



## Dr. YACOV BARNEA

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### EDUCATION:

- D. Sc. 1991      Technion, ISRAEL Institute of Technology, Haifa.  
Faculty of Mechanical Engineering & Dept. of Nuclear Engineering.  
Thesis Subject: *'Precursory Cooling during Bottom Reflooding of Hot Surfaces with Subcooled Liquid'*.
- M. Sc. 1983      'Ben-Gurion' University of the Negev, Beer-Sheva.  
Department of Mechanical Engineering.  
Thesis Subject: *'Evaluation of the Heat Transfer Coefficient in Assisting Mixed Convection on a Vertical Element with Uniform Heat-Flux'*.
- B. Sc. 1976      'Ben-Gurion' University of the Negev, Beer-Sheva.  
Department of Mechanical Engineering (Major).  
Department of Nuclear Engineering (minor).

### EMPLOYMENT HISTORY:

- 2005 - Present      **Head of Department of Research Reactors, Safety and Licensing Division**  
ISRAEL Atomic Energy Commission, Tel-Aviv, P.O. Box 7061, 61070.
- 2000 - Present      Associate Professor (Interim), School of Mechanical Engineering,  
Faculty of Engineering, Tel - Aviv University, ISRAEL
- 1996 - 2005      Senior Safety Engineer Officer, Safety & Licensing Division - IAEC.
- 1993 - 1995      Head of Thermohydraulic R&D Laboratory, Nuclear Research Center-  
Negev. P. O. Box 9001, Beer- Sheva, 84190, ISRAEL
- 1993 - 1994      Senior Lecturer, Department of Mechanical Engineering, Faculty of  
Technology, "Ben-Gurion" University, P. O. Box 653, Beer- Sheva, 84105, ISRAEL
- 1991 - 1993  
(sabbatical)      Post-Doctoral Fellow, Mechanical Engineering Department, Faculty of  
Applied Sciences, University of British Columbia, Vancouver, B.C., CANADA.
- 1988 - 1991      Head of Thermohydraulic R&D Group, N.R.C.N
- 1985 - 1986      Instructor, Nuclear Engineering Department, Technion, ISRAEL  
Institute of Technology, Haifa, 32000.
- 1976 - 1987      Research Engineer, N. R. C.N

## **R&D EXPERIENCE**

A) Senior Safety Analyst and Licensing Engineer of advanced multidisciplinary Integrated Engineering Systems related to Research Reactors.

B) Head of R&D projects related to Nuclear Fuel & Thermohydraulics Safety related phenomena in Nuclear Reactors.

C) Leading Scientist of projects related to generic R&D subjects of Heat and Mass Transfer such as: Conduction, Forced, Natural and Mixed Convection, Boiling and Two-Phase Flow.

D) Design and assembly of Heat Transfer Laboratory for simulative Thermohydraulics Experiments of Nuclear Reactor Facilities.

E) Development of production engineering processes of pharmaceutical radioisotopes.

## **TEACHING EXPERIENCE**

- Department of Mechanical Engineering, "Ben-Gurion" University, Beer-Sheva, ISRAEL.

- Recitation exercise in the following subjects:

1975 Introduction to Thermodynamics to 2<sup>nd</sup> year undergraduate students.

1976 Introduction to Fluid Mechanics to 3<sup>rd</sup> year undergraduate students.

1977 Advanced Thermodynamics to 4<sup>th</sup> year undergraduate students.

1979 - 1980 Mechanical Laboratories to 2<sup>nd</sup> year undergraduate students.

- Lecturing the follow subject:

1993 - 1994 Heat Tranfer by Boiling and Condensation to graduate students.

- Department of Nuclear Engineering, Technion IIT, Haifa, ISRAEL.

- Recitation exercise in the following subjects:

1985 - 1986 Nuclear Laboratories to graduate students.

- Department of Mechanical Engineering, University of British Columbia, Vancouver, CANADA.

1991 - 1993 Co-advisor of graduate students.

- School of Mechanical Engineering, Faculty of Engineering, Tel-Aviv University, Tel-Aviv, ISRAEL.

2006 - 2007 Power Production Facilities & Energy Utilization to 4<sup>th</sup> year undergraduate students

2000 - Present, Supervisor of Graduation Projects for 4<sup>th</sup> year undergraduate students.