

# Giuseppe Manai, Ph. D

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<https://sg.linkedin.com/in/giuseppemanai> - <https://scholar.google.com.sg/citations?user=k96jmM0AAAAJ&hl=en&oi=ao>

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## Leadership

- Passionate about creating business and social value through building robust and scalable Decision Science.
- Motivated by driving technical teams to significant achievements with strong professional rigor & personal integrity.
- Entrepreneurial with proven experience in devising and executing big data strategies in both startup as well as enterprise or corporate environment.
- 20 years of experience of working in Data Science at the intersection between Academia, Government and Industry.
- ACM member, co-founder of the SIGKDD chapter in Singapore. [www.KDD.sg](http://www.KDD.sg) ; [www.kdd.org](http://www.kdd.org)

## Decision Science

- Using data and data science to enable decision making at scale, mostly in the enterprise and B2B.
- Develop and implement data strategies from data to decisions through analytics and data mining.
- Supply Chain Analytics, Mobility Intelligence, Telco Network Analytics, Marketing & Customer Analytics, Credit Scoring.

## Data Product

- Build products vision, strategy and roadmap for data products that can enable effective decision making.
  - Hands-on in Release Planning and Operations Management using Lean Startup principles and agile methodologies.
  - Distinctive capabilities to synthesize highly technical concepts to maximise effect on business outcomes.
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## PROFESSIONAL EXPERIENCE

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**Stemly (SoptAI) – FutureLabs | ING Innovation Lab**

**Sep 2018 - present**

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### Founder and CEO

- Stemly (Previously SoptAI) modernises global trade with autonomous forecasts that find applications in supply chain operations and financing. Our algorithms are based on automatic machine learning techniques and allow for the discovery of optimal forecasting models. We unlock sizeable business & financial impact in terms of lower lost demand, decrease in inventory, lower working capital & financing costs. Stemly is an initiative backed by ING bank and FutureLabs Ventures.
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**DATASPARK (SINGTEL)**

**MULTIPLE ROLES (6 yrs)**

**2012 – 2018**

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**Director, Data Science and Product Management**

**2017 – 2018**

- In the Leadership team, I set and execute the company vision and strategy with PnL responsibilities. Successfully pivoted the company from services oriented to product development operational model;
  - Design and develop innovative algorithms based on Artificial Intelligence and Machine Learning for Mobility Intelligence and Networks Analytics and their application to business domains such as advertising, FSI and transport;
  - Devised & enforced coding standards & responsible for technology choices. Code is fully tested, CI/CD is enabled;
  - Technology used are Scala / Spark for product; Zeppelin for analysis; Python & R for fast prototyping;
  - Product strategy, vision and roadmap; requirements elicitation & analysis, prioritisation and triage with stakeholders;
  - Lead, manage & mentor highly technical people in their day to day activities as well as their career & personal growth.
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**Director, Data Science Consulting**

**2012 – 2017**

- In the Leadership team, responsible for consulting and professional services team;
  - Pioneered the expansion into the South East Asian markets through professional services focussed on building applications of Mobility Intelligence, Customer Analytics for Advertising and Marketing, Credit Scoring use cases.
  - Internal Consulting for digital business units in Singtel. Built and managed Recommender Systems for several Applications to personalise content and notifications. Predictive modelling and BI reporting for marketing units.
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**Senior Analytics Consultant, SAS Institute (Singapore)**

**2011 – 2012**

- Design and development of advanced analytics solutions using SAS. Customer Intelligence, Advertising and Marketing. Risk Analytics and Fraud. End to end professional services responsibilities to deliver the projects.
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**Statistician in the Research and Analytics Branch, Irish Tax and Customs Authority (Ireland)**

**2008 – 2011**

- Build advanced analytics algos for Citizen Relationship Management, Fraud Analysis, Forecasting, Web Analytics etc.
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- Supervised and trained several staff on a project basis and interns (2 each year) on advanced analytics, data manipulation and general statistical and analytical techniques.
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## EDUCATION

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### Post Doc in Physics, Trinity College Dublin (Ireland)

2006 - 2008

- Obtained & Managed a European research grant for research on nanomaterials characterisation at low temperature.
- Designed and conducted research experiments and participated in the direction of research strategy.
- Numerical simulations by means of Density Functional Theory techniques.
- Mentoring and training of 3 Ph.D students. Teaching assistant for Physics classes and laboratory assignments.

### Ph.D. in Physics, Trinity College Dublin (Ireland).

2001 – 2006

- Designed & assembled a Low Temperature Scanning Tunnelling Microscope (STM) for the measurement of changes in physical properties of nanomaterials at very low temperatures and in high magnetic fields.
- Physical characterisation of self-organised metallic clusters on metallic/ semimetallic surfaces in Ultra High Vacuum.
- Simulations of self-organised metallic clusters on metallic/ semimetallic surfaces using Density Functional Theory.

### M. Sc. / BA degree in Chemistry (Italy)

1996 - 2001

- Numerical Simulation of a granular gas dynamics inside mechanochemical reactors using Molecular Dynamics simulations technique to model the physical system. Modelled how the change in the elasticity of the collision of milling balls with the vial's walls affects the system dynamics.
  - Numerical Simulation of the self-ignition & propagation of Mechanically Activated Self-propagating High-temperature Synthesis (MASHS). Numerical findings are compared and validated with physical experiments.
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## PUBLICATIONS & PATENTS

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<https://scholar.google.com.sg/citations?user=k96jmM0AAAAJ&hl=en&oi=ao>

20. [Improved Localisation using Spatio-Temporal Data from Cellular Network](#). Luo, Ng, Lim, Tan, He, Giuseppe Manai, and Ying Li. IEEE International Conference on Mobile Data Management, June 25-28, 2018, AAU, Aalborg, Denmark;
  19. [IEEE Big Data 2016](#); Classification of massive mobile web log URLs for customer profiling & analytics;
  18. [IEEE Big Data 2015](#); Clairvoyant-push: A real-time news personalized push notifier using topic modeling and social scoring for enhanced reader engagement;
  17. [CBRecSys 2014](#); HybridRank: A Hybrid Content-Based Approach To Mobile Game Recommendations;
  16. [ECEG 2010](#); Segmentation of the PAYE Anytime Users;
  15. [ECEG 2010](#); An Experiment to Measure Changes of Usage and Satisfaction with the Channels of Contact with the Irish Revenue;
  14. [ECIW 2009](#); Channels of Contact with Revenue: is the Telephone Irreplaceable? ;
  13. [Room-temperature self-assembly of equilateral triangular clusters via Friedel oscillations](#). Phys. Rev. Lett. 101, (2008) 16570;
  12. [The reversibility of phase transitions in Ti/Co core/shell nanometre-sized particles](#). Nanotechnology, 20, 1, 015702 (2008);
  11. [Numerical investigation of the stability of Ag-Cu nanorods and nanowires](#). Phys. Rev. B, 78, 2, 024103. (2008);
  10. [Two-State Structure of Nanometer-Sized cu Particles](#). Int. J. Nanosci. 07, 137 (2008);
  9. [Homogeneous and heterogeneous melting behavior of bulk and nanometer-sized Cu systems: a numerical study](#). J Mater Sci(2007);
  8. [Epitaxial molybdenum oxide grown on Mo \(110\): LEED, STM, and density functional theory calculations](#). Phys. Rev. B, 75, 15 (2007);
  7. [Numerical simulations of the melting behavior of bulk and nanometer-sized Cu systems](#). Physica B: Condensed Matter 392 (2007);
  6. [Nano-Magnetic Probing on Magnetite](#). IEEE Transactions on Magnetics, vol. 42, no. 10, pp. 2927-2929, (2006);
  5. [Scanning Tunneling Spectroscopy Study Of The Electronic Structure Of Fe<sub>3</sub>O<sub>4</sub> Surfaces](#). PhysRevB.74.085416 (2006);
  4. [Towards spin-polarized scanning tunneling microscopy on magnetite \(110\)](#). Japanese Journal of Applied Physics 45, 3B, (2006);
  3. [Oxygen-induced p \(3x 1\) reconstruction of the W \(1 0 0\) surface](#). Surface science 579 (1), 65-72 (2005);
  2. [Mechanically induced self-propagating combustions: Experimental findings and numerical simulation results](#). J. Mat. Sc. 39 (2004);
  1. [Onset of chaotic dynamics in a ball mill: attractors merging and crisis induced intermittency](#). Chaos, 12, 3, (2002);
    - [Non-linearity and chaos in the dynamics of a granular gas. Propagation of combustive reactions during mechanochemical activation](#). Master Thesis (2001) [In Italian]
    - Patent: Method of forming conducting nanowires [US\(2006\)](#);
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