

Name: Morel Groper

Date: May, 2020

## **CURRICULUM VITAE**

### **1) Personal Details**

Date of Birth: October, 1964  
Citizen of: Israel  
Marital Status: Married, two children  
Permanent Home Address: Moshav Sde Itzhak, Israel  
Home Telephone Number: (077) 883 1585  
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### **2) Higher Education**

#### *a) Undergraduate and Graduate Studies*

1987: B.Sc., Mech. Engineering, Technion, Israel Institute of Technology  
1995: M.Sc., Mech. Engineering, Technion, Israel Institute of Technology  
1999: Ph.D., Mech. Engineering, Technion, Israel Institute of Technology

#### *b) Post-Doctoral Studies*

None

### **3) Academic Ranks and Tenure in Institutes of Higher Education**

| <i>Dates</i>   | <i>Name of Institution and Department</i>                                   | <i>Rank/Position</i>                     |
|----------------|---|--|
| 2005 – Present | Technion, Israel Institute of Technology, Faculty of Mechanical Engineering | Adjunct Senior Lecturer *                |
| 2014 – Present | University of Haifa, The Department of Marine Technologies                  | Adjunct Associate Professor (Specialist) |

(\*) Teaching the courses in Mechanical Engineering Design and Hydrodynamic Lubrication, one/two courses per semester

#### 4) Offices in Academic Administration

| <i>Dates</i>   | <i>Name of Institution and Department</i>                         | <i>Rank/Position</i> |
|----------------|---|----------------------|
| 2014 – Present | University of Haifa, The Hatter Department of Marine Technologies | Head of Department   |

#### 5) Scholarly Positions and Activities Outside the University

##### *a) Professional Experience*

| <i>Dates</i> | <i>Activity</i>   |
|--------------|---|
| 1987 - 1991  | Design engineer (Lieutenant Navy – "Seren"), Marine Engineering Branch, Israeli Navy Headquarters, Israeli Navy. Design of mechanical elements and power systems for new and existing Navy vessels.   |
| 1991 - 1995  | Chief marine engineer (Lieutenant Commander Navy – "Rav-Seren") for the SA'AR5 corvette technical team at Ingalls Shipbuilding Inc., MS, U.S.A. Development of propulsion elements and control algorithms for the corvette's propulsion system, part of the team for the design of the propulsion, auxiliary and damage control systems, responsible for the analysis of sea trials experiments and ship performance tests. |
| 1995 - 1997  | Head of the mechanical systems department (Lieutenant Commander Navy – "Rav-Seren"), Marine Engineering Branch, Israeli Navy Headquarters, Israeli Navy. Group leader responsible for the design of mechanical components and retrofits for propulsion and auxiliary systems installed onboard the Israeli Navy surface vessels.  |
| 1999 - 2000  | Head of the mechanical workshop (Lieutenant Commander Navy – "Rav-Seren"), Israeli Navy Shipyard, Israeli Navy. Development of maintenance procedures and troubleshooting of complicated failures in Navy's vessels mechanical systems. In charge of 100 employees, technicians and engineers.  |
| 2000 – 2002  | Head of the Engineering Squadron (Commander Navy – "Sgan-Aluf"), Israeli Navy Shipyard, Israeli Navy. Development of maintenance concepts and design of retrofits for mechanical and hydraulic systems. Analysis of failures in diesel engines and other mechanical equipment. Responsible of the shipyard's technical design office, metallurgical laboratory and workshops.   |
| 2002 – 2005  | Head of the Marine Engineering Branch (Commander Navy – "Sgan-Aluf"), Israeli Navy Headquarters, Israeli Navy. Lead the design and development of propulsion and other mechanical systems for new and existing Navy surface vessels and submarines. Conduct and instruct a team of 20 mechanical engineers.   |
| 2005 – 2007  | Head of the Naval Architecture Branch (Commander Navy – "Sgan-Aluf"), Israeli Navy Headquarters, Israeli Navy. Lead the design, development and analysis of the Naval Architecture aspects for the new and existing Navy's marine platforms. Conduct and instruct a team of 30 mechanical engineers and naval architects.   |

|                |   |
|----------------|---|
| 2007 – 2010    | Head of Naval Architecture and Marine Engineering (NA&ME) Department (Captain Navy – "Aluf-Mishne"), Israeli Navy Headquarters, Israeli Navy. Responsible for the design, development and retrofit in the Naval Architecture and Marine Engineering aspects for the new and existing Navy's marine platforms. Conduct and instruct a team of 70 Mechanical Engineers and Naval Architects.  |
| 2010 – 2012    | Owner of M.G. Mechanical and Marine Engineering Design Bureau. Design and Consulting on Mechanical and Marine Engineering Projects.   |
| 2012 – 2014    | Owner and CEO of GALIM, Marine Engineering, Design & Consultancy Ltd ( <a href="http://www.galim-engineering.co.il">www.galim-engineering.co.il</a> ). GALIM provides comprehensive mechanical engineering and project management services to the Naval, Marine, Offshore and Industrial sectors. GALIM services focus on Naval Architecture & Marine Engineering, Concept Design & Technical Solutions, Mechanical Engineering and Consultancy Services. |
| 2014 – Present | Adjunct Associate Professor (Specialist), Head of the Hatter Department of Marine Technologies, Charney School of Marine Sciences, University of Haifa.<br><br>Adjunct Senior Lecturer (part-time), Machine Design, Hydrodynamic Lubrications, Faculty of Mechanical Engineering, Technion, Israel Institute of Technology.   |

## 6) Research Grants

### a) *Grants Awarded*

| <b><i>Role in Research</i></b> | <b><i>Other Researchers (Name &amp; Role)</i></b> | <b><i>Title</i></b>  | <b><i>Funded by (C= Competitive Fund)</i></b> | <b><i>Amount</i></b>  | <b><i>Years</i></b> |
|--------------------------------|---|--|---|-----------------------|---------------------|
| co-PI                          | Roe Diamant,<br>Aya Lazar                         | IW hunter:<br>Smart drifter to record spatial evidence of internal waves                 | Ministry of Science, Technology and Space (C) | 849,570 NIS           | 2020 - 2023         |
| co-PI                          | Tali Treibitz,<br>lead-PI<br>Guy Gilboa,<br>co-PI | 3D Optical Obstacle Avoidance for Autonomous Underwater Vehicles in Complex Environments | Ministry of Science, Technology and Space (C) | 700,000/2,100,000 NIS | 2019-2021           |
| lead-PI                        | Tali Treibitz,<br>co-PI                           | Docking and LARS operation for small AUVs in high seaway                                 | IMOD  | 300,000 NIS           | 2017-2019           |

|         |   |   |   |                         |           |
|---------|---|---|---|-------------------------|-----------|
| PI      |   | Health monitoring of a water lubricated hydrodynamic bearing                          | IMOD  | 110,000 NIS             | 2018-2019 |
| lead-PI | Tali Treibitz, co-PI                        | Autonomy of planing crafts in seaway  | IMOD  | 300,000 NIS             | 2016-2018 |
| co-PI   | Tali Treibitz, lead-PI<br>Sagi Filin, co-PI | Our Eyes Beneath The Sea – a Holistic AUV Based Framework for Visual Seafloor Surveys | Ministry of Science, Technology and Space (C) | 1,000,000/2,400,000 NIS | 2016-2018 |

## 7) Teaching

### a) *Courses Taught in Recent Years*

| <i>Year</i>    | <i>Name of Course</i>                           | <i>Type of Course</i> | <i>Institution</i>                             | <i>Number of Students</i> |
|----------------|---|-----------------------|--|---------------------------|
| 2003 - 2010    | Marine Engineering                              | Lecture               | Naval Academy, Haifa                           | 15 (approximately)        |
| 2005 – Present | Mechanical Engineering Design 1 (034015)        | Undergraduate course  | Faculty of Mechanical Engineering, Technion    | 150 (approximately)       |
| 2005 – Present | Mechanical Engineering Design 2 (034016)        | Undergraduate course  | Faculty of Mechanical Engineering, Technion    | 70 (approximately)        |
| 2010 – Present | Hydrodynamic Lubrication (03610)                | Postgraduate course   | Faculty of Mechanical Engineering, Technion    | 14 (approximately)        |
| 2018 -         | Fundamentals in Underwater Engineering (400419) | Postgraduate course   | School of Marine Sciences, University of Haifa | 10 (approximately)        |
| 2019 -         | Underwater Marine Vehicles (400420)             | Postgraduate course   | School of Marine Sciences, University of Haifa | 4 (approximately)         |

### b) *Supervision of Graduate Students*

| <b>Name of Student</b> | <b>Title of Thesis</b> | <b>Degree</b> | <b>Date of Completion</b> |
|------------------------|------------------------|---------------|---------------------------|
|------------------------|------------------------|---------------|---------------------------|

|                  |   |                         |                  |
|------------------|---|-------------------------|------------------|
| Avishai Dov      | On the influence of operational parameters on the performance of a water lubricated journal bearing                           | M.Sc. (Technion)        | 2017             |
| Allaka Himabindu | Motion Assessment of a Planing Craft in Seaway  | M.Sc. (summa cum laude) | 2017             |
| Ivgeni Gutnik    | On the modification of the SPARUS II AUV for close range imaging survey platform  | M.Sc.                   | 2018             |
| Gil Maor         | Development of a vectored thruster for AUV applications   | M.Sc.                   | Pending          |
| Allaka Himabindu | Autonomous Operation of a Planing Craft in Seaway (temporary)   | Ph.D.                   | 2022 (estimated) |
| Ivgeni Gutnik    | Robust launch and recovery operation of a small size AUV in sea way applying a deployable docking station concept (temporary) | Ph.D.                   | 2023 (estimated) |
| Sharon Parver    | Improving LARS operation for small AUVs in high seaway (temporary)  | M.Sc.                   | 2020 (estimated) |
| Yuri Katz        | On the development of a small-size autonomous Lagrangian float to identify, follow and ultimately study Internal Waves        | M.Sc.                   | 2020 (estimated) |
| Eli Shafer       | Path planning toward a docking station using FLS (temporary)  | M.Sc.                   | 2021 (estimated) |
| Tamar Yahav      | Oceanic camera array  | M.Sc.                   | 2022(estimated)  |

## 8) Public Professional Activities

- 1) Head of the Naval Architecture & Marine Engineering cell, The Association of Engineers and Architects in Israel.

## 9) Membership in Professional Societies:

- 1) Member, Israel Society for Tribology.
- 2) Member, the Association of Engineers and Architects in Israel.

## 10) Awards

- 1) Flores, P. Reviewer acknowledgments and awards: Recognition awards for distinction of reviewing in 2019. Mechanism and Machine Theory, Vol. 152, 103904 (2020).