

# Ottavia M. Epifania, Ph.D.

GitHub: <https://github.com/OttaviaE>  
Open Science Framework: <https://osf.io/profile/>  
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Phone: +39-3479261377

Birth Date: January 10<sup>th</sup>, 1990

## CURRENT EMPLOYMENT

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- **Temporary research fellow** Padova, IT  
*University of Padova* *July 2022 - June 2024*  
PRIN 2020 Project: “Computerized, Adaptive and Personalized Assessment of Executive Functions and Fluid Intelligence”  
Principal Investigator: Professor Luca Stefanutti  
Law: art. 22 della Legge 240/2010  
Note: Currently underway
- **Lecturer** Milan, IT  
*60-hour course (First semester), 8 c.f.u.* *Since Academic Year 2021/2022*  
Course: **Statistical Psychometrics** (Introduction to Measurement Theory in Psychology, univariate and bivariate descriptive statistics, Probability Theory, Statistical Inference)  
School: Bachelor degree in Psychology, Catholic University of the Sacred Heart, Milan, Italy  
Note: Currently underway, Confirmed for the Academic Year 2023/2024
- **Review Editor** *July 2021 - On going*  
*Frontiers in Quantitative Psychology*

## EDUCATION

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- **Ph.D. in Psychological Sciences; cum laudae** Padova, IT  
*University of Padova* *Oct 2017 - May 2021*  
Thesis defended on May, 14<sup>th</sup>, 2021  
Thesis reviewers: Prof. David Andrich, Prof. Francis Tuerlinckx.  
Defense committee: Prof. Luca Andrichetto, Prof. Caterina Primi, Prof. Katie Wolsiefer  
Thesis: Inglorious Measures: A Linear Mixed-Effects Model approach for a Rasch analysis of implicit measure accuracy and time responses  
Advisor: Professor Egidio Robusto  
Co-advisor: Professor Gianmarco Altoè  
Attended courses: Null hypothesis testing, R basics/advanced, Inferential Statistics (NHST), Inferential Statistics (Bayesian), Latent trait modeling, Scientific writing.
- **Visiting research scholar** Ohio, USA  
*The Ohio State University* *Jan 2019 - May 2019*  
Collaboration with Prof. De Boeck (i.e., multilevel data modeling, latent variable modeling)
- **Master Degree in Psychology, 110/110 cum laude** Genova, IT  
*University of Genova* *Nov 2012 - Nov 2014*  
Supervisor: Prof. Carlo Chiorri  
Thesis: Pratiche di Body Modifications: Associazione con la tendenza al self injury e con i tratti di personalità

- **Bachelor Degree in Psychology, 109/110**  
*University of Genova*  
 Supervisor: Dr. Paola Cardinali  
 Thesis: Violenza e processi Psicosociali: Il G8 di Genova

Genova, IT  
 Oct 2012 - Oct 2009

## PREVIOUS WORK EXPERIENCE

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- **Temporary research fellow**  
*University of Padova*  
 Project: “New frontiers in developing tests for Psychological Assessment”  
 Principal Investigator: Professor Pasquale Anselmi  
 Law: art. 22 della Legge 240/2010  
 Note: 5-month mandatory maternity leave, from 24<sup>th</sup> December 2021 to 24<sup>th</sup> May 2022  
 Padova, IT  
 Feb 2021 - June 2022
- **Translator**  
*EduVal Project srl*  
 English-Italian translations of documents, reports, tests for the OECD-SSES project  
 Busto Arsizio, IT  
 Sep 2018 - Dec 2018
- **Temporary research fellow**  
*Educational Technologies Institute - National Research Council*  
 Project: “Technologies for socio-educational inclusion of children with chronic illness”  
 Principal Investigators: Dr. Vincenza Benigno, Dr. Guglielmo Trentin  
 Law: art. 22, comma 3, della legge 240/2010, art. 6, comma 2 bis, della L. 27 febbraio 2015 n. 11, di conversione del D.L. 31 dicembre 2014 n. 192  
 Note: Originally, the contract was from May, 1<sup>st</sup> 2016 to April, 30<sup>th</sup> 2017, but it was extend on April, 24<sup>th</sup> for a 6-month period starting from April, 30<sup>th</sup> 2017.  
 Genova, IT  
 May 2016 - Sept 2017

## TEACHING EXPERIENCE

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- **Statistical Psycbometrics**  
*60-hour course, 8 c.f.u.*  
 Topics: Introduction to Measurement Theory in Psychology, univariate and bivariate statistics, Probability Theory, Statistical Inference  
 School: Bachelor Degree in Psychology, Catholic University of the Sacred Heart, Milan, IT  
 Milan, IT  
 Since A.Y. 2021/2022
- **An introduction to Item Response Theory Models with R**  
*6-hour Seminar*  
 Topics: Introduction to Item Response Theory for dichotomous responses, model estimation with R on simulated and real data, investigation of Differential Item Functioning.  
 School: University of Trento, Rovereto, IT  
 Course website: <https://ottaviae.github.io/IRTintro/>  
 Rovereto, IT  
 November, 17<sup>th</sup>, 2023
- **couRse: An introduction to R**  
*12-hour course*  
 Topics: Variables, functions, and operators, data structures, working with data frames, descriptive statistics, graphics (base R and ggplot2)  
 School: Graduate School in Psychology, Catholic University of the Sacred Heart, Milan, IT  
 Further information: Lesson at the Graduate School in Psychology of the Catholic University of the Sacred Heart.  
 Course website: <https://github.com/OttaviaE/coRso>  
 Milan, IT  
 June 7<sup>th</sup>-8<sup>th</sup>, 2023

- **RMarkdown: Reproducible analysis, presentations, reports and beyond** Padova, IT  
*20-hour course* *2022, 2023*  
 Topics: Basics of RMarkdown, integrating code, analysis, and text in one file, presentations with basic RMarkdown, xaringan, and beamer, introduction to quarto  
 School: Applied Research Courses Academy, Department of Developmental Psychology and Socialisation, University of Padova, Padova, IT  
 Further information: Open-badge course, Third mission. The course is an intensive school on RMarkdown. So far, it has been delivered three times (June 2022, March 2023, June 2023).  
 Course website: <https://arca-dpss.github.io/CorsoRmarkdown/>
- **Introduction to Item Response Theory with applications in R** Bolzano, IT  
*16-hour course* *December, 19<sup>th</sup>-21<sup>st</sup>, 2022*  
 Topics: Introduction to Item Response Theory for dichotomous responses, model estimation with R on simulated and real data, investigation of Differential Item Functioning.  
 School: University of Bolzano, Bolzano, IT  
 Course characteristics: Lesson at the Graduate School in Bressanone-Brixen  
 Course website: <https://ottaviae.github.io/bRixen-IRT/>
- **From experiment design to data analysis: How to work with implicit measures** Padova, IT  
*8-hour course* *2022, 2023*  
 Topics: Programming experiments in Inquisit, Saving data, Import and analyze data with R  
 School: II Level Master in Quantitative Psychology, University of Padova, IT  
 Further information: The course in an intensive school on programming and collecting data in Inquisit, and analyze the collected data. So far, it has been delivered twice times (July 2022, July 2023).
- **Programming in R and introduction to shiny** Padova, IT  
*12-hour course* *July, 2022*  
 Topics: Introduction to R and shiny, Basic and advanced programming in shiny  
 School: Higher Education Learning Platform for Quantitative Thinking (QHELP)  
 Course website: <https://ottaviae.github.io/RcouRse/>
- **Implicit assessment in psychology: Myths, doubts, and practical applications** Milano, IT  
*2-hour seminar* *June, 10<sup>th</sup>, 2022*  
 Topics: Excursus on the concept of implicit in psychological assessment, implicit measures, Psychometrically sound approaches for analyzing implicit measures data  
 School: Methodological School (FoRME), Catholic University of the Sacred Heart, Milan, IT  
 Further information: Third mission.
- **Psychometrics – Tutor** Padova, IT  
*30 hours (Second semester)* *Since Academic year 2019/2020*  
 Topics: Statistical inference, Statistical testing in Psychology  
 School: Bachelor in Psychology, University of Padova, IT
- **The Rasch model: Practical applications in R** Padova, IT  
*6-hour course* *Academic year: 2017/2018*  
 Topics: Introduction to R, Analysis of simulated data with the TAM package in R, *infit* and *outfit* computation and interpretation  
 School: Master Degree in Work Psychology, University of Padova, IT

## STUDENT SUPERVISION

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- **Academic Year 2019-2020** Padova, IT  
*University of Padova* *Bachelor degree in Psychology*  
Thesis: “Risposta sbagliata!”: L’effetto del feedback sulla performance durante l’Implicit Association Test.  
Thesis: L’effetto del feedback (built-in correction) nella somministrazione dell’Implicit Association Test
- **Academic Year 2018-2019** Padova, IT  
*University of Padova* *Bachelor degree in Psychology*  
Thesis: Implicit Association Test, Single Category Implicit Association Test e misure esplicite per la valutazione della preferenza per il cioccolato
- **Academic Year 2018-2019** Padova, IT  
*University of Padova* *Master degree in Social and Work Psychology*  
Thesis: Misure implicite e scelte comportamentali: Confronto tra l’Implicit Association Test e il Single Category Implicit Association Test
- **Academic Year 2017-2018** Genova, IT  
*University of Genova* *Bachelor degree in Psychology*  
Thesis: Validità di costrutto di una misura per la valutazione dell’atteggiamento verso i senzatetto
- **Academic Year 2016-2017** Padova, IT  
*University of Genova* *Bachelor degree in Psychology*  
Thesis: Relazioni fra misure implicite ed esplicite dell’atteggiamento verso le persone tatuate

## SKILLS & GENERAL INFORMATION

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- **Programming and data analysis:** R (data analysis: 8 years, packages development 4 years), shiny (5 years), RMarkdown (6 years), L<sup>A</sup>T<sub>E</sub>X(article, beamer, book, 5 years), HTML (4 years), CSS (4 Years), Matlab (Basic), Python (Basic), SQL (Basic).
- **Software for teaching:** Moodle, Kaltura, Blackboard
- **Languages:** Italian (Mother Tongue), English (Advanced)
- **Personal:** Goal-oriented, team player, strong work ethic, assertive, creative, out-of-the-box thinker.
- **Psicostat:** Member of the Psicostat group since 2020, <https://psicostat.dpss.psy.unipd.it/>

## ADVANCED TRAINING COURSES

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- **IRT, CAT, Machine Learning** Cambridge, UK  
*University of Cambridge* *July 2018*  
Topics: R, IRT, Concerto testing platform, CAT, Data mining, sentiment text analysis, Machine learning in practice  
Professor: Dr. Aiden Loe, and Dr. Chris Gibbons
- **Tools for Teaching Quantitative Thinking (TquanT)** Glasgow, UK  
*University of Glasgow* *Feb 2018*  
Topics: R, shiny, parameter estimation  
Professor: Dr. Lisa de Bruine, Prof. Francis Tuerlinckx, Prof. Florian Wickelmaier, Prof. Martin Losert, Prof. Hans Colonius
- **IRT models** Florence, IT  
*University of Florence* *Feb - May 2017*  
Topics: IRT models for dichotomous and polytomous items, Differential Item Functioning, Goodness of Fit  
Professor: Prof. Caterina Primi, Prof. Francesca Chiesi

- **Measurement models in Psychometrics** Genova, IT  
*University of Genova* *June - July 2016*  
 Topics: Latent variables modeling - Exploratory Factor Analysis, Confirmatory Factor Analysis - in R  
 Professor: Prof. Carlo Chiorri
- **Data analysis with R** Genova, IT  
*University of Genova* *June - July 2015*  
 Topics: Import data in R, bivariate and multivariate statistical analysis  
 Professor: Prof. Carlo Chiorri, Dr. Marcello Passarelli, Dr. Tommaso Piccinno, Dr. Michele Masini

## INTERNSHIPS

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- **Trainee in Developmental Psychology** Genova, IT  
*Educational Technologies Institute - National Research Council* *Sep 2015 - Mar 2016*  
 Project “Technologies for socio-educational inclusion of children with chronic illness”  
 Supervisor: Dr. Vincenza Benigno
- **Trainee in Psychometrics** Genova, IT  
*University of Genova* *Mar 2015 - Sep 2015*  
 Collaboration with other trainees and Ph.D. students in data analysis  
 Supervisor: Prof. Carlo Chiorri

## SUBMITTED PAPERS/PAPERS UNDER REVIEW

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- Epifania, O.M., Anselmi, P., Robusto, E. (under review). Less is more: A new Item Response Theory-based approach for shortening tests *Psychological Methods* [Second round of review]
- Epifania, O. M., Anselmi, P. & Robusto, E., (under review). A guided tutorial on linear mixed-effects models for the analysis of accuracy and response times in experiments with fully-crossed design *Psychological Methods* [First round of review]

## PUBLICATIONS IN PEER-REVIEWED JOURNALS

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### 2023

- Epifania, O. M., Robusto, E., & Anselmi, P. (2023). Is the performance at the Implicit Association Test sensitive to feedback presentation? A Rasch-based analysis. *Psychological Research*, 87(3), 737–759. doi: <https://doi.org/10.1007/s00426-022-01703-w> (WoS, Scopus, Google Scholar)

### 2022

- Epifania, O.M., Anselmi, P., Robusto, E. (2022). Pauci sed boni: An Item Response Theory Approach for Shortening Tests. In: Wiberg, M., Molenaar, D., González, J., Kim, JS., Hwang, H. (eds) *Quantitative Psychology*. IMPS 2022. Springer Proceedings in Mathematics & Statistics, vol 422. Springer, Cham. [https://doi.org/10.1007/978-3-031-27781-8\\_7](https://doi.org/10.1007/978-3-031-27781-8_7) (WoS, Scopus, Google Scholar)
- Epifania, O. M., Anselmi, P., & Robusto, E. (2022). Filling the gap between implicit associations and behavior: A Linear Mixed-Effects Rasch Analysis of the Implicit Association Test. *Methodology*, 18(3), 185-202, doi: <https://doi.org/10.5964/meth.7155> (WoS, Scopus, Google Scholar)
- Epifania, O. M., Anselmi, P., & Robusto, E. (2022). Implicit social cognition through the years: The Implicit Association Test at age 21. *Psychology of Consciousness: Theory, Research, and Practice*, 9(3). doi: <https://doi.org/10.1037/cns0000305> (WoS, Scopus, Google Scholar)

## 2021

- Epifania, O. M., Robusto, E., & Anselmi, P. (2021). Rasch gone mixed: A mixed model approach to the Implicit Association Test. *TPM: Testing, Psychometrics, Methodology in Applied Psychology*, 28(4). doi: 10.4473/TPM28.4.5 (WoS, Scopus, Google Scholar)
- Paolini, S., Devita, M. Epifania, O.M., Anselmi, P., Sergi, G., Mapelli, D. & Coin, A. (2021). Perception of stress and cognitive efficiency in older adults with mild and moderate dementia during the COVID-19-related lockdown *Journal of Psychosomatic Research*, 149. doi: <https://doi.org/10.1016/j.jpsychores.2021.110584> (WoS, Scopus, Google Scholar)

## 2020

- Epifania, O. M., Anselmi, P., & Robusto, E. (2020). Dscoreapp: A shiny web application for the computation of the implicit association test d-score. *Frontiers in Psychology*, 10, 2938. doi: 10.3389/fpsyg.2019.02938 (WoS, Scopus, Google Scholar)
- Epifania, O. M., Anselmi, P., & Robusto, E. (2020). A fairer comparison between the Implicit Association Test and the Single Category Implicit Association Test. *Testing, Psychometrics, Methodology in Applied Psychology*, 27(2). doi: <http://doi.org/10.4473/TPM27.2.4> (WoS, Scopus, Google Scholar)

## 2020

- Epifania, O.M., Anselmi, P., & Robusto, E., (2020). Implicit measures with reproducible results: The `implicitMeasures` package. *Journal of Open Source Software*, 5(52), 2394. doi: 10.21105/joss.02394 (Google Scholar)

## 2019

- Epifania, O. M., Anselmi, P., & Robusto, E. (2019). DscoreApp: A user-friendly web application for computing the Implicit Association Test D score. *Journal of Open Source Software*, 4(42), 1764, <https://doi.org/10.21105/joss.01764> (Google Scholar)

## R PACKAGES

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- Epifania O.M., Anselmi P., Robusto E. (2023). `shortIRT`: Procedures Based on Item Response Theory Models for the Development of Short Test Forms [Computer software manual]. R package version 0.1.0. Retrieved from <https://cran.r-project.org/web/packages/shortIRT/index.html>
- Brancaccio, A., Epifania, O.M., & de Chiusole, D. (2023). `matRiks`: Generates Raven-Like Matrices According to Rules [Computer software manual]. R package version 0.1.0. Retrieved from <https://cran.r-project.org/web/packages/matRiks/index.html>
- Epifania, O. M., Anselmi, P., & Robusto, E. (2020). `implicitMeasures`: Computes the Scores for Different Implicit Measures [Computer software manual]. Retrieved from <https://CRAN.R-project.org/package=implicitMeasures> (R package version 0.2.0) (Google Scholar)
- Epifania, O. M. (2019). DscoreApp. <http://fisppa.psy.unipd.it/DscoreApp/>. (April 2019)

## CONFERENCES

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### 2023

- Epifania, O. M., Stefanutti, L., Anselmi, P., Brancaccio, A. & de Chiusole, D. (2023). Le misure in psicologia sono significative? Il caso del test della Torre di Londra. Presentation at the Symposium: “Crisi di replicabilità o crisi di validità? L'importanza delle misure”, *XXVIII Italian Psychology Association Conference, Experimental Psychology Section*, Lucca (IT), Sep, 18<sup>th</sup>-20<sup>th</sup> 2021
- Epifania, O. M., Brancaccio, A., de Chiusole, D., Anselmi, P., & Stefanutti, L. (2023). matRiks: An R package for rule-based automatic generation of Raven-like matrices. Presentation at the Symposium: “New frontiers for the adaptive assessment of executive functions”, *XXVIII Italian Psychology Association Conference, Experimental Psychology Section*, Lucca (IT), Sep, 18<sup>th</sup>-20<sup>th</sup> 2021
- Epifania, O. M., Anselmi, P., & Robusto, E. (2023). Cut it short: A new item response theory-based approach for shortening tests. Presentation at the *Meeting of the Association of Applied Statistics*, Bologna (IT), Sep, 6<sup>th</sup>-8<sup>th</sup> 2023
- Epifania, O. M., Brancaccio, A., de Chiusole, D., Anselmi, P., & Stefanutti, L. (2023). matRiks: An R package for rule-based automatic generation of Raven-like matrices. Presentation at the *Meeting of the European Mathematical Psychology Group*, Amsterdam (NL), Jul, 18<sup>th</sup>-21<sup>th</sup> 2023

### 2022

- Epifania, O.M., Anselmi P., & Robusto, E. (2022). Don't say CAT: New Item Response Theory approaches for developing short test forms. Presentation in the Symposium “Recent Advances in Psychometrics II”, *XXX Conference of the Italian Psychology Association Padova*, Padova (IT) Sep, 27<sup>th</sup>-30<sup>th</sup> 2022
- Epifania, O.M. (2022). The Rasch model: Questionnaires and beyond. Presentation in the Symposium “Connecting People and Ideas from Psychology and Statistics: The Psicostat Experience”, *XXX Conference of the Italian Psychology Association Padova*, Padova (IT), Sep, 27<sup>th</sup>-30<sup>th</sup> 2022
- Epifania, O.M., Anselmi P., & Robusto, E. (2022). Pauci sed boni: New Item Response Theory-based procedures for shortening tests. Presentation at the *Meeting of the European Mathematical Psychology Group 2022*, Rovereto (IT), Sep, 5<sup>th</sup>-7<sup>th</sup> 2022
- Epifania, O.M., Anselmi P., & Robusto, E. (2022). Pauci sed boni: An Item Response Theory approach for shortening tests. Poster presentation at the *International Meeting of the Psychometric Society (IMPS)*, Bologna (IT), July, 11<sup>th</sup>-15<sup>th</sup> 2022

### 2021

- Epifania, O.M., Anselmi P., & Robusto, E. (2021). Risposta sbagliata! L'effetto del feedback sulla performance all'Implicit Association Test [Wrong response! The feedback effect on the performance at the Implicit Association]. Presentation at the *XXVII Italian Psychology Association Conference, Experimental Psychology Section*, Lecce (IT), Sep, 8<sup>th</sup>-10<sup>th</sup> 2021
- Epifania, O.M., Anselmi P., & Robusto, E. (2021). Less is more: Una procedura Item Response Theory per lo sviluppo di forme brevi di test. [Less is more: An Item Response Theory Procedure for shortening tests] Presentation at the *XXVII Italian Psychology Association Conference, Experimental Psychology Section*, Lecce (IT), Sep, 8<sup>th</sup>-10<sup>th</sup> 2021

### 2020

Epifania, O.M., Anselmi P., & Robusto, E. (2020). Non separare dopo quello che hai somministrato insieme prima: Un approccio misto per l'analisi congiunta delle misure implicite. [Don't split what you administered together. A mixed model approach for the concurrent analysis of implicit measures] Presentation at the *XXVI Italian Psychology Association Conference, Experimental Psychology Section*, Sep 2<sup>th</sup>-4<sup>th</sup> 2020

Epifania, O.M., Anselmi, P., & Robusto, E. (2020). Scoring the implicit: The `implicitMeasures` package. Oral poster presentation @ useR!2020 Virtual Conference, July, 7<sup>th</sup>-9<sup>th</sup> 2020. Retrievable @ <https://www.youtube.com/watch?v=INa426Ru40Y&list=PL4IzsxWztPdqml-u7PvYOVLDsVD7kjby&index=5>

Epifania, O.M., Anselmi, P., & Robusto, E. (2020). Scoring the Implicit Association Test has never been easier: DscoreApp. Shiny demo presentation @ eRum 2020 Virtual Conference, June, 17<sup>th</sup>-20<sup>th</sup> June. Retrievable @ <https://github.com/OttaviaE/erum2020program>

Epifania, O.M. (2020). Filling the gap between implicit and behavior: A Rasch modeling of the Implicit Association Test. Presentation, *Cognitive Science Arena*, Bressanone-Brixen (IT), Feb, 7<sup>th</sup>-8<sup>th</sup> (Third position "Best presentation").

## 2019

Epifania, O. M., Anselmi, P., & Robusto, E. (2019). DscoreApp: Una Shiny Web application per il calcolo del *D* score. [DscoreApp: A shiny web application for the computaion of the *D* score], Presentation at the *XXV Conference of the Italian Psychology Association, Exeperimental Pscyhology, Experimental Psychology Section*, Milano (IT), Sep, 18<sup>th</sup>-20<sup>th</sup> 2019

## 2018

Epifania, O.M., Robusto, E., & Anselmi, P. (2018). Rasch gone mixed: A mixed model approach to the Implicit Association Test. Presentation at the *Meeting of the European Mathematical Psychology Group 2018*, Genova, 30<sup>th</sup> July – 2<sup>nd</sup> August 2018.

## 2017

Panarello, S., Pronesti, A., Epifania, O. M., Priolo, E. et al. (2017). Afachia Pediatrica Monolaterale e Bilaterale: Valutazione delle Modificazioni Refrattive e del Risultato Funzionale. Presentation at the *XXXXII Conference of the Oftalmolgic Society*, Genova (IT), Oct, 6<sup>th</sup>-7<sup>th</sup> 2017

Epifania, O. M. (2017). Now you see me: Personality predictors of tattoos visibility. Presentation at the *Cognitive Science Arena 2017*, Bressanone-Brixen (IT), Feb 17<sup>th</sup>-18<sup>th</sup> 2017

## 2016

Benigno V., Epifania O.M., Fante, C., Ravicchio, F., & Caruso, G. (2016). Which technological skills and teaching strategies for inclusive education: Synergies and discordances. Presentation at the *International Conference of Education, Research, and Innovation*, Sevilla (E), Nov 14<sup>th</sup>-16<sup>th</sup> 2016

Epifania, O.M., & Chiorri, C. (2016). L'analisi di variabili di conto con sovrabbondanza di zeri: Il caso della relazione tra caratteristiche di personalità e numero di tatuaggi. [Data analysis with zero over dispersion: The relationship between personality characteristics and number of tattoos] Presentation at the *XXII Conference of the Italian Psychology Association, Exeperimental Pscyhology Section*, Roma (IT), Sept 20<sup>th</sup>- 22<sup>nd</sup> 2016