Name: **Dr. Yann Sepulcre**
Date: 09/04/25

CURRICULUM VITAE

1. Personal Details

Electronic Addresses:yanns@mail.sapir.ac.il , sepulcre@post.bgu.ac.il

Cellular Phone: +972585984662

2. Higher Education

A. Undergraduate and Graduate Studies

Period of Study	Name of Institution and Department	Degree	Year of Approval of Degree
2000-2004	Department of Mathematics, *University Denis Diderot* (France)	Ph.D	2004
1998-1999	Department of Mathematics, *Ecole Normale Superieure* at Cachan (France)	Diploma qualifying to teach Mathematics at the University, at the first 2	1999

		years level.	
1997-1998	Department of Mathematics, *University Denis Diderot* (France)	Graduate Level Degree in Mathematics (specialization: Algebraic Geometry)	1998
1994-1997	Preparatory school at *Lycee Louis-le-Grand* (France), and *University Denis Diderot* (France)	Undergraduate Level Degree in Mathematics	1997

B. Post-Doctoral Studies

Period of Study	**Name of Institution, Department and Host**	**Degree**	**Year of Completion**
2005-2006	Department of Mathematics and Computer Science, *Bar-Ilan University* (Israel)	No additional degree was to be expected here	2006

1. **<u>Academic Ranks and Tenure in Institutes of Higher Education</u>**

Dates	Name of Institution and Department	Rank/Position
present - 2021	Department of Engineering (year A), Sapir Academic College (Israel)	Lecturer (internal staff member, tenure position)
2021 - 2017	Department of Engineering (year A), Sapir Academic College (Israel)	Lecturer (external staff member)
2022 - 2018	Department of Mathematics, Afeka College of Engineering (Israel)	Lecturer (external staff member)
2018 - 2017	Department of Computer Science, Hadassah College of Engineering (Israel)	Lecturer (external staff member)
2021 - 2011	Department of Electrical Engineering, Department of Mathematics, Shamoon College of Engineering (Ashdod, Israel)	Lecturer (external staff member)
2015 - 2007	Department of Mathematics, Holon Institute of Technology (Israel)	Lecturer (external staff member), Shapira fellowship owner **(**during the first two years)
2013 - 2011	Department of Mathematics, Jerusalem	Lecturer (external staff member)

	College of Engineering (Israel)	
2005-2006	Department of Mathematics and Computer Science, Bar-Ilan University (Israel)	Post-doctoral fellowship owner, invited and supervised by (then) Department Chief Prof. Mina Teicher

2. Scholarly Positions and Activities outside the Institution

Year	**Name of institution or company**	**Position or Role**
present-2023	Department of EE, Shamoon College of Engineering (Israel)	Supervisor of two 4th year students (jointly with Dr. Trigano) for their common undergraduate thesis (about Enhancing Sparsity for Activity Estimation in Nuclear Spectroscopy)
2014-2015	Department of EE, Shamoon College of Engineering (Israel)	Supervisor of an undergraduate thesis (on Image Processing applied to a Basket Ball refereeing problem)
2013-2014	Department of EE, Shamoon College of Engineering (Israel)	Supervisor of a 4th year undergraduate thesis (on Image Processing applied to a Control Quality problem)

3. Participation in Scholarly Conferences

a. Active Participation

Date	Name of Conference	Place of Conference	Subject of Lecture/Discussion	Role
2013	**EUSIPCO**	Bucharest (Romania)	***Iterated Sparse Reconstruction for Activity Estimation in Nuclear Spectroscopy***	**Invited lecturer**
2012	**ISSAC**	San Jose (California State, USA)	***Using discriminant curves for surface recovering in the 4- dimensional complex projective space from two generic linear projections***	**Invited lecturer**
2012	**IEEE (annual conf. in Israel)**	Eilat (Israel)	***Spectrum Distortion Attenuation by Sparse Linear Regression***	**Invited Lecturer**
2011	**IEEE (annual conf. in Israel)**	Eilat (Israel)	***On Nonhomogeneous Activity Estimation in Gamma Spectrometry Using Sparse Signal Representation***	**Contributor**

4. Invited Lectures\ Colloquium Talks

Date	Place of Lecture	Name of Forum	Presentation/ Comments
2019	Afeka College of Engineering	Mathematics and its applications Colloquium	**Sparse Regression applied to the Piling-up Problem in Signal Processing**

5. Teaching

Year	Co	Course Name		Type of Course Lecture/Seminar/ Workshop/High Learn Course/ Introduction Course (Mandatory)	Degree	Number o Students
-2017 present		**Differential Calculus 1**		**weekly lectures**	**Ugrad**	
-2019 present		**Linear Algebra 1**		**weekly lectures**	**Ugrad**	
-2017 present		**Integral Calculus and ODE**		**weekly lectures**	**Ugrad**	
-2019 prese		**Linear Algebra 2**		**weekly lectures**	**Ugrad**	

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-2019 present	**Basics of Logic and Set Theory**		**weekly lectures**	**Ugrad**	
-2020 present	**Digital Systems**		**weekly lectures**	**Ugrad**	
2020-2022	**Machine Learning for EE, SE, IS, BioMed**		**weekly lectures**	**Ugrad (4^{th} year)**	
2019-2020	**Image Processing for EE**		**weekly lectures**	**Ugrad (3^{rd}-4^{th} year)**	
2018-2019	**Discrete Mathematics for IS**		**weekly lectures**	**Ugrad**	
2012-2018	**Introduction to Probability and Statistics for EE, SE**		**weekly lectures**	**Ugrad**	
2017-2019	**Complex Analysis for EE**		**weekly lectures**	**Ugrad**	

8. Professional Experience

Year	Company name	Role
2008-2009	C-True Imaging company (Rehovot, Israel)	Algorithmist (with Matlab coding).

		Topic: Image Processing applied to .Face Detection

PUBLICATIONS

A. Ph.D. Dissertation

Language	French
Title (in English)	The degree of the projective variety of Poncelet curves
Keywords	Algebraic Geometry, Moduli Spaces of Semi-Stable Coherent Sheaves
Number of pages	(without appendices) 46
University	Denis Diderot University (Paris, France)
Supervisor	Prof. Joseph Le Potier (passed away in 2006)
Reviewers	Prof. Laurent Gruson, Prof. Kieran O'Grady, Prof. Mattei Toma
Final sanction	Accepted under the sanction "Quite "Honorable
Year	2004

B. Articles In Refereed Journals

Published

1. T. Trigano, **Y.Sepulcre**, Data-driven Parameter Selection for Activity Estimation in Nuclear Spectroscopy, in Signal Processing, 151, 99-106, Oct. 2018,

https://doi.org/10.1016/j.sigpro.2018.05.006

Q1, GR 71, IF 4.729, 2 citations

The authors had equal contributions.

2. T. Trigano, **Y.Sepulcre**, Y.Ritov, Sparse Reconstruction Algorithm for Nonhomogeneous Counting Rate Estimation, in IEEE Transactions in Signal

Processing 65(2), 372-385, 2017, 10.1109/TSP.2016.2620104

Q1, GR 98, IF 4.875, 10 citations

The second author had the main contribution.

3. T. Trigano, I.Gildin and **Y.Sepulcre**, Pile-up Correction Using an Iterated Sparse

Reconstruction Method, in IEEE Signal Processing Letters 22(9), 1392-1395, 2015,

10.1109/LSP.2015.2406911

Q1, GR 62, IF 3.201, 12 citations

The third author had the third contribution in importance.

4. **Y.Sepulcre**, T.Trigano, and Y.Ritov, Sparse Regression Algorithm for Counting

Rate Estimation in Gamma Spectrometry, in IEEE Transactions in Signal

Processing 61(17), 4347-4359, 2013, 10.1109/TSP.2013.2264811

Q1, GR 98, IF 4.875, 27 citations

The first two authors had equal contributions (the third author did not actively

participate in the writing).

C. Articles or Chapters in Scientific Books

(which are not Conference Proceedings)

Published

1. T.Trigano & **Y.Sepulcre**: Regularized Sparse Representation for Spectrometric Pulse Separation and Counting Rate Estimation,

in *Latent Variable Analysis and Source Separation*, Theis, Cichocki, Yeredor,

Zibulevsky (eds), Lecture Notes in Computer Science, Vol 7191, 188-195,

2012. **Nb of pages: 7**.

Link: https://doi.org/10.1007/978-3-642-28551-6_24.

The authors had equal contribution.

D. Articles in Conference Proceedings

Published

1. M.Lopatin, N.Moskovitch, T.Trigano and **Y.Sepulcre**, *Pileup Attenuation for*

Spectroscopic Signals Using a Sparse Reconstruction, in Proceedings of 27th IEEE

Convention of Electrical and Electronics Engineers in Israel, 5 pages, 2013

2. **Y. Sepulcre**, T. Trigano**,** *Iterated Sparse Reconstruction for Activity Estimation in*

Nuclear Spectroscopy, in Proccedings of the European Signal Processing

.Conference (EUSIPCO-2012), 5 pages, 2012

3. T. Trigano, **Y. Sepulcre**, *Spectrum Distortion Attenuation by Sparse Linear*

.*Regression*, in Proccedings of 2012 IEEEI Conference, 4 pages, 2012

4. **Y. Sepulcre**, J.Y. Kaminski, *Using discriminant curves for surface recovering in*

the complex 4-dimensional projective space from two generic linear projections,

in ISSAC International Conference on Algebraic and Symbolic Computation in

Computer science, 6 pages, 2011.

5. T. Trigano, **Y. Sepulcre**, M. Roitman and U. Aferiat, *On Nonhomogeneous Activity Estimation in Gamma Spectrometry Using Sparse Signal Representation*, in IEEE International Workshop on Statistical Signal Processing, 4 pages, 2011.

6. T. Trigano, **Y. Sepulcre**, M. Tal and Y. Mashiach, *Sparse Regression Algorithm for Activity Estimation in γ Spectrometry*, in Proccedings of 26th IEEE Convention of Electrical and Electronics Engineers in Israel, 5 pages, 2010

E. Submitted Publications – Articles in progress

1. (*) Y.Sepulcre, T.Trigano, << C-LASSO: Adding Convolutions in LASSO for Sparser Solutions in Convolutional Dictionaries>>, submitted to IEEE Transactions in Signal Processing, 2025

2. T. Trigano, D. Luengo, A. Levin, Y. Sepulcre, <, FDP-TF: A Fast Two-Pass Trend Filtering for ECG Delineation >>, submitted to Computers in Biology and Medicine

Articles In Progress (2025)

1. *Stochastic mean-shift clustering,* with Y.Lapidot, T.Trigano . .

2. *Iteratively Reweighted LASSO for Cross-Products Penalized Sparse Solutions*, with D.Luengo, J.Via, and T.Trigano

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F. Other Works Connected with my Teaching

Teaching project in progress (started 2021):

Writing two books (in Hebrew), one in *Analysis* and one in *Algebra* for the 1st year, expected to cover all the contents of the 1st year courses in Mathematics taught at Ben Gurion University. New chapters (with solved exercises) have been uploaded regularly on the Lee-mood websites (with positive feedbacks so far).

1. *Mathematical Analysis*:

Chapters already written: Real Numbers and the supremum property; Sequences

; Continuity and Uniform Continuity ; Differentiable functions ; Taylor Expansions ; Integration ; Sequences and Series of Functions ; Ordinary Differential Equations

2. *Linear Algebra*:

Chapters already written: Commutative Fields, Systems of Linear Equations, Vector Spaces, Linear Transformations, Inner Products.