Enrico Bertini

Curriculum Vitae

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Dep. of Computer Science and Engineering
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Current Position

Associate Professor

Research Interests

Information Visualization, Visual Analytics, Human-Centered AI.

Education

2006 Ph.D. in Computer Engineering, Sapienza University of Rome
2002 Laurea (M.Sc.) in Computer Engineering, Sapienza University of Rome
1994 Classical High School Degree, Istituto Villa Flaminia, Rome, Italy

Employment

2018-present Associate Professor, CSE, NYU Tandon School of Engineering, Brooklyn, NY
2012-2018 Assistant Professor, CSE, NYU Tandon School of Engineering, Brooklyn, NY
2009-2012 Post-Doctoral Research Fellow, University of Konstanz, Germany
2006-2009 Post-Doctoral Research Fellow, University of Fribourg, Switzerland

Awards

2020 ACM CHI Best Paper Award: Honorable Mention
2019 IEEE VIS Best Poster Award: Honorable Mention
2019 FICO Explainable AI Challenge Award (2nd place)
2017 Google Faculty Research Award
2017 ACM CHI Best Paper Award: Honorable Mention
2016 ACM CHI Best Paper Award: Honorable Mention
2015 Winner, United Nations World Humanitarian Summit Data Challenge
2013 ACM CHI Best Paper Award: Honorable Mention
2011 IEEE BioVis Best Paper Award: Honorable Mention
2011 IEEE VAST Challenge: Grand Challenge Award

Publications with awards are marked in the publication list below.

Research Grants

Personal allocations are presented in brackets, when available.

2020-2021	NSF: "RAPID: Visualizing Epidemical Uncertainty for Personal Risk Assessment". Enrico Bertini, Rumi Chunara, Lace M. Padilla, Jennifer Howell.	$191,696	
2019-2022	AHRQ: "Development and Evaluation of Patient-Reported Outcome Score Visualization to Improve Their Utilization (PROVIZ)". Heather Gold, Enrico Bertini.	$299,933	
2019-2023	NSF IIS: "*Empirically Validated Perceptual Tasks for Data Visualization*". Steven Franconeri, Enrico Bertini.	$1,199,808	($402,405)
2020-2021	SAGE Concept Grant: "*The Exploratory Labeling Assistant*". Enrico Bertini.	£2,000	
2019-2021	Capital One Contract: "*Visualization for Explainable and Interpretable Machine Learning*". Enrico Bertini, Claudio Silva.	$500,000	($500,000)
2017-2020	NSF CRI: "*An Infrastructure of Display Devices to Study Visual Analytics Beyond the Desktop*". Enrico Bertini (PI), Claudio Silva (co-PI).	$273,552	($273,552)

2017-2018	Google Faculty Research Award: "*Interactive Visual Explanation of Machine Learning Models*". Enrico Bertini (PI), Yindalon Aphinyanaphongs (co-PI).	$54,048	($54,048)
2017-2019	DARPA Data-Driven Discovery of Models (D3M) Program: "*Streamlining Model Design, Comparison and Curation*". Juliana Freire (PI), Enrico Bertini, Kyunghyun Cho, Harish Doraiswamy, Claudio Silva (co-PIs).	$3,800,000	($500,000[1])
2016-2017	Pacific Northwest National Laboratory Contract: "*Visual Analytics for Data Streaming (Analysis In Motion Initiative)*". Enrico Bertini, Aritra Dasgupta (internal sponsor).	$123,128	($123,128)
2015-2016	Knight Foundation Prototype Fund: "*RevEx: A Data Visualization Tool To Find Stories in Millions of Internet Reviews*". Enrico Bertini.	$35,000	($35,000)
2015-2016	Pacific Northwest National Laboratory Contract: "*Visual Analytics for Data Streaming (Analysis In Motion Initiative)*". Enrico Bertini, Aritra Dasgupta (internal sponsor).	$107,436	($107,436)
2015-2017	MacArthur Foundation Grant: "*Data Visualization for Human Rights Advocacy*". Margaret Satterthwaite (PI), Enrico Bertini (PI), Oded Nov (PI).	$250,000	($125,000)
2014-2015	AIG Contract: "*Data Visualization for Sensemaking and Knowledge Discovery in Health Claim Analytics*". Enrico Bertini (PI), David Sontag (PI).	$125,000	($71,359)
2013-2014	Seed Grant NYU/NYU-Poly: "*Data Visualization for Human Rights*". Enrico Bertini (PI), Margaret Sattartwaithe (PI), Oded Nov (PI).	$100,000	($100,000)
2011-2013	DFG (German Research Foundation): SteerSCiVA: "*Visual Analytics methods to steer the subspace clustering process*". Enrico Bertini (PI), Thomas Seidl (co-PI).	€273,240	
2011-2013	SNSF (Swiss National Foundation): "*Humanitics: Visualizing migration flows and their development in time*". Denis Lalanne (PI), Enrico Bertini (co-PI).	CHF 113,576	
2009-2011	SNSF (Swiss National Science Foundation): "*Humanitics: Visual Analytics for All*". Denis Lalanne (PI), Enrico Bertini (co-PI).	CHF 96,568	

Publications

I publish most of my papers in top Visualization and HCI conferences and journals. IEEE InfoVis/VAST and EG/IEEE EuroVis are the two top conferences in Visualization. Their proceedings are published as journal papers in IEEE Transactions on Visualization and Computer Graphics (TVCG) and EG/IEEE Computer Graphics Forum (CGF). Their acceptance rate is typically between 20–25%. ACM CHI, UIST, CSCW are top conferences in Human-Computer Interaction and their acceptance rates are around 20%. Honorable mention awards at ACM CHI are given to the top 4–5% of the papers. Students who co-authored papers under my direct supervision as lead authors are marked with an asterisk (*).

Refereed journal papers

1. Hong, S. R., J. Hullman, and E. Bertini (2020). Human Factors in Model Interpretability: Industry Practices, Challenges, and Needs. *Proc. of the ACM on Human-Computer Interaction (CSCW)* **4**(CSCW), 1–26.
2. Ono, J. P., S. Castelo, R. Lopez, E. Bertini, J. Freire, and C. Silva (2020). PipelineProfiler: A Visual Analytics Tool for the Exploration of AutoML Pipelines. *IEEE Transactions on Visualization and Computer Graphics*.
3. Dasgupta, A., J. Poco, B. Rogowitz, K. Han, E. Bertini, and C. T. Silva (2018). The effect of color scales on climate scientists' objective and subjective performance in spatial data analysis tasks. *IEEE Transactions on Visualization and Computer Graphics*.
4. Koven*, J., C. Felix Da Silva*, H. Siadati, J. Markus, and E. Bertini (2018). Lessons Learned Developing a Visual Analytics Solution for Investigative Analysis of Scamming Activities. *IEEE Transactions on Visualization and Computer Graphics (Proc. of VAST)*.
5. Ming*, Y., H. Qu, and E. Bertini (2018). RuleMatrix: Visualizing and Understanding Classifiers with Rules. *IEEE Transactions on Visualization and Computer Graphics (Proc. of VAST)*.

[1] This amount is estimated since all PIs are at NYU and the resources are shared among them.

6. Felix Da Silva*, C., E. Bertini, and S. Franconeri (2017). Taking Word Clouds Apart: An Empirical Investigation of the Design Space for Keyword Summaries. *IEEE Transactions on Visualization and Computer Graphics (Proc. of InfoVis)*.
7. Felix Da Silva*, C., A. V. Pandey*, and E. Bertini (2017). TextTile: An Interactive Visualization Tool for Seamless Exploratory Analysis of Structured Data and Unstructured Text. *IEEE Transactions on Visualization and Computer Graphics (Proc. of VAST)* **23**(1), 161–170.
8. Katharina, R., M. L. Satterthwaite, A. V. Pandey*, J. Emerson, J. Boy, O. Nov, and E. Bertini (2016). Data Visualization for Human Rights Advocacy. *Journal of Human Rights Practice* **8**(2).
9. Dasgupta, A., J. Poco, Y. Wei, R. Cook, E. Bertini, and C. Silva (2015). Bridging Theory with Practice: An Exploratory Study of Visualization Use and Design for Climate Model Comparison. *IEEE Transaction on Visualization and Computer Graphics* **21**(9), 996–1014.
10. Boy, J., R. Rensink, E. Bertini, and J. Fekete (2014). A Principled Way of Assessing Visualization Literacy. *IEEE Transaction on Visualization and Computer Graphics (Proc. of InfoVis)* **20**(12), 1963–1972.
11. Fuchs*, J., P. Isenberg, A. Bezerianos, F. Fischer, and E. Bertini (2014). The Influence of Contour on Similarity Perception of Star Glyphs. *IEEE Transaction on Visualization and Computer Graphics (Proc. of InfoVis)* **20**(12), 2251–2260.
12. Krause*, J., A. Perer, and E. Bertini (2014). INFUSE: Interactive Feature Selection for Predictive Modeling of High Dimensional Data. *IEEE Transaction on Visualization and Computer Graphics (Proc. of VAST)* **20**(12), 1614–1623.
13. Pandey*, A. V., O. Nov, A. Manivannan, M. Satterthwaite, and E. Bertini (2014). The Persuasive Power of Data Visualization. *IEEE Transaction on Visualization and Computer Graphics (Proc. of InfoVis)* **20**(12), 2211–2220.
14. Poco, J., A. Dasgupta, Y. Wei, W. Hargrove, C. R. Schwalm, D. N. Huntzinger, R. Cook, E. Bertini, and C. T. Silva (2014). Visual Reconciliation of Alternative Similarity Spaces in Climate Modeling. *IEEE Transaction on Visualization and Computer Graphics (Proc. of VAST)* **20**(12), 1923–1932.
15. Poco, J., A. Dasgupta, Y. Wei, W. Hargrove, C. Schwalm, R. Cook, E. Bertini, and C. Silva (2014). SimilarityExplorer: A Visual Inter-Comparison Tool for Multifaceted Climate Data. *Eurographics/IEEE Computer Graphics Forum (Proc. of EuroVis)* **33**(3), 341–350.
16. Bertini, E., H. Strobelt*, J. Braun, O. Deussen, U. Groth, T. U. Mayer, and D. Merhof (2012). HiTSEE: A Visualization Tool for Hit Selection and Analysis in High-Throughput Screening Experiments for KNIME Platform. *BMC Bioinformatics* **13**(Suppl 8), S4.
17. Boyandin*, I., E. Bertini, and D. Lalanne (2012). A Qualitative Study on the Exploration of Temporal Changes in Flow Maps with Animation and Small-Multiples. *Eurographics/IEEE Computer Graphics Forum (Proc. of EuroVis)* **31**(3pt2), 1005–1014.
18. Lam, H., E. Bertini, P. Isenberg, C. Plaisant, and S. Carpendale (2012). Empirical studies in information visualization: Seven scenarios. *IEEE Transactions on Visualization and Computer Graphics* **18**(9), 1520–1536.
19. Bertini, E., A. Tatu*, and D. Keim (2011). Quality Metrics in High-Dimensional Data Visualization: An Overview and Systematization. *IEEE Transaction on Visualization and Computer Graphics (Proc. of InfoVis)* **17**(12), 2203–2212.
20. Boyandin*, I., E. Bertini, P. Bak, and D. Lalanne (2011). Flowstrates: An Approach for Visual Exploration of Temporal Origin-Destination Data. *Eurographics/IEEE Computer Graphics Forum (Proc. of EuroVis)* **30**(3), 971–980.
21. Krstajič*, M., E. Bertini, and D. Keim (2011). CloudLines: Compact Display of Event Episodes in Multiple Time-Series. *IEEE Transaction on Visualization and Computer Graphics (Proc. of InfoVis)* **17**(12), 2432–2439.
22. Bertini, E. and D. Lalanne (2010). Investigating and Reflecting on the Integration of Automatic Data Analysis and Visualization in Knowledge Discovery. *SIGKDD Explorations (Special Issue on Visual Analytics and Knowledge Discovery)* **11**(2), 9–18.
23. Bertini, E., T. Catarci, A. Dix, S. Gabrielli, S. Kimani, and G. Santucci (2009). Appropriating Heuristic Evaluation Methods for Mobile Computing. *International Journal of Mobile Human Computer Interaction* **1**(1), 20–41.
24. Bertini, E., M. Rigamonti, and D. Lalanne (2009). Extended Excentric Labeling. *Eurographics/IEEE Computer Graphics Forum (Proc. of EuroVis)* **28**(3), 927–934.
25. Batini, C., E. Bertini, M. Comerio, A. Maurino, and G. Santucci (2007). Visual Languages and Quality Evaluation in Multichannel Adaptive Information Systems. *Journal of Visual Languages and Computing* **18**(5), 513–522.

26. Bertini, E. and G. Santucci (2006). Give Chance a Chance: Modeling Density to Enhance Scatter Plot Quality through Random Data Sampling. *Information Visualization* **5**(2), 95–110.

Refereed conference papers

1. Xu, K., J. Yuan, Y. Wang, C. Silva, and E. Bertini (2021). mTSeer: Interactive Visual Exploration of Models on Multivariate Time-series Forecast. In: *Proc. of ACM CHI Conference on Human Factors in Computing Systems (CHI)*.
2. Zhang, Y., Y. Sun, L. Padilla, S. Barua, E. Bertini, and A. G. Parker (2021). Mapping the Landscape of COVID-19 Crisis Visualizations. In: *Proc. of the 2020 CHI Conference on Human Factors in Computing Systems (CHI)*.
3. Bertini, E., M. Correll, and S. Franconeri (2020). Why Shouldn't All Charts Be Scatter Plots? Beyond Precision-Driven Visualizations. In: *Proc. of IEEE Conference on Visualization (VIS)*.
4. Correll, M., E. Bertini, and S. Franconeri (2020). Truncating the Y-Axis: Threat or Menace? In: *Proc. of the 2020 CHI Conference on Human Factors in Computing Systems (CHI)*. **[Best Paper Award: Honorable Mention]**, pp.1–12.
5. Gomez*, O., S. Holter*, J. Yuan*, and E. Bertini (2020). ViCE: visual counterfactual explanations for machine learning models. In: *Proc. International Conference on Intelligent User Interfaces (IUI)*, pp.531–535.
6. Felix Da Silva*, C., A. Dasgupta, and E. Bertini (2018). The Exploratory Labeling Assistant: Mixed-Initiative Label Curation with Large Document Collections. In: *Proc. of ACM User Interface Software and Technology Symposium (UIST)*.
7. Boy, J., A. V. Pandey*, J. Emerson, M. Satterthwaite, O. Nov, and E. Bertini (2017). Showing People Behind Data: Does Anthropomorphizing Visualizations Elicit More Empathy for Human Rights Data? In: *Proc. of ACM CHI Conference on Human Factors in Computing Systems (CHI)*. **[Best Paper Award: Honorable Mention]**.
8. Krause*, J., A. Dasgupta, J. Swartz, Y. Aphinyanaphongs, and E. Bertini (2017). A Workflow for Visual Diagnostics of Binary Classifiers using Instance-Level Explanations. In: *Proc. of the IEEE Conference on Visual Analytics Science and Technology (VAST)*. IEEE.
9. Koven*, J., E. Bertini, L. Dubois, and N. Memon (2016). InVEST: Intelligent Visual Email Search and Triage. In: *Proc. of Digital Investigation*.
10. Krause*, J., A. Dasgupta, J.-D. Fekete, and E. Bertini (2016). SeekAView: An Intelligent Dimensionality Reduction Strategy for Navigating High-Dimensional Data Spaces. In: *Proc. of IEEE Symposium on Large Data Analysis and Visualization (LDAV)*.
11. Pandey*, A. K., K. Josua, C. Felix Da Silva*, J. Boy*, and E. Bertini (2016). Towards Understanding Human Similarity Perception in the Analysis of Large Sets of Scatter Plots. In: *Proc. of ACM CHI Conference on Human Factors in Computing Systems (CHI)*. **[Best Paper Award: Honorable Mention]**.
12. Felix Da Silva*, C., A. K. Pandey*, and E. Bertini (2015). RevEx: Visual Investigative Journalism with A Million Healthcare Reviews. In: *Proc. of Computation+Journalism Symposium (CJ)*.
13. Pandey*, A. V., K. Rall, M. Sattarthwaite, and E. Bertini (2015). How Deceptive are Deceptive Visualizations?: An Empirical Analysis of Common Distortion Techniques. In: *Proc. of ACM CHI Conference on Human Factors in Computing Systems (CHI)*.
14. Fuchs*, J., F. Fischer, F. Mansmann, E. Bertini, and P. Isenberg (2013). Evaluation of alternative glyph designs for time series data in a small multiple setting. In: *Proc. of ACM CHI Conference on Human Factors in Computing Systems (CHI)*. **[Best Paper Award: Honorable Mention]**.
15. Mansmann, F., M. Krstajic, F. Fischer, and E. Bertini (2012). StreamSqueeze: A Dynamic Stream Visualization for Monitoring of Event Data. In: *Proc. of Conference on Visualization and Data Analysis (VDA)*.
16. Tatu*, A., F. Maas, I. Farber, E. Bertini, T. Schreck, T. Seidl, and D. Keim (2012). Subspace Search and Visualization to Make Sense of Alternative Clusterings in High-Dimensional Data. In: *Proc. of IEEE Conference on Visual Analytics Science and Technology (VAST)*.
17. Bertini, E., H. Strobelt*, J. Braun, O. Deussen, U. Groth, T. U. Mayer, and D. Merhof (2011). HiTSEE: A Visualization Tool for Hit Selection and Analysis in High-Throughput Screening Experiments. In: *Proc. of IEEE Symposium on Biological Data Visualization (BioVis)*. **[Best Paper Award: Honorable Mention]**.
18. Tatu, A., P. Bak, E. Bertini, D. Keim, and J. Schneidewind (2010). Visual Quality Metrics and Human Perception: An Initial Study on 2D Projections of Large Multidimensional Data. In: *Proc. of ACM SIGCHI Working Conference on Advanced Visual Interfaces (AVI)*.

19. Bertini, E., A. D. Girolamo, and G. Santucci (2007). See What You Know: Analyzing Data Distribution To Improve Density Map Visualization. In: *Proc. of Eurographics/IEEE-VGTC Symposium on Visualization (EuroVis)*.
20. Bertini, E., P. Hertzog, and D. Lalanne (2007). SpiralView: Towards Security Policies Assessment through Visual Correlation of Network Resources with Evolution of Alarms. In: *Proc. of IEEE Symposium on Visual Analytics Science and Technology (VAST)*.
21. Bertini, E., L. Dell'Aquila, and G. Santucci (2006). Reducing Infovis Cluttering through Sampling, Displacement, and User Perception. In: *Proc. of Conference on Visualization and Data Analysis (VDA)*.
22. Bertini, E., S. Gabrielli, and S. Kimani (2006). Appropriating and Assessing Heuristics for Mobile Computing. In: *Proc. of ACM SIGCHI Working Conference on Advanced Visual Interfaces (AVI)*.
23. Bertini, E., A. Calì, T. Catarci, S. Gabrielli, and S. Kimani (2005). Interaction-based Adaptation for Small Screen Devices. In: *Proc. of User Modeling (UM)*.
24. Bertini, E., L. Dell'Aquila, and G. Santucci (2005). SpringView: Cooperation of Radviz and Parallel Coordinates for View Optimization and Clutter Reduction. In: *Proc. of IEEE International Conference on Coordinated & Multiple Views in Exploratory Visualization (CMV)*.
25. Bertini, E. and G. Santucci (2005). Improving 2D Scatterplots Effectiveness through Sampling, Displacement, and User Perception. In: *Proc. of IEEE International Conference on Information Visualization (IV)*.
26. Bertini, E. and G. Santucci (2005). Is It Darker? Improving Density Representation in 2D Scatter Plots through a User Study. In: *Proc. of Conference on Visualization and Data Analysis (VDA)*.
27. Ellis, G., E. Bertini, and A. Dix (2005). The Sampling Lens: Making Sense of Saturated Visualisations. In: *Proc. of ACM CHI Conference on Human Factors in Computing Systems (Late Breaking Results) (CHI)*.
28. Bertini, E. and G. Santucci (2004). By Chance is Not Enough: Preserving Relative Density through Non Uniform Sampling. In: *Proc. of IEEE International Conference on Information Visualization (IV)*.
29. Bertini, E. and G. Santucci (2004). Modeling Internet Based Applications for Designing Multi-Device Adaptive Interfaces. In: *Proc. of ACM SIGCHI Working Conference on Advanced Visual Interfaces (AVI)*.
30. Bertini, E. and G. Santucci (2004). Quality Metrics for 2D Scatterplot Graphics: Automatically Reducing Visual Clutter. In: *Proc. of Smart Graphics (SG)*.
31. Bertini, E. and S. Kimani (2003). Mobile Devices: Opportunities for Users with Special Needs. In: *Proc. of ACM SIGCHI International Conference on Human-Computer Interaction with Mobile Devices and Services (MobileHCI)*.

Refereed workshop papers

1. Krause*, J., A. Perer, and E. Bertini (2018). A User Study on the Effect of Aggregating Explanations for Interpreting Machine Learning Models. In: *KDD Workshop on Interactive Data Exploration and Analytics (IDEA)*.
2. Tamagnini*, P., J. Krause*, A. Dasgupta, and E. Bertini (2017). Interpreting Black-Box Classifiers Using Instance-Level Visual Explanations. In: *ACM SIGMOD Workshop on Human-In-the-Loop Data Analytics (HILDA)*.
3. Josua Krause* Adam Perer, E. B. (2016). Using Visual Analytics to Interpret Predictive Machine Learning Models. In: *ICML Workshop on Interpretability in Machine Learning*.
4. Krause*, J., N. Razavian, E. Bertini, and D. Sontag (2015). Visual Inspection of Longitudinal Electronic Medical Records. In: *IEEE VIS Workshop on Visual Analytics in Health Care (VAHC)*.
5. Boyandin*, I., E. Bertini, and D. Lalanne (2010). Using Flow Maps to Explore Migrations Over Time. In: *Workshop on Geospatial Visual Analytics (GeoVA)*.
6. Krstajič*, M., E. Bertini, F. Mansmann, and D. Keim (2010). Visual Analysis of News Streams with Article Threads. In: *ACM KDD Workshop on Novel Data Stream Pattern Mining Techniques (StreamKDD)*.
7. Bertini, E. and D. Lalanne (2009). Surveying the Complementary Role of Automatic data Analysis and Visualization in Knowledge Discovery. In: *KDD Workshop on Visual Analytics and Knowledge Discovery (VAKD)*.
8. Bertini, E., P. Hertzog, and D. Lalanne (2007). Visual Analysis of Corporate Network Intelligence: Abstracting and Reasoning on Yesterdays for Acting Today. In: *ACM Workshop on Visualization for Computer Security (VizSEC)*.
9. Bertini, E. and G. Santucci (2006). Visual Quality Metrics. In: *ACM CHI Workshop on BEyond time and errors: novel evaLuation methods for Information Visualization (BELIV)*.

10. Kimani, S., E. Bertini, and L. D. Bello (2005). The Pivotal Role of Visualization in Digital Libraries. In: *International Workshop on Audio-Visual Content and Information Visualization in Digital Libraries (AVIVDiLib)*.
11. Bertini, E. and S. Kimani (2004). Library and Ubicomp: Supporting Seamless Interaction with Physical and Digital Entities. In: *MobileHCI Workshop on Interaction Design for CSCL in Ubiquitous Computing*.
12. Bertini, E. and G. Santucci (2002). Data Mining and Information Visualization: a Result+Data Approach. In: *DIMACS Workshop on Visualization and Data Mining*.

Magazines, posters and invited papers

1. McColeman, C., E. Bertini, and S. Franconeri (2020). Poster: A Qualitative Assessment of Basic Perceptual Tasks Employed while Reading Common Data Visualizations. In: *Proc. of IEEE Conference on Visualization (VIS)*. **Best Poster Award: Honorable Mention**.
2. Dasgupta, A., J. Poco, E. Bertini, and C. T. Silva (2016). Reducing the Analytical Bottleneck for Domain Scientists: Lessons from a Climate Data Visualization Case Study. *Computing in Science & Engineering* **18**(1), 92–100.
3. Boyandin*, I., E. Bertini, and D. Lalanne (2010). Visualizing the World's Refugee Data with JFlowMap. In: *Eurographics/IEEE-VGTC Symposium on Visualization (EuroVis) (Poster)*.
4. Keim, D. A., P. Bak, E. Bertini, D. Oelke, D. Spretke, and H. Ziegler (2010). Advanced Visual Analytics Interfaces. In: *Proc. of the International Working Conference on Advanced Visual Interfaces (AVI'10)*. (Invited Paper). Roma / Italy: The Association for Computing Machinery, Inc. (ACM), pp.3–11.
5. Bertini, E., C. Plaisant, and G. Santucci (2007). BELIV'06: Beyond Time and Errors, Novel Evaluation Methods for Information Visualization. *ACM Interactions* **14**(3), 59–60.

Teaching Experience

Massive Open Online Course (MOOC)

I designed, developed and recorded a *Specialization in Information Visualization* for the leading MOOC platform *Coursera*. The specialization was published in Sep. 2018 and includes a total of 4 courses. Total enrollment across the 4 courses is currently at around 20,000 students.

Courses Taught at NYU

Information Visualization (Grad./Undergrad.) [NYU Tandon]	Spring'13, Spring'14, Spring'15, Fall'15, Spring'16, Fall'16, Fall'17, Fall'18, Spring'19, Fall'19, Spring'20, Fall'20, Spring'21, Summer'21, Fall'21
Information Visualization (Online) [NYU Tandon]	Spring'15, Spring'16, Fall'16, Fall'18, Spring'19, Fall'19, Spring'20, Fall'20, Spring'21, Fall'21
Data Sensemaking (Undergrad.) [NYU Tandon]	Spring'17, Spring'18, Summer'18
Human-Computer Interaction (Grad.) [NYU Tandon]	Fall'14
Visual Analytics (Grad.) [NYU Tandon]	Fall'13, Spring'19, Spring'20

Courses Taught at Univ. of Konstanz

Applied Visual Analytics [Univ. of Konstanz]	Fall'11
Information Visualization [Univ. of Konstanz]	Fall'10

Mentoring

PhD Students Advised at NYU

2020-Present	Racquel Fygenson [graduation expected Spring'25]
2019-Present	Daniel Kerrigan [graduation expected Spring'24]
2017-Present	Jun Yuan [graduation expected Spring'22]
2014-2019	Cristian Felix Da Silva [graduated Spring'19] (now at Accern)
2013-2019	Jay Koven (co-advised with Prof. Memon) [graduated Spring'19] (now self-employed)
2013-2018	Josua Krause [graduated Spring'18] (now at Accern)
2013-2017	Anshul Pandey [graduated Spring'17] (now at Accern)

PostDocs Advised at NYU

2020-2021	Ke Xu
2015-2016	Jeremy Boy (now at United Nations)
2019-2020	Ray Hong (now at George Mason University)
2012-2015	Aritra Dasgupta (now at NJIT)
2012-2014	Hendrik Strobelt (now at IBM Research)

Undergraduate Students Advised at NYU (Summer Research Program)

Summer 2021	Matthew Varona
Summer 2020	Andrew Qu
Summer 2020	Ayden Wang
Summer 2019	Selina Zhang
Summer 2018	Amanda Chiu
Summer 2018	Steffen Holten
Summer 2018	Oscar Gomez
Summer 2018	Minah Kim

Visiting PhD/Master Students Advised at NYU

Summer 2019	Alba Puy (Univ. of Rome La Sapienza)
Summer 2018	Federica Di Castro (Univ. of Rome La Sapienza)
Summer 2018	Alessandra Legretto (Univ. of Bari)
Summer 2018	Michela Bragagnolo (Univ. of Rome La Sapienza)
Spring 2017	Yao Ming (Hong Kong Univ. of Science and Technology)
Fall 2017	Giorgio Giannone (Univ. of Rome La Sapienza)
Fall 2017	Manfredi Roesler Franz (Univ. of Rome La Sapienza)
Fall 2017	Livia Lombardi (Univ. of Rome La Sapienza)
Summer 2016	Paolo Tamagnini (Univ. of Rome La Sapienza)
Summer 2014	Marco Angelini (Univ. of Rome La Sapienza)
Fall 2013	Johannes Fuchs (Univ. of Konstanz)

PhD Students Advised (prior to joining NYU)

2009-2013	Andrada Tatu (with Prof. Keim) (Konstanz) [graduated] Thesis Title: *Visual Analytics of Patterns in High-Dimensional Data*
2008-2013	Ilya Boyandin (with Prof. Lalanne) (Fribourg) [graduated] Thesis Title: *Visualization of Temporal Origin-Destination Data*

Master Students Advised (prior to joining NYU)

2012	Fabian Maaß(Univ. of Konstanz) Thesis Title: *Visual analytics for subspace search in high-dimensional data*
2010	Stefan Moritz Koch (Univ. of Konstanz) Thesis Title: *Spatio-temporal visualization for territorial market analysis*
2007	Lawrence Michel (Univ. of Fribourg) Thesis Title: *Web-based visualization of Swiss Post logistics*
2005	Luigi dell'Aquila (Sapienza Univ. of Rome) Thesis Title: *Visualization techniques for multidimensional data visualization*

PhD Student Committees

I am or have been a member of the PhD guidance committee of the following students: Nivan Ferreira (Prof. Silva), Jorge Poco (Prof. Silva), Junius Gunaratne (Prof. Nov), Tuan-Anh Hoang-Vu (Prof. Freire), Aline Bessa (Prof. Freire), Michal Siedlaczek (Prof. Suel), Hossein Siadati (Prof. Memon), Fabio Miranda (Prof. Silva).

Talks

Invited speaker at events/conferences:

06/2019	NYC Media Lab Machines + Media Working Group (New York, NY, USA)
11/2018	Sixth Arab-American Frontiers Symposium (Kuwait City, Kuwait)
10/2017	Uber Data Visualization Meetup (New York, NY, USA)
06/2017	PNNL Faculty Summit on Machine Learning and HCI (Richland, WA, USA)
05/2017	Conference on Algorithms and Explanations at NYU Law (New York, NY, USA)
11/2016	SciViz NYC (New York, NY, USA)
10/2016	10 Year Anniversary BELIV Workshop 2016 (Baltimore, MD, USA) [**keynote speaker**]
06/2016	Invited talk: PNNL Faculty Summit on Social Media Analytics (Richland, WA, USA)
03/2016	Tapestry Conference on Visual Storytelling (Estes Park, CO, USA)
11/2015	AMIA Workshop on Data Mining for Medical Informatics (San Francisco, CA, USA)
05/2015	Data Visualization Panel at Metis (New York, NY, USA)
05/2015	Mechanized Images for Human Eyes at Shenkar University (Tel Aviv, Israel)
04/2015	Tansley Workshop on Information Visualisation for Science and Policy (Ascot, UK)
11/2014	NYC Data Visualization Meetup (New York, NY, USA)

04/2014 NYU Center of Data Science Showcase (New York, NY, USA) [**keynote speaker**]
11/2013 Data Visualization Workshop at IBM Watson (Yorktown Heights, NY, USA)
06/2013 4th Workshop on Interactive Data Visualization (Rio De Janeiro, Brazil)
12/2011 DBTA Workshop on Information Visualisation (Zurich, Switzerland)
06/2011 Visualizing.org Workshop Visualizing Europe (Brussels, Belgium)
04/2011 International Development Research Center (Ottawa, Canada) [**keynote speaker**]
08/2009 Visual Analytics Center (VAC) Consortium Meeting at PNNL (Richland, WS, USA)

Speaker at department/company seminars:

10/2018 Microsoft Research Seminar (New York, NY)
05/2017 Data Science Seminar at NYU Center of Data Science (New York, NY, USA)
04/2016 DBVIS Visualization Retreat (Konstanz, Germany)
12/2015 BlackRock (New York, NY, USA)
06/2015 NASA JPL (Pasadena, CA, USA)
05/2015 AIG (New York, NY, USA)
03/2015 CUNY Graduate School (New York, NY, USA)
10/2014 University of Miami (Miami, FL, USA)
05/2014 CCICADA Rutgers University (Brunswick, New Jersey, USA)
01/2014 UMass Lowell (Lowell, USA)
05/2013 United Technologies Research Center (Hartford, CT, USA)
04/2012 University of Rostock (Rostock, Germany)
04/2012 NYU-Poly (New York, NY, USA)
04/2012 University of Utah (Salt Lake City, UT,USA)
03/2012 University of Notre Dame (Notre Dame, IN, USA)
03/2011 UMass Lowell (Lowell, MA, USA)
08/2009 University of Konstanz (Konstanz, Germany)
12/2005 University of Fribourg (Fribourg, Switzerland)
07/2005 SAP Research (Palo Alto, CA, USA)

Scientific Service

Program Committee Membership

ACM CHI	2017, 2019, 2021
IEEE InfoVis	2012, 2013, 2014, 2016, 2017
IEEE VAST	2010, 2011, 2012, 2014, 2015, 2018, 2019
EG/IEEE EuroVis	2011, 2012, 2013, 2017
IEEE BioVis	2012, 2013
ACM AVI	2010, 2012

Editor

2016 Co-Editor (with A. Perer and R. Maciejewski) of a Special Issue on Visualization in Big Data Journal

Conference Organization

2020 VIS 2020, Short Paper Co-Chair
2016 VIS 2016, Workshop Co-Chair
2016 EuroVis, Short Paper Co-Chair
2015 VIS 2015, Poster Co-Chair
2015 EuroVis, Short Paper Co-Chair
2015 EuroVA, Conference Co-Chair
2014 VIS 2014, Poster Co-Chair
2013 VIS 2013, Publicity Co-Chair
2012 VisWeek 2012, Publicity Co-Chair
2011 VisWeek 2011, Workshop Co-Chair
2010 VisWeek 2010, Workshop Co-Chair

Workshop and Panel Organization

I founded and co-chaired the BELIV workshop on evaluation methods in Visualization in 2006 and helped growing it to an established event for 10 years. It is now part of the regular IEEE VIS program as a "pre-approved" workshop.

IEEE VIS Workshop on "Pedagogy of Visualization" (2017)
[with A. Joshi, E. Adar, S. Engle, M. Hearst, D. Keefe]
IEEE VIS Workshop on "Visualization for Predictive Analytics" (2014)
[with A. Perer, R. Maciejewski, J. Sun]
IEEE VIS Panel on "Reproducible Visualization Research" (2012)
[with T. Munzner, C. Sheidegger, G. Kindlmann]
IEEE VIS Workshop on "Novel Evaluation Methods For Visualization" (BELIV) (2012)
[with P. Isenberg, T. Isenberg, H. Lam, A. Perer]
ACM CHI Workshop on "Novel Evaluation Methods For Visualization" (BELIV) (2010)
[with Heidi Lam, A. Perer]
ACM CHI Workshop on "Novel Evaluation Methods For Visualization" (BELIV) (2008)
[with A. Perer, C. Plaisant, G. Santucci]
SIGCHI AVI Workshop on "Novel Evaluation Methods For Visualization" (BELIV) (2006)
[with C. Plaisant, G. Santucci]

Reviewing (Conferences)

ACM CHI (2017, 2019, 2021)
IEEE InfoVis (2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017)
IEEE VAST (2009, 2010, 2011, 2012, 2014, 2015, 2018)
Eurographics/IEEE EuroVis (2010, 2011, 2012, 2013, 2017)
ACM Advanced Visual Interfaces (AVI) (2008, 2010, 2012)
IEEE BioVis (2011, 2012, 2013)

Reviewing (Journals)

Transaction on Visualization and Computer Graphics (TVCG)
Information Visualization Journal (IVS)
International Journal of Human-Computer Studies (IJHCS)

Scientific Dissemination and Outreach

- I am the founder and host (with Moritz Stefaner) of *Data Stories* (http://datastori.es), a popular podcast on data analysis, communication, and visualization.
- The podcast features between around 15,000 listeners per episode (published bi-weekly).
- The podcast serves a large community of academics and practitioners and is widely considered the most established podcast in Data Science (see list of mentions below).

Popular Media

Mentions/citations in popular books

2016 *Effective Data Visualization: The Right Chart for the Right Data.* Stephanie D. H. Evergreen. SAGE Publications.
2016 *Good Charts: The HBR Guide to Making Smarter, More Persuasive Data Visualizations.* Scott Berinato. Harvard Business Review Press.
2016 *The Truthful Art: Data, Charts, and Maps for Communication.* Alberto Cairo. New Riders.
2016 *Big Data and Social Science: A Practical Guide to Methods and Tools.* Ian Foster, Rayid Ghani, Ron S. Jarmin, Frauke Kreuter, Julia Lane. CRC Press.
2015 *Big Data at Work: The Data Science Revolution and Organizational Psychology.* Scott Tonidandel, Eden King, Jose Cortina Routledge.
2010 *Interactive Data Visualization: Foundations, Techniques, and Applications.* Matthew O. Ward, Georges Grinstein, Daniel Keim. CRC Press.

Newspapers and magazines

05/2016	Washington Post	*Doctors Fire Back at Bad Yelp Reviews and Reveal Patients Information Online.*
01/2016	The Economist	*Ratings Agency. Students Judge Their Teachers. Often Unfairly.*
08/2015	Health Imaging	*Healthcare Consumers Stand to Gain as Popular Yelp Teams with Brainy ProPublica.*
08/2015	NPR	*On Yelp, Doctors Get Reviewed Like Restaurants And It Rankles.*

NYU Press Releases

05/2019	NYU Press Release	*Top 15 Data Science Podcasts To Subscribe To In 2019.*
02/2019	NYU Press Release	*Summer Undergraduate Research Students Score Big in the FICO Challenge.*
12/2018	NYU Press Release	*Beagle Sniffs Out Email Scammers.*
04/2017	NYU Press Release	*Out With Boring Statistics And Charts? Not So Fast ... Tandon Researchers Shed Light On A Mistaken Assumption About Presenting Data.*
02/2017	NYU Press Release	*Machine Learning Demystified.*
03/2016	NYU Press Release	*Searching For Big Insights From Online Reviews.*
02/2016	NYU Press Release	*Big-Data Visualization Experts Make Using Scatter Plots Easier For Todays Researchers.*
11/2015	NYU Press Release	*When The United Nations Puts A Call Out To Data Pros ... Enrico Bertini's Data Visualization Group Triumphs.*
09/2015	NYU Press Release	*NYU Engineers Are Helping Visualize Better Healthcare.*
06/2015	NYU Press Release	*NYU Researchers: One Big-data Picture Is Worth A Thousand Words On Human Rights.*
08/2014	NYU Press Release	*Visualization Conference Selects 8 NYU School Of Engineering Papers.*

Mentions of Data Stories podcast

10/2020	Ubuntupit	*The 25 Best Data Science Podcasts You Must Listen in 2020.*
01/2020	Towards Data Science	*Top 20 Podcasts for Data Science.*
05/2017	Capterra Blog	*Top 11 Business Intelligence Podcasts.*
03/2017	ThoughtSpot	*9 Podcasts for People Who Love Data.*
11/2016	Startup Grind	*The 10 Best AI, Data Science and Machine Learning Podcasts.*
09/2016	DataCamp	*Learn Data Science - Resources for Python & R.*
09/2016	Kaggle Blog	*What We're Reading: 15 Favorite Data Science Resources.*
07/2016	Digital Surgeons Blog	*6 of the Best Digital Marketing and Analytics Podcasts.*
06/2016	Amplitude Blog	*5 Best Analytics Podcasts.*
04/2016	LunaMetrics Blog	*What Were Listening To: Top 12 Data-Related Podcasts.*
01/2016	Dataconomy	*Top 10 Data Science And Machine Learning Podcasts.*
06/2015	KDNuggets	*Best Big Data, Data Science, Data Mining, and Machine Learning Podcasts.*
04/2015	The Startup	*The 7 Best Data Science and Machine Learning Podcasts.*
12/2015	Data Pine	*Top 9 Big Data Podcasts To Sharpen Your Business Skills.*
02/2015	Tech Powered Math Blog	*Favorite Podcasts for Data Scientists.*

Open-Source Software

As a result of the research developed in my lab we have published several open source software tools[2]:

- *RevEx:* data visualization software to help journalists make sense of millions of reviews.
- *TextTile:* visual text analytics software to help people query and visualize large document collections.
- *Rivelo:* user interface to help people interpret machine learning models.
- *Explainer:* visual analytics software to help data scientists validate machine learning models.
- *Beagle:* interactive search software to help investigators make sense of large crime-related document collections.
- *ELA:* mixed-initiative tool to organize a document collection around a set of yet undefined categories.
- *SliceLens:* model exploration software to debug ML data and models through interactive subgroup analysis.
- *AdViCE:* model debugging software based on counterfactual explanations.
- *SuRE:* model analysis software based on rules.

University Affiliation and Service

Since joining NYU I am a member of the Visualization Imaging and Data Analysis (VIDA) group. As a group member I am actively participating to the advancement of the group and mentoring of our students.

[2] All project can be found in our group GitHub: https://github.com/nyuvis/.

Departmental service

2021 PhD Committee
2020 PhD Program Director (Interim)
2019 PhD Admissions Chair
2018 PhD Admissions Chair
2017 PhD Admissions Committee
2016 PhD Committee
2015 Outreach Committee
2014 PhD Committee
2014 NYU Shanghai Faculty Search Committee