Bio – Professor Dr. Stelios BEKIROS

Professor Bekiros's **Global Rankings** as recently measured and publicly reported by all established global metrics, are outstanding. His scientific achievements foster extrovercy, academic excellence and promote multidisciplinary cutting-edge research, at the intersection of many scientific fields.

Indicatively, among other, according to 2022-2023 AD Index, Scopus and ScholarGPS™ (ID: 60455308873206, dataset up to 2022) etc., he ranks **worldwide**:

- "**Highly Ranked Scholar of Lifetime Achievement**" internationally at **TOP 0.45%** "*Overall ALL scientific fields*"

- **Number #1 in "FX/Currency Economics" field (TOP 0.0%)**

- **Number #53 in "Economics" field (TOP 0.37%)** *just 5 places behind Nobel Laureate "Joseph E. Stiglitz"*

- **Number #148 in "Social Sciences" field (TOP 0.53%)**

- **TOP 0.45%** in **"Overall achievement in ALL scientific fields"** i.e., across and within *inter-* and *multi-disciplinary* fields

- **Top 100 "*Economics & Econometrics*" Europe Scientists 2023,** AD Scientific Index

Moreover, Professor Bekiros ranks at IDEAS, Web of Science, among the **TOP 1%** authors worldwide in the fields of *"Blockchain", "Econometrics", "Quantum AI", "Machine Learning", "FinTech/Finance", "Econophysics",* with over **+10,000 citations** at *Google Scholar*: **h-index 54** and **i10-index 170**

Professor Bekiros obtained a Dipl.-Ing / BEng and an MEng in *Electrical and Computer Engineering* (spec. Artificial Intelligence, Software Engineering, Control Systems) from National Technical University of Athens (NTUA). He also holds an MSc in *Decision Sciences* (spec. Statistics, Financial Engineering, Operations Research and Computer Science) and a PhD in *Big Data Science & Computational Econometrics with Machine Learning* from Athens University of Economics and Business (AUEB). He has more than twenty five years of postdoctoral research and teaching experience in many distinguished universities, centres and research institutions, mainly in the Netherlands, Italy, France, UK and Greece. He was a faculty member/research fellow at the European Institute for Statistics, Probability, Stochastic Operations Research and its Applications (EURANDOM), Technical University of Eindhoven, at the Center for Nonlinear Dynamics in Economics and Finance (CeNDEF) of the Faculty of Economics and Econometrics of the University of Amsterdam, at the Department of Economics of the European University Institute (EUI) in Florence (Italy), at the Hellenic Ministry of Finance, at the Centre of Planning and Economic Research (KEPE), at the IPAG Business School in Paris, France, and at the Decision Support Systems Laboratory of the National Technical University of Athens.

He has been awarded numerous prestigious Grants including the Max Weber Fellowship – the largest postdoctoral programme in the social sciences in the world hosted by the EUI and funded by the European Commission (DG Education) – three MSCA Fellowships & Awards for pioneering work on multidisciplinary research, many national grants/awards by the EU, NWO, RC-AUEB/GSRT and

he was appointed Scientific director of European EC projects (FP-7, H2020) at EU universities and institutions. He held many research Post-Doctoral positions at EURANDOM, CeNDEF, AUEB and at the EUI.

Professor Bekiros holds **four (4) Habilitations** in *Statistics*, *Econometrics*, *Operations Research & Mathematical Methods in Economics, Insurance & Finance*, and *Economic Policy*. He was elected in 2019 Full Professor of Economic Statistics at the Dept. of Statistical Sciences of the University of Padova, Italy. He is Chair Full Professor of FinTech/AI, Econometrics & Data Science at the Faculty of Economics, Management (FEMA) of the University of Malta and Research Full Professor at the IPAG Business School, Senior Fellow of the LSE Health Center at the Department of Health Policy, London School of Economics (LSE), Senior fellow at the Rimini Centre for Economic Analysis (RCEA), senior fellow of LABEX ReFi / Financial Regulation Lab, ADEMU affiliated researcher at the European University Institute and senior visiting fellow, whilst he holds *Honorary Chair Full Professor posts* at the University of Turin, London School of Economics and IPAG. Professor Bekiros has also worked in other research positions in the academia and as an engineering & financial expert consultant in the public and private sector.

He is the **only researcher** who has been **awarded 4 prestigious European Fellowships,** in particular **3 Marie Skłodowska-Curie (MSCA) Fellowships (2011, 2013, 2015)** for pioneering multidisciplinary work at the intersection of many scientific fields, as well as a **Max Weber Fellowship (MWP)** in economics by the **European Commission (2009).** Professor Bekiros strongly emphasizes multidisciplinary, interdisciplinary and trans-disciplinary research through applying *Future Technologies* approaches from *Quantum Computing, Blockchain, Economics, Computer Science & Software Engineering, IoT, Big Data Science, Machine Learning, Artificial Intelligence, Physics, Electrical Engineering, Cognitive sciences/Psychology, Bioinformatics, Medicine* etc. in studying the complexity of economic and social systems.

Professor Dr. Stelios Bekiros is *pioneer* in developing and applying *Artificial Intelligence* **and** *Machine Learning* approaches as well as *Econophysics* **and** *Complex Systems Science* in many disciplines, particularly in social sciences. Back in *1998*, under the scope of his MEng thesis, he developed a novel Artificial Intelligence Evolutionary Genetic Algorithm utilized in conjunction with nonlinear Operations Research approaches and Computational Game Theory, in order to optimise the returns of complex synthetic structured derivatives' portfolios, while at the same time mitigating the economic, environmental, operational, financial and climate risks involved in the early attempts of deploying deregulated electricity and energy markets with heterogeneous agents, investors, speculators, arbitrageurs, institutional, governmental and regulatory stakeholders. In his MSc thesis *(2001)* he employed complex theory approaches, from earth sciences, meteorology, climate and environmental sciences, to hydrology, structural engineering, seismology, multivariate extreme value statistics (EVT) and chaotic nonlinear dynamical systems, in building new mathematical and empirical models of superior forecastability, for social, natural and physical sciences. In his PhD dissertation *(2004)* he was one of the first early scholars to utilize mathematical/biology models of self-organised fractality originating from Statistical Mechanics and Complexity theory, combined with models of inherent Heisenberg indeterminacy and uncertainty derived from Quantum Mechanics, with the aim of developing Integrated Artificial Intelligence Systems, capable of processing, forecasting and nowcasting multi-dimensional variable/parameter Big Data-driven models, during crises outbreaks. The Hybrid models which incorporated Deep Reinforcement Machine Learning algorithms (Recurrent Chaotic Neural Networks) fine-tuned via Heuristic Bayesian hyper-parameter training and Nonlinear Robust Control systems (Supervised

Evolutionary Actor-Critic Fuzzy Controllers), were deployed on Data pre/post-processing Pipelines with Embedded Time-Scale filters (Maximum Overlap Discrete & Continuous Transforms). Some of his early pioneering works, include **Bekiros et. al (2004)**, **Bekiros et. al (2005)**, **Bekiros (2007)**, **Bekiros et. al (2008)**, **Bekiros (2009)**, **Bekiros (2010)**, **Bekiros (2015)** among other.

He has participated in numerous conferences and academic seminars and has been an invited speaker in many prestigious universities and institutions. During the last twenty five years he has served as principal investigator, project manager or team member in many European and national research projects (e.g., H2020, FP7, Max Weber Programme, EC-MSCA, Netherlands organization for scientific research-NWO, EU 3rd Framework Programme, EIB, EC DG-XIII/ESPRIT, EPET-II/Hellenic Ministry of Development, Cyprus RPF/Penek etc.). Amongst many current projects he serves as **Principal Investigator** for a Mega-EU Grant project, under the Action programme *HORIZON-CL4-2022-DATA-01* of the Horizon Framework Programme for Research and Innovation (2021-2027), entitled: "*Promoting and Incentivising Federated, Trusted, and Fair Sharing and Trading of Interoperable Data ASsets*", Acronym "PISTIS", comprising a consortium of 104 partners coordinated by *Fraunhofer Society for the Advancement of Applied Research*, which is the biggest organization for applied research and development services in Europe. Fraunhofer is a German research organization of 76 institutes spread throughout Germany, each focusing on different fields of applied science with some 29,000 employees, mainly scientists and engineers, and an annual research budget of about €2.8 billion.

Professor Bekiros serves as **expert evaluator** for the NSERC (Natural Sciences and Engineering Research Council of Canada) and the NSF (USA), expert evaluator for the QS Reputation Survey – QS World University Rankings, expert evaluator/vice-chair for the European Commission (EU-REA panels, Horizon 2020), expert evaluator for the Swiss National Science Foundation (SNF), a WES expert for Ifo Institute (Leibniz Institute for Economic Research, University of Munich), expert project evaluator for "la Caixa Barcelona Institute" Banking Foundation, economic expert for the Bank of Finland, CEPR, Oxford University, international expert for Paris Region Fellowship Programme (ParisRegionFP), H2020 Orientation Service de la Recherche et Culture Scientifique while he is a regular evaluator of Research Centre of AUEB (RC-AUEB) & GSRT (Hellenic Ministry of Education). He has been a Visiting scholar at Cambridge University (UK), LUISS Guido Carli (Rome, Italy), Queen Mary University of London (UK), Linköping University (Sweden), University of Amsterdam (The Netherlands), European University Institute (Florence, Italy) and IPAG Business School (Paris, France).

He is **Editor-in-Chief, Academic Editor, Co-Editor and Assc Editor** for more than 20 prestigious Journals: "*PLOS ONE*", Plos; "*Chaos, Solitons & Fractals*", Elsevier; "*Economics – Innovative And Economic Research Journal*", Elsevier; "*INFORMS Journal on Applied Analytics (IJAA) (formerly Interfaces)*"; "*Entropy*" Journal; "*Big Data Analytics*", Springer-Nature; "*Journal of Economic Surveys*" Wiley, "*Risk Analysis*", Wiley; "*Journal of Forecasting*", Wiley; "*Computational Economics*", Springer; "*Review of Behavioral Economics*"; "*Review of Behavioral Finance*"; "*Quantitative Finance & Economics*"; "*International Review of Financial Analysis*", Elsevier; "*Journal of International Financial Markets Institutions & Money*", Elsevier; "*Finance Research Letters*", Elsevier; "*Heliyon*", Elsevier; "*Emerging Markets Finance and Trade*", Taylor & Francis; "*International Review of Economics & Finance*", Elsevier; "*Alexandria Engineering Journal*", Elsevier; "*Forecasting*" journal; "*Technology in Society*", Elsevier etc.

His work, with presently ***over 320 articles***, has been published in the ***most highly esteemed academic*** *journals* and in books and proceedings in many scientific fields. He has currently more than 10 articles under review in distinguished journals and writes one book and a collective volume.

His research interests include among other *Quantum Machine Learning & Artificial Intelligence, Blockchain Technology, Complex Systems, DeFi, FinTech, Big Data Science, IoT, Chaos and Econophysics, Epigenomics, Computational Medicine, Bioinformatics, Computational Econometrics, Extreme and Bayesian Statistics, Complex Systems, Financial Engineering, Macro-Finance, OR, Behavioral Finance, Electrical & Computer Engineering* etc. He acts as a referee for top journals in many scientific disciplines aside from economics, and in 2010 he was given the best reviewer award by the prestigious European Journal of Operational Research (EJOR, Elsevier), and in 2016 by the Journal of Empirical Finance (Elsevier). He is a member of the European Area Business Cycle Network (EABCN), the Econometric Society, Royal Economic Society, the European Economic Association, the Society of Financial Econometrics, the IEEE Computational Intelligence Society, INFORMS, the Society for Computational Economics (SCE), the Society for Economic Measurement (SEM) and the Rimini Centre for Economic Analysis (RCEA). He is Senior Fellow at the LSE Health Center of London School of Economics (LSE).

His **well-developed teaching portfolio** includes under- and post-graduate courses such as "*Big Data Science, Machine Learning & Artificial Intelligence in Economics/Finance*" (MSc/PhD level), "*Time Series Econometrics*" (Hons/MSc) & "*Advanced Econometrics*" (Hons/MSc level), "*Econophysics & Nonlinear Economic Dynamics*"/"*Complexity theory Economics*" (MSc/PhD level), "*Advanced Econometrics*" (PhD/MSc, BSc & ERASMUS level), "*Tokenization, Blockchain & DeFi*" (MSc/PhD level), "*Crypto-Econometrics, Algorithmic trading & Technical analysis*"" (crash course mode), "*Econometrics in Banking & Finance*" (BSc/Hons level), "*Spectral & Nonparametric Econometrics*" (crash course mode), "*Stochastic Differential Equations & Martingales with Applications in Derivatives Markets*" (BSc & MSc level), "*OR & Decision/Expert Systems*" (MEng/PhD level) School of Electrical & Computer Engineering (NTUA), "*Computational Finance & Econometrics*" (ERASMUS++ level), "*Quantitative Methods in Economics & Finance*" (BSc in Finance), "*Financial Engineering & Risk Measurement*" (BSc/MSc level).

Professor Bekiros strongly envisions the **enhancement of extrovercy, visibility and excellence** through the following agenda, amongst other:

- *Building national and international networks & partners (private sector, universities etc.) towards conducting collaborative research*

- *Submitting research proposals (ERC Grants, Horizon 2023-2027, UK-ESRC, Levehulme etc) to EU, UK, USA or any other national funding bodies, economic and financial institutions*

- *Promotion of multidisciplinary projects; fostering a multidisciplinary scientific community could really "unchain" scientists from the conventional constraints of a specific academic department, institute, centre, and provide the ideal environment for innovative, frontier science*

- *Participating, developing synergies and organizing conferences, workshops, regular seminar series under the core topics of the University as well as other sub-areas of research*

- *Contributing and advancing the portfolio of collaborative teaching and research in all levels i.e., undergraduate, Masters and PhD programs at the University. His agenda is dynamically updated based on the University needs and high-quality collaborations with the faculty members, postdoctoral, Masters and PhD students*

Beyond his academic profile, Prof. Bekiros holds an MMUS in music theory and guitar performance in most genres, including jazz, classical, rock, fusion etc. Moreover, he served in the military, specifically in Armor (black berets) and Artillery (blue berets) Arms, where he was trained for active combatant unrestricted service I1 (equivalent 1-A USA). He is inspired by the philosophies of all martial arts. *Sensei Bekiros* is an accomplished Black Belt Dan Ju-Jitsu Master (JJ International Federation), a Mixed Martial Arts (MMA) instructor, an ISU certified Self-defense instructor by the International StreetFighting Union (ISU), and a disciple of DAS streetfighting system. He has certified seminar training in Aikido, and knowledge of advanced armed and unarmed combat techniques in the Israeli elite special forces system of Krav-Maga. During the last years, he trains extensively in Muay Boran and Muay Thai.