alleviating human suffering at the above mentioned exhibition.

Experience abroad

I.C.I. Research Fellowship in engineering at the Department of Engineering Science, Oxford, October 1965 to September 1967.

Work on powered prostheses for thalidomide affected children carried out. Funds received from the Lady Hoare Thalidomide Appeal Fund for technician and materials.

Sabbatical leave 1969-1970 spent with the Dunlop Co. Ltd, Coventry, England. The work was centered on theoretical and practical developments relating to the rotary pouch actuator.

Participation in International Congresses

1. IUTAM "Second-order effects in elasticity, plasticity and fluid dynamics". International Symposium, Haifa, Israel, April 1962. Lecture delivered: "Observation on the self-acting air thrust bearing effect."
2. International Medical & Biological Engineering Conference, Stockholm, 14-19 August, 1967. Scientific Exhibition Section. "A new gas-powered 6 degree-of-freedom prosthesis"
3. Third International Symposium on External Control of Human Extremities. 25-31 August 1969. Paper presented: "A new limb for thalidomide children".
4. Third International Conference on Orthotics and Prosthetics, 21st-23rd May, Torino. Paper presented: "A double-acting rotary actuator for prosthetic purposes."
5. Conference on powered prosthetics, Norbacka Institute, Stockholm, August 1970. Invited lecture: "Actuators for powered limbs."

1. Membership in Professional Societies

1. Member of the "Israel Society for Theoretical and Applied Mechanics".
2. Member of the "Institute of Patentees and Inventors", U.K.
3. Member of the "Israel Inventors' Association".

2. Post-graduate Student Supervision

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|-----|---------------|-------|-----------------|
| 1. | F. Singer | M.Sc. | Completed 1965. |
| 2. | M. Shmueli | M.Sc. | Completed 1966. |
| 3. | F. Rahamim | M.Sc. | Completed 1966. |
| 4. | G. Ishai | M.Sc. | Completed 1969. |
| 5. | N. Ben-Amots | M.Sc. | Completed 1969. |
| 6. | U. Shohet | M.Sc. | Completed 1969. |
| 7. | D. Keini | M.Sc. | Completed 1969. |
| 8. | A. Livni | M.Sc. | Completed 1969. |
| 9. | A. Simkin | M.Sc. | |
| 10. | O. Yehezkieki | D.Sc. | |
| 11. | N. Ben-Amots | D.Sc. | |