Paolo Rota | PhD

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Education

University of Trento **Italy**
Ph.D., *Sep 2010 - Feb 2015*
I've been working at Department of Information Engineering and Computer Science of the University of Trento under supervision of prof. **Nicu Sebe** and prof. **Nicola Conci**. My topic was about Social Interaction Analysis in a real-world scenario. In 2014, for 7 months, I've been a visiting student at Georgia Institute of Technology in **James Rehg**'s lab working on fight detection in urban scenario. I successfully defended the thesis with title *Social Interaction Analysis in Videos from Wide to Close Perspective* on February 23rd, 2015

University of Trento **Italy**
M.Sc.in Telecommunications Engineering, *Jan 2010*
Relevant subjects are: Signal Processing, Wireless Communications, Multimedia, Computer Vision, Electronics in TLC, Data hiding

University of Trento **Italy**
B.Sc. in Telecommunications Engineering, *Mar 2006*
Relevant subjects are: Signal Processing, Electromagnetism, General Electronics, Image and Video Processing, Remote Sensing

Istituto Tecnico Aeronautico, Forlí (FC) **Italy**
Diploma di Perito Aeronautico, *Jul 2001*
Relevant subjects are: Meteorology, Aerotechnics, Air Traffic Control, Navigation

Ph.D. Thesis

title: *Social Interaction Analysis in Videos, from Wide to Close Perspective*

supervisors: Nicu Sebe and Nicola Conci

breef description: A copy of the manuscript is available here.

Working Experience

University of Trento **Trento**
Post-doc *Aug 2018 – Now*
The activity is connected with a start-up agency named ProM which is meant to help local companies in the prototyping activity. I supervise the machine learning and deep learning lab in ProM. Aside from the startup activity I'm also collaborating with the MHUG lab of University of Trento for fundamental research projects on multimodal machine learning and image2image translation.

Istituto Italiano di Tecnologia **Genova**
Post-doc *Feb 2017 – Jul 2018*
I worked in the Pattern Analysis and Computer Vision group (PAVIS) led by professor Vittorio Murino. During this period I have been working in the ambit of EU and Industrial projects as project manager. My research line covers the topic of deep learning for multimodal data analysis, scene understanding and image-to-image translation.

TU Wien **Vienna**

Postdoctoral Fellow *Feb 2015 – Jan 2017*

I am a Marie Curie fellow on AutoFLOW project (see section below) working on Machine Learning techniques to analyse Flow Cytometry data in order to provide an automatic diagnostic support to medical operators.

SS&C Technologies Inc. **Dublin**

Computer Programmer *Mar 2010 – Jul 2010*

Developing the migration of middleware layer of a proprietary application from Corba to FIX (Forex transactions). For more informations check here: SS&C Tech.
Detailed achievements:

- Teamwork Skills;
- Software Developer:
  - Versioning environment: *Perforce*;
  - Language: *C++*;
  - Bug Report: *Bugzilla*;

Languages

Italian: Mothertongue

English: Understanding: *Excellent*

Speaking: *Very Good*

Writing: *Very Good*

Spanish: Understanding: *Basic*

German: Understanding: *Basic*

Computer skills

Windows and Linux Environment: Excellent Knowledge

Programming Languages: c, c++, c#, MATLAB, Python

Programming Libraries and tools: OpenCV, EMGU, Qt, Django

Deep Learning Toolboxes: Keras, Caffe, Tensorflow

Experience

Machine Learning: Linear and Logistic Regression, Support Vector Machines, Random Forests, Neural Networks (Convolutional, Recurrent, Adversarial)

Computer Vision: Optical Flow, Dense Trajectories, Visual Features (SIFT, STIP, SURF, HOG, HOF, MBH), Bag of Words, Image Processing, Social Signal Processing

Projects: I've been involved in the Marie Curie project AutoFLOW. During the two years at TU Wien I gained experience in *managing EU projects*, scheduling deadlines and resources. During the same time I've been involved in other projects, from the proposal to the delivery, handling communications between partners and structuring reports.
During IIT experience I've been responsible for the *H2020 activity* which involves brokerage events participation, consortium building and proposal writing.

Teaching: I have been *teaching assistant* for the following courses:

- *Computer Vision:* MSc course in 2011/12 and 2012/13;
- *Data Hiding:* MSc course in 2011/12 and 2012/13;

I have have given *lectures* for the following courses:

- *Video Analysis:* MSc course in 2015/16 and 2016/17;
- *Deep Learning:* MSc course in 2016/17.

Reviewing for relevant international journals and conferences

IEEE Transaction on Multimedia, ICCV, CVPR, ECCV, Computer Analysis of Images & Patterns, Image and Vision Computing.

References

SS&C Technologies Inc. Dublin

- Liam O'Bien

University of Trento

- Nicola Conci
- Nicu Sebe
- Giulia Boato
- Paolo Bosetti

Georgia Institute of Technology

- James Rehg

TU Wien

- Martin Kampel
- Robert Sablatnig

Istituto Italiano di Tecnologia

- Vittorio Murino

Selected Publications

F. Setti, D. Conigliaro, P. Rota, C. Bassetti, N. Conci, N. Sebe, and M. Cristani. The S-HOCK dataset: A new benchmark for spectator crowd analysis. *Computer Vision and Image Understanding*, 159(February 2018):47–58, 2017.

P. Rota, E. Sangineto, V. Conotter, and C. Pramerdorfer. Bad teacher or unruly student: Can deep learning say something in image forensics analysis? In *ICPR*, 2016.

M. Reiter, P. Rota, F. Kleber, M. Diem, S. Groeneveld-Krentz, and M. Dworzak. Clustering of cell populations in flow cytometry data using a combination of gaussian mixtures. *Pattern Recognition*, 2016.

P. Rota, N. Conci, N. Sebe, and J. M. Rehg. Real-life violent social interaction detection; a new benchmark. In *ICIP*, 2015.

D. Conigliaro, P. Rota, F. Setti, C. Bassetti, N. Conci, N. Sebe, and M. Cristani. The s-hock dataset: Analyzing crowds at the stadium. In *CVPR*, 2015.

F. Morreale, A. De Angeli, R. Masu, P. Rota, and N. Conci. Collaborative creativity: The music room. *Personal and Ubiquitous Computing*, 2014.

P. Rota, N. Conci, and N. Sebe. Real time detection of social interactions in surveillance video. *ECCV Workshop*, 2012.

For more info please refer to my google scholar profile: `https://scholar.google.it/`

citations?user=K1goGQ4AAAAJ&hl=en