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Head Research Data Center IDSC

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IZA Institute
of Labor Economics
Initiated by Deutsche Post Foundation

Personal Data	Citizenship: Greek / German Date and Place of Birth: April 6 1965 in Thessaloniki Greece Children: Irimi Elena Askitas Languages: Greek, English, German, French, Italian
Education	1994: PhD Mathematics (Thesis: On 2-spheres in 4-manifolds), Indiana University, Bloomington, IN, US 1990: MA Mathematics (Emphasis on Mathematical Logic), Indiana University, Bloomington, IN, US 1988: B.A. Mathematics and Computer Science, Aristoteleion University, Thessaloniki, Greece 1983: Highschool, Thessaloniki, Greece
Research Fields & Interests	Epidemiology, Technology, Applications of Big Data and Web Data to Economics and Social Science, Behavioral Macroeconomics, Data Science, Time Series, Forecasting, Game Theory, Non-linear dynamics, complex social processes, Machine Learning, Classical Knot Theory, Four Dimensional Topology.
The Toll Index	I publish a monthly leading Indicator of the German Business Cycle called Toll Index. The Toll Index is an example of what I call “economic telemetry”. It was introduced in a joint paper with Klaus F. Zimmermann titled “Nowcasting Business Cycles Using Toll Data” published in the Journal of Forecasting (https://dx.doi.org/10.1002/for.1262). It is based on MAUT data and exploits the idea that just-in-time delivery turns the highway into a warehouse and hence production and transportation are coincident. Since transportation measurements are faster due to the underlying technology of the MAUT we can get an advance sneak peak of production. The Toll Index has been covered extensively in the press among others on the CNN International show “ Marketplace Europe ”.
Conference Organizer	Fifth IDSC of IZA Workshop: Matching Workers and Jobs Online - New Developments and Opportunities for Social Science and Practice, September 16-17 2022, Online. Fourth IDSC of IZA Workshop: Matching Workers and Jobs Online - New Developments and Opportunities for Social Science and Practice, October 2021, Online Third IDSC of IZA Workshop: Matching Workers and Jobs Online - New Developments and Opportunities for Social Science and Practice, September 2020, ONLINE. (IDSC

of IZA and University of Luxembourg).

Second IDSC of IZA Workshop: Matching Workers and Jobs Online - New Developments and Opportunities for Social Science and Practice, September 2019, Bochum. (IDSC of IZA and Center of Advanced Internet Studies).

Industrial Relations and Social Dialogue in the Age of the Collaborative Economy – IRSDACE, November 28 2018, Bonn, Germany.

Arbeitsbeziehungen und sozialer Dialog im Zeitalter der kollaborativen Wirtschaft – IRSDACE, November 27 2018, Bonn, Germany.

IDSC of IZA Workshop: Matching Workers and Jobs Online - New Developments and Opportunities for Social Science and Practice, September 2018.

Tenth Annual European DDI Users Group Meeting, DIW/SOEP - German Institute for Economic Research, December 2018.

Nineth Annual European DDI Users Group Meeting, FORS - Swiss Centre of Expertise in the Social Sciences, December 5-6, 2017.

Eighth Annual European DDI Users Group Meeting, GESIS, Cologne, December 6-7, 2016.

Seventh Annual European DDI Users Group Meeting, Statistics Denmark and the National Archives, Copenhagen, December 2-3, 2015.

Sixth Annual European DDI Users Group Meeting, IOE – Institute of Education, London, UK, 2014

Fifth Annual European DDI Users Group Meeting, Réseau Quetelet - French Data Archives for Social Science, Paris France, 2013

Metadata and Persistent Identifiers for Social and Economic Data - Describing the input and output of empirical research in a persistent way, Berlin-Brandenburg Academy of Sciences and Humanities

Fourth Annual European DDI Users Group Meeting, NSD - Norwegian Social Science Data Services, Bergen Norway, 2012

Third Annual European DDI Users Group Meeting, SND - Swedish National Data Service, Gothenburg Sweden, 2011.

Joint Workshop FORS, University of Lausanne and IDSC of IZA on Redistribution and Well-Being, Lausanne, Bonn 2011.

Persistent Identifiers for the Social Sciences, Bonn 2011.

Second Annual European DDI Users Group Meeting, Utrecht 2010.

First Annual European DDI Users Group Meeting: DDI - The Basis of Managing the Data Life Cycle, Bonn 2009.

German Stata User Group Meeting, Bonn 2009.

Open Data Foundation Europe (ODaF), Bonn 2009

IDSC Workshop on Comparability of DDI/SDMX, Wiesbaden 2008

Presentations

Research

Use of online job ads data and big data in research, CEDEFOP: Towards smarter and people-centred skills intelligence – Online job advertisements: Gaining real-time insights into skill trends, Thessaloniki Greece/Zoom. CELSI, Bratislava, March 2019.

New Data Sources for Social Science, InGRID: Main Gaps in Research Infrastructures in Central-Eastern Europe. CELSI, Bratislava, March 2019.

Exploiting the Internet as a Data Source for Social Science, Research Seminar: Ifo Zentrum für Industrieökonomik und neue Technologien , February 2019.

Forecasting with Big Data, Conference organised by the Central Bank of Argentina, November 2017.

Big Data and the Social Sciences, Keynote, Big Data Session, 5th International eLife Congress, June 2016.

Methodologies and tools for policy analysis. Expert workshop on “Using Big Data to Advance Policy Research” under the auspices of the INGRID Project, CEPS, May 2016.

Internet Data in the Social Sciences, GESIS, Cologne, 2015

Health and Well-being in the Crisis, invited talk at the Computational Social Science Conference, Warwick Business School, UK, June 2014.

Selfish Altruism, Fierce Cooperation and the Emergence of Cooperative Equilibria from Passing and Shooting at the International Conference on Game Theory, Stony Brook Center for Game Theory, US, July 2014.

Selfish Altruism, Fierce Cooperation and the Emergence of Cooperative Equilibria from Passing and Shooting at the 16th Conference on the Foundations of Utility and Risk, Erasmus School of Economics, Rotterdam, NL, June-July 104.

Selfish Altruism, Fierce Cooperation and the Emergence of Cooperative Equilibria from Passing and Shooting at Norms Actions Games 2104, Kings College London, UK, April 2014.

Detecting Mortgage Delinquencies with Google Trends, Workshop on Using Big Data for Forecasting and Statistics, European Central Bank, Frankfurt, DE, April 2014.

General Public

“Matching Facilitators of Supply and Demand in Labor Markets”, *Globalization Revisited - Symposium on Economic and Social Development (giz), Bad Neuenahr, 2018.*

“Exploring the Internet as a data source for Social Science”, *Panel-Session RatSWD: Microdata for analysing the “digital economy”, Verein für Socialpolitik - Jahrestagung 2018 “Digitale Wirtschaft”, Freiburg im Breisgau*

“Matching supply and demand in the labour market”, OECD Boulogne, Paris, June 2018, [Expert Meeting on new labour market data sources](#).

“Exploring the Internet as a data source for Social Science”, RatSWD-Session, Verein für Socialpolitik - Jahrestagung 2018 “Digitale Wirtschaft”

Arbeitswelt 4.0 - Mensch und Maschine in unsere komplexe soziotechnische Gesellschaft

(upcoming), 12. Bonner Unternehmertage, October 2017.

Digitalisierung und Modernisierung der Arbeitswelt, Auswärtiges Amt, Seminar für Regionaljournalisten in Palermo, Italien 2017

Über die ökonomische Signifikanz des geotagging von Daten, [Neues aus der Vogelperspektive - Innovationen aus dem Bereich Geoinformatik](#) (IHK Bonn/Rhein-Sieg, T-Systems, Podium 49), Juni 2016

Arbeit 4.0: Wo bleibt der Mensch in eine Welt umwälzende Technologien? (upcoming), Arbeiten in der digitalen Welt – Innovationstag 2016 IHK NRW, June 16 2016, 3M Deutschland GmbH.

Über die ökonomische Signifikanz des geotagging von Daten, ITK Innovativ, IHK Bonn/Rhein-Sieg, T-Systems, Podium 49 (June 6 2016)

Panel with Lena Olivier (LinkedIn) at the Wage Indicator Conference – Celebrating 15 years of WageIndicator

“Mechanical muscles with digital brains” und wo bleibt der Mensch?, [Wirtschaft 4.0 – Beispiele für das intelligente Arbeitsleben von morgen](#), IHK Bonn/Rhein-Sieg

Der technologische Wandel und seine Auswirkung auf die Arbeitswelt, Rotary Club Bonn-Museumsmeile, February 2015.

Big Data is the New Bacon, keynote at [Big Data – Neue Rohstoffquellen erschließen](#) (IHK Bonn/Rhein-Sieg, T-Systems, Podium 49), September 2014

Secure Computing Against Sensitive Data with JoSuA, GESIS, Cologne 2013

Invited Participations

Remembering and Forgetting in the Digital Age 2015, Forschungsstelle für Informationsrecht (FIR-HSG) Universität St. Gallen, Schaffhausen, CH, April 2015.

Second Open Economics Workshop, Open Knowledge Foundation, CIPIL and MIT Sloan School of Management, supported by the Alfred P. Sloan Foundation. MIT Sloan School of Management, US, June 2013

[Open Research Data](#), European Commission Public Consultation

Remembering and Forgetting in the Digital Age 2012, Forschungsstelle für Informationsrecht (FIR-HSG) Universität St. Gallen, Schaffhausen, CH, October 2012.

First Open Economics Workshop, Open Knowledge Foundation and CIPIL, supported by the Alfred P. Sloan Foundation. Emmanuel College, University of Cambridge, UK, December 2012

Experience

- Text Mining with Python for Economists, IZA Fall 2017.
- Text Mining with Python for Economists, Potsdam Center for Quantitative Research, University of Potsdam, <https://www.uni-potsdam.de/en/pcqr/events/pcqr-workshops.html>
- Using the Internet as a data source for social science, University of Luxembourg, [Fall 2020](#).
- Selected applications of web-scraping and text-mining with Python for Economists. A hands-on approach, University of Luxembourg, [upcoming: May 18-20, 2022](#)

I have done consulting projects centered around technology, research with Big Data, matching of supply and demand in labor markets etc for organizations such as the International Monetary Fund, OECD, PARIS21, the European Commission etc.

I have invented and (together with the [DDI Alliance](#) and [GESIS](#)) I run EDDI – the [European DDI Conference](#). The conference is a roaming event whose aim is to promote systematic data documentation centered around the DDI standard but also to build a networked European community of data workers.

I have invented [JoSuA](#) the premiere remote processing web based solution used among others at the FDZ IAB – [Research Data Center of the Research Institute of the German Federal Employment Agency](#) in Nurnberg. JoSuA allows data custodians to open their sensitive data for research by any researcher anywhere on the globe while at the same time keeping the data safe within the custodian’s datacenter.

10/2014 – IZA Director of Data and Technology (Head of IT and Head IDSC)

08/2008 – Head of IDSC

01/2008 – Deputy Head of IT

2000-present – IT at IZA

1999 – Visiting Fellow, Aristoteleion University, Thessaloniki, Greece

1998 – Military Service in Greece

01/1997-08/1997 – Guest Researcher at the MPIM in Bonn

10/1996-12/1996 – Visiting Position at the MPI

10/1994-09/1996 – Leibniz Fellow, Max-Planck-Institute for Mathematics, Bonn

1989-1994 – Teaching Assistant Mathematics, Indiana University

1983-1988 – Candidature in Municipal Politics, Thessaloniki.

Awards and Grants

1999 EU-Fellowship at the Aristoteleion University

1994-1996 Leibniz Fellow at the MPIM in Bonn

Work In Progress

Internet and Economic Growth

A Dataset of Science Communication Press Releases

Data Trends in Labor Economics

Publications

Economics / Data Science

Lockdown Strategies, Mobility Patterns and COVID-19, *IZA DP 13293* (with Konstantinos Tatsiramos and Bertrand Verheyden, included in [vol. 23](#) of CEPR’s Covid Economics: Vetted and Real-Time Papers. Published in Nature Journal: [Scientific Reports](#))

Explaining opinion polarisation with opinion copulas, *IZA DP 10753* (Published [PLoS ONE](#))

Big Data is a Big Deal but how much data do we need?, AStA Wirtschafts- und Sozialstatistisches Archiv, ([10.1007/s11943-016-0191-3](https://doi.org/10.1007/s11943-016-0191-3)).

Trend-Spotting in the housing market, *Cityscape: A Journal of Policy Development and Research*, Office of Policy Development and Research – U.S. Department of Housing and Urban Development, Vol. 18, Number 2, 2016, pp. 185-198.

Google Search Activity Data and Breaking Trends, *IZA Word of Labor*.

Calling the Greek referendum on the nose with Google Trends, *IZA DP 9569*.

Predicting the Irish “Gay Marriage” Referendum, *IZA DP 9570*

Predicting Road Conditions with Internet Search, *IZA DP 9503* (Published [PLoS ONE](#))

Selfish Altruism, Fierce Cooperation and the Emergence of Cooperative Equilibria from Passing and Shooting, *IZA DP 7896* (Published [Journal of Biological Dynamics](#))

The Toll Index: Innovation-based Economic Telemetry, *IZA Policy Paper Series 31*, with Klaus F. Zimmermann

Detecting Mortgage Delinquencies, *IZA DP 5895* (with Klaus F. Zimmermann, submitted for publication)

The internet as a data source for advancement in social sciences, *International Journal of Manpower*, Vol. 36 Iss: 1, pp.2 – 12 (with Klaus F. Zimmermann)

Health and well-being in the great recession, *International Journal of Manpower*, Vol. 36 Iss: 1, pp.26 – 47 (with Klaus F. Zimmermann)

Nowcasting Business Cycles Using Toll Data, *Journal of Forecasting*, 2013, 32 (4), 299 – 306. (with Klaus F. Zimmermann)

Googlemetrie und Arbeitsmarkt, *Wirtschaftsdienst*, Juli 2009. (with Klaus F. Zimmermann)

Google Econometrics and Unemployment Forecasting, *Applied Economics Quarterly*, 2009, 55 (2), 107 – 120. (with Klaus F. Zimmermann)

Economic Policy

[Flattening the COVID-19 curve: What works](#) , 2020 (joint with K. Tatsiramos and B. Verheyden)

[Online Talent Platforms, Labour Market Intermediaries and the Changing World of Work](#), 2018.

IRSDACE - Industrial Relations and Social Dialogue in the Age of the Collaborative Economy, in preparation.

[“Emerging Labour Market Data Sources towards digital TVET”](#), PARIS21 Discussion Paper, No. 13, Paris, 2018 (forthcoming).

Data Technology

What Makes Persistent Identifiers Persistent?, *German Data Forum Working Paper Series* No. 147

Data Documentation and Remote Computing at the International Data Service Center of IZA, *IASSIST Quarterly*, 2008

With a DDI working group, URN and Entity Resolution in DDI 3.0

With a DDI working group, Management of DDI 3.0 identifiers

Programming

JoSuA, several [Stata modules](#). I am teaching courses on Python programming for web-scraping and text-mining for social scientists.

Mathematics

With Kalfagianni, Efstratia On Knot adjacency. *Topology Appl.* 126 (2002), no 1-2, 63-81

Grids as unknotting operations. *Knots in Hellas 98 (Delphi)*, 18-26, Ser. Knots Everything, 24, World Sci. Publishing, River Edge, NJ, 2000.

A grid of type pxq with $\gcd(p,q)=6$ unknots. *J. Knot Theory Ramifications* 9 (2000), no. 3, 285-292.

On 4-equivalent tangles. *Kobe J. Math.* 16 (1999), no. 1, 87-91.

Lambda-unknotting-number-one knots need not be prime. *J. Knot Theory Ramifications* no 8 (1999), no. 7, 831-834

A note on 4-equivalence. *J. Knot Theory Ramifications* 8 (1999), no. 3, 261-263

Multi-# unknotting operations: a new family of local moves on a knot diagram and related invariants of knots. *J. Knot Theory Ramifications* 7 (1998), no. 7, 857-871

A note on the #-unknotting operation. *J. Knot Theory Ramifications* 7 (1998), no. 6, 713-718

On pairs of locally flat 2-spheres in simply connected 4-manifolds. *Math. Z.* 228 (1998), no.1, 131-153.

Erratum: Embedding of 2-Spheres in 4-manifolds. *Manuscripta Mathematica.* 90 (1996), no.1, 137-138.

Embedding of 2-spheres in 4-manifolds. *Manuscripta Mathematica.* 89 (1996), no. 1, 35-47. May, 2007

Book Chapters/Contributions/Reports

Kurzexpertise: Berichterstattung über die Arbeitswelt in Deutschland: Datengrundlagen für Branchenbetrachtungen, N. Askitas, G. Tassoukis, N. Pestel, [FORSCHUNGSBERICHT 488](#), Bundesministerium für Arbeit und Soziales.

Google Search Activity Data and Breaking Trends, in *Evidence-Based Policy Making in Labor Economics The IZA World of Labor Guide 2016*

On the Interplay between Forgetting and Remembering, in F. Thouvenin et al., *Remembering and Forgetting in the Digital Age*, Law, Governance and Technology Series 38, Springer-Verlag, Heidelberg, https://doi.org/10.1007/978-3-319-90230-2_10

Social Media: eine technologische und ökonomische Perspektive, in *Social Media im Unternehmen – Ruhm oder Ruin*, Springer Vieweg

Edited Volumes

International Journal of Manpower, Special Issue on Using internet activity data, Editors: Nikolaos Askitas and Klaus F. Zimmermann

Boards, Affiliations, Service and Memberships to Professional Associations

Networks

Fellow member of the CESifo Research Network in the Area of Economics of Digitisation

Editorship

Member of the Editorial Board of [PLOS ONE](#), Academic Editor in Economics

Guest Editor for the [International Journal of Manpower](#), Special Issue on Using internet activity data

Reviewer

Several Journals in Mathematics, Economics and Data Science. Most recent: *IZA Journal of Labor Economics*, *Journal for Labour Market Research*, *EPJ Data Science*, *Food Policy*, *Computational Economics*, *Journal of Family and Economic Issues*, *IEEE Pervasive Computing*, *AStA Wirtschafts- und Sozialstatistisches Archiv*, *PLoS ONE*, *International Journal of Manpower*, *Journal of Population Economics*, *IZA Journal of Labor Economics*, *Journal of Economic Psychology*.

Boards and Committees

Canada Foundation for Innovation (CFI) Expert Evaluation Committee 2021-2022 for the 2023 Major Science Initiatives Fund (MSI), Canada Foundation for Innovation.

International Board of Reviewers of the [General Online Research Conference 2020](#) organized by the German Society for Online Research

Scientific Committee of [CARMA 2020](#). – 3rd International Conference on Advanced Research Methods and Analytics

Scientific Committee of [CiDaS 2019](#). – The International Conference on Contemporary Issues in Data Science

Scientific Committee of [CARMA 2018](#). – 2nd International Conference on Advanced Research Methods and Analytics

External Expert Evaluator COST – European Cooperation in Science and Technology

Pilot-Monitoringkommission FDI, RatSWD

Scientific Committee of German Stata User Group 2009 in Bonn Germany

Reviewer for *Math Reviews* since 1998 and referee for several Mathematics and Economics Journals

Scientific Committee of [CARMA 2016](#). – 1st International Conference on Advanced Research Methods and Analytics

Scientific Committee of and Invited Plenary Speaker at the [5th International eLife Congress](#).

Scientific Advisory Board of the Data Service Center of the Faculty of Sociology at the University of Bielefeld.

International Board of Reviewers of the [General Online Research Conference](#) organised by the German Society for Online Research

Advisory Board at the Open Data Foundation

Speaker of the [German Research Infrastructure](#) to the [German Council of Social and Economic Data](#).

Professional Associations

American Mathematical Society

German Statistical Society – Deutsche Statistische Gesellschaft

DDI alliance Experts Committee

[IASSIST](#) – International Association for Social Science Information Services and Technology

German Research Infrastructure

Verein für SocialPolitik

European Association of Labour Economists

Game Theory Society

IT / Computing Operating Systems: Unix/Linux Flavors, MacOS, MS Windows flavors.

Languages: Perl, Python, Stata, Shell Scripting, R.

Current Interests: Network Design, Security, Data Harvesting, Systems Architecture, Data management

Projects

Current

Emerging Labour Market Data Sources towards Digital TVET, PARIS21.

Online talent platforms, labour market intermediaries and the changing world of work, EU SSDC project with the World Employment Confederation Europe and UNI Europa. Consortium: CEPS, IZA.

IRSDACE - Industrial Relations and Social Dialogue in the Age of Collaborative Economy, funded by the European Commission. Consortium: CEPS, IZA, FAOS, CELSI.

Past

Social Media im Mittelstand – [Expedition Unternehmen](#)

Webdatanet, funded by COST - European Cooperation in Science and Technology

**In the Press
(selected)**

Interview with the Estonian Public Broadcasting, [Saksa teadlane: igas riigis töötavad piirangud erinevalt](#), February 2021

Estonian Public Broadcasting, [Viirust püüdes: Eesti, Läti, Soome, Leedu ja Rootsi piirangute lugu](#), February 2021

Le Quotidien, [Quatre mesures efficaces contre le Covid-19, selon le Liser](#), February 2021

Belgian Public Service Broadcaster RTBF, [Coronavirus : voici les mesures politiques les plus efficaces pour lutter contre l'épidémie](#), January 2021

Interview with Open Science Magazin – ZBW, [Wo technische Kompetenz steckt, ist auch Offenheit](#), November 2020

VOXEU/CEPR, [Flattening the COVID-19 curve: What works](#) , June 2020

IZA World of Labor, [Coronavirus, telecommuting, and the labor market](#), April 2020

The Economist – Intelligence Unit, [Taxing times](#), October 2018

IZA Newsroom, [Eine Datensteuer für die Digitalwirtschaft](#), October 2018

IZA Newsroom, [A data tax for a digital economy](#), October 2018

IZA World of Labor, [A data tax for a digital economy](#), October 2018

Washington Post, [What do Google search results tell us about the Brexit vote?](#), June 2016

LSE EUROPP, [Brexit and Scottish independence: Does campaign information actually change voters' minds during a referendum?](#), June 2016

Washington Post, [Can Google Trends predict referendum elections?](#), April 2016

Bloomberg, [How Google Searches pretty much nailed the New Hampshire Primary](#), February 2016

(Contains a quote of mine and mentions my work on [Calling the Greek Referendum on the Nose with Google Trends](#) in the context of the US primaries.)

New York Times. [“The Upshot” – To Know Who’s Leading in the Voting, Just Ask Google](#) by Justin Wolfers, February 2016

(Mentions my paper [Calling the Greek Referendum on the Nose with Google Trends](#) in the context of the US primaries).

Deutsche Welle, [Signale Im Rauschen](#), October 2015

(Mentions my work on the Toll Index and my blog on [askitas.com](#))

[Die Wirtschaft](#) – Industrie- und Handelskammer (IHK) Bonn/Rhein-Sieg

Wirtschafts Woche 24, [Copy of “Der Volkswirt”](#) , 5.6.2015

DRS3 Swiss public radio – Input (interview in audio in German and Schwyzerdütsch) [Big Data – Wie Forscher mit unseren Daten die Zukunft vorhersagen](#), January 1 2012

CNN International, [Joint interview with Klaus F. Zimmermann on the show “Market-place Europe” regarding our Toll Index](#), Dec 2011

Wirtschaftswoche, New Economics, [Maut als Maßstab](#), Nr. 041, p. 044, 10/10/2011.

The undercover economist, [In praise of the nowcast](#), Tim Harford, 2011

Financial Times, [In Praise of the nowcast](#) Tim Harford, 2011

Handelsblatt, [Krise Macht Krank](#), 2011