

Alessandro Franchin

Project Scientist

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Professional appointments

- 2020 – present **Project Scientist, Atmospheric Chemistry Observations & Modeling (ACOM) at the National Center for Atmospheric Research (NCAR), Boulder, CO.** Conducting field airborne measurements of NO_x and ozone to study the chemical evolution of nitrogen oxides to constraining their regional and global effects on oxidants, ozone chemistry, and aerosol formation. Carrying out instrument development to advance the capability of measuring NO_x and ozone from airborne platforms.
- 2016 – 2020 **Research Scientist, Chemical Science Division, Cooperative Institute for Research in Environmental Sciences/National Oceanographic and Atmospheric Administration (CIRES/NOAA), Boulder, CO.** Conducted laboratory, and field airborne measurements to study the chemical composition and evolution of aerosol particles produced by wildfires and by emissions from urban and agricultural areas.
- 2012 – 2014 **Laboratory Physicist, Airmodus Ltd., Helsinki, Finland.** Developed new instrumentation to measure sub-3 nm aerosol particles. (Part-time during PhD studies).
- 2008 – 2008 **Research Fellow, Department of Physics, University of Milan, Milan, Italy.** Developed an electrostatic collection chamber for measurement of radon-222 for atmospheric applications.

Education

- 2016 **PhD, Physics, University of Helsinki, Finland.** Conducted chamber measurements (5 intensive measurement periods) of atmospheric nanoparticles and air ions at the CLOUD chamber at CERN. Conducted field measurements (3 intensive measurement periods) in different measurement stations in Finland and Ireland. Both chamber and field measurements studied atmospheric new particle formation. Developed a high transmission inlet for the Caltech nano-Radial DMA, developed high-size resolution and high-transmission planar DMAs for atmospheric applications.
- 2008 **MS, Physics, University of Milan, Italy.** Designed and realized a 222Rn monitor for outdoor measurements aimed at evaluation of atmospheric stability conditions.
- 2006 **BS, Physics, University of Milan, Italy.** Determined the disequilibrium factor between radon-222 and its short-lived decay products attached onto aerosol particles.

Honors and awards

2020	Outstanding performance award, group award in service for creating a CIRES mentorship program (link here)
2020	CIRES Administrator's Award for FIREX-AQ (link here)
2020	CIRES Bronze Medal for outstanding execution of the FIREX-AQ mission (link here)
2020	Promotion to Research Scientist II at CIRES/NOAA
2012	Chancellor's Travel Award
2009	Early-Stage Research Fellowship, Marie Curie Initial Training Network within Seventh Framework Programme (FP7) of the European Union

Selected list of peer reviewed publications

(*Corresponding Author)

Robinson, M. A., Decker, Z. C. J., Barsanti, K. C., Coggon, M. M., Flocke, F. M., **Franchin, A.**, Fredrickson, C. D., Gilman, J. B., Gkatzelis, G. I., Holmes, C. D., Lamplugh, A., Lavi, A., Middlebrook, A. M., Montzka, D. M., Palm, B. B., Peischl, J., Pierce, B., Schwantes, R. H., Sekimoto, K., Selimovic, V., Tyndall, G. S., Thornton, J. A., Van Rooy, P., Warneke, C., Weinheimer, A. J., and Brown, S. S.: Variability and Time of Day Dependence of Ozone Photochemistry in Western Wildfire Plumes, *Environ. Sc. Technol.*, 55(15): 10280–90, 10.1021/acs.est.1c01963, 2021.

Decker, Z. C. J., Robinson, M. A., Barsanti, K. C., Bourgeois, I., Coggon, M. M., DiGangi, J. P., Diskin, G. S., Flocke, F. M., **Franchin, A.**, Fredrickson, C. D., Hall, S. R., Halliday, H., Holmes, C. D., Huey, L. G., Lee, Y. R., Lindaas, J., Middlebrook, A. M., Montzka, D. D., Moore, R. H., Neuman, J. A., Nowak, J. B., Palm, B. B., Peischl, J., Rickly, P. S., Rollins, A. W., Ryerson, T. B., Schwantes, R. H., Thornhill, L., Thornton, J. A., Tyndall, G. S., Ullmann, K., Van Rooy, P., Veres, P. R., Weinheimer, A. J., Wiggins, E., Winstead, E., Womack, C. C., and Brown, S. S.: Nighttime and Daytime Dark Oxidation Chemistry in Wildfire Plumes: An Observation and Model Analysis of FIREX-AQ Aircraft Data, *Atmos. Chem. Phys. Discuss.*, [preprint], 10.5194/acp-2021-267, in review, 2021.

Womack, C. C., Manfred, K. M., Wagner, N. L., Adler, G., **Franchin, A.**, Lamb, K. D., Middlebrook, A. M., Schwarz, J. P., Brock, C. A., Brown, S. S., and Washenfelder, R. A.: Complex Refractive Indices in the Ultraviolet and Visible Spectral Region for Highly Absorbing Non-Spherical Biomass Burning Aerosol, *Atmos Chem Phys*, 21, 7235–52, 10.5194/acp-21-7235-2021, 2021.

McDuffie, E. E., Womack, C. C., Fibiger, D. L., Dube, W. P., **Franchin, A.**, Middlebrook, A. M., Goldberger, L., Lee, B., Thornton, J. A., Moravek, A., Murphy, J. G., Baasandorj, M., and Brown, S. S.: On the contribution of nocturnal heterogeneous reactive nitrogen chemistry to particulate matter formation during wintertime pollution events in Northern Utah, *Atmos Chem Phys*, 19, 9287-9308, 10.5194/acp-19-9287-2019, 2019.

Adler, G., Wagner, N. L., Lamb, K. D., Manfred, K. M., Schwarz, J. P., **Franchin, A.**, Middlebrook, A. M., Washenfelder, R. A., Womack, C. C., Yokelson, R. J., and Murphy, D. M.: Evidence in biomass burning smoke for a light-absorbing aerosol with properties intermediate between brown and black carbon, *Aerosol Sci Tech*, 53, 976-989, 10.1080/02786826.2019.1617832, 2019.

Womack, C. C., McDuffie, E. E., Edwards, P. M., Bares, R., de Gouw, J. A., Docherty, K. S., Dube, W. P., Fibiger, D. L., **Franchin, A.**, Gilman, J. B., Goldberger, L., Lee, B. H., Lin, J. C., Lone, R., Middlebrook, A. M., Millet, D. B., Moravek, A., Murphy, J. G., Quinn, P. K., Riedel, T. P., Roberts, J. M., Thornton, J. A., Valin, L. C., Veres, P. R., Whitehill, A. R., Wild, R. J., Warneke, C., Yuan, B., Baasandorj, M., and Brown, S. S.: An Odd Oxygen Framework for Wintertime Ammonium Nitrate

Aerosol Pollution in Urban Areas: NO_x and VOC Control as Mitigation Strategies, *Geophysical research letters*, 46, 4971-4979, 10.1029/2019GL082028, 2019.

***Franchin, A.**, Fibiger, D. L., Goldberger, L., McDuffie, E. E., Moravek, A., Womack, C. C., Crosman, E. T., Docherty, K. S., Dube, W. P., Hoch, S. W., Lee, B. H., Long, R., Murphy, J. G., Thornton, J. A., Brown, S. S., Baasandorj, M., and Middlebrook, A. M.: Airborne and ground-based observations of ammonium-nitrate-dominated aerosols in a shallow boundary layer during intense winter pollution episodes in northern Utah, *Atmos Chem Phys*, 18, 17259-17276, 10.5194/acp-18-17259-2018, 2018.

Wimmer, D., Mazon, S. B., Manninen, H. E., Kangasluoma, J., **Franchin, A.**, Nieminen, T., Backman, J., Wang, J., Kuang, C. G., Krejci, R., Brito, J., Morais, F. G., Martin, S. T., Artaxo, P., Kulmala, M., Kerminen, V. M., and Petaja, T.: Ground-based observation of clusters and nucleation-mode particles in the Amazon, *Atmos Chem Phys*, 18, 13245-13264, 10.5194/acp-18-13245-2018, 2018.

Manfred, K. M., Washenfelder, R. A., Wagner, N. L., Adler, G., Erdesz, F., Womack, C. C., Lamb, K. D., Schwarz, J. P., **Franchin, A.**, Selimovic, V., Yokelson, R. J., and Murphy, D. M.: Investigating biomass burning aerosol morphology using a laser imaging nephelometer, *Atmos Chem Phys*, 18, 1879-1894, 10.5194/acp-18-1879-2018, 2018.

Kooijmans, L. M. J., Maseyk, K., Seibt, U., Sun, W., Vesala, T., Mammarella, I., Kolari, P., Aalto, J., **Franchin, A.**, Vecchi, R., Valli, G., and Chen, H. L.: Canopy uptake dominates nighttime carbonyl sulfide fluxes in a boreal forest, *Atmos Chem Phys*, 17, 11453-11465, 10.5194/acp-17-11453-2017, 2017.

Steiner, G., ***Franchin, A.**, Kangasluoma, J., Kerminen, V. M., Kulmala, M., and Petaja, T.: Production of neutral molecular clusters by controlled neutralization of mobility standards, *Aerosol Sci Tech*, 51, 946-955, 10.1080/02786826.2017.1328103, 2017.

Kurten, A., Bianchi, F., Almeida, J., Kupiainen-Maatta, O., Dunne, E. M., Duplissy, J., Williamson, C., Barmet, P., Breitenlechner, M., Dommen, J., Donahue, N. M., Flagan, R. C., **Franchin, A.**, Gordon, H., Hakala, J., Hansel, A., Heinritzi, M., Ickes, L., Jokinen, T., Kangasluoma, J., Kim, J., Kirkby, J., Kupc, A., Lehtipalo, K., Leiminger, M., Makhmutov, V., Onnela, A., Ortega, I. K., Petaja, T., Praplan, A. P., Riccobono, F., Rissanen, M. P., Rondo, L., Schnitzhofer, R., Schobesberger, S., Smith, J. N., Steiner, G., Stozhkov, Y., Tome, A., Trostl, J., Tsagkogeorgas, G., Wagner, P. E., Wimmer, D., Ye, P. L., Baltensperger, U., Carslaw, K., Kulmala, M., and Curtius, J.: Experimental particle formation rates spanning tropospheric sulfuric acid and ammonia abundances, ion production rates, and temperatures, *J Geophys Res-Atmos*, 121, 12377-12400, 10.1002/2015JD023908, 2016.

Duplissy, J., Merikanto, J., **Franchin, A.**, Tsagkogeorgas, G., Kangasluoma, J., Wimmer, D., Vuollekoski, H., Schobesberger, S., Lehtipalo, K., Flagan, R. C., Brus, D., Donahue, N. M., Vehkamäki, H., Almeida, J., Amorim, A., Barmet, P., Bianchi, F., Breitenlechner, M., Dunne, E. M., Guida, R., Henschel, H., Junninen, H., Kirkby, J., Kurten, A., Kupc, A., Maattanen, A., Makhmutov, V., Mathot, S., Nieminen, T., Onnela, A., Praplan, A. P., Riccobono, F., Rondo, L., Steiner, G., Tome, A., Walther, H., Baltensperger, U., Carslaw, K. S., Dommen, J., Hansel, A., Petaja, T., Sipila, M., Stratmann, F., Vrtala, A., Wagner, P. E., Worsnop, D. R., Curtius, J., and Kulmala, M.: Effect of ions on sulfuric acid-water binary particle formation: 2. Experimental data and comparison with QC-normalized classical nucleation theory, *J Geophys Res-Atmos*, 121, 1752-1775, 10.1002/2015JD023539, 2016.

Kirkby, J., Duplissy, J., Sengupta, K., Frege, C., Gordon, H., Williamson, C., Heinritzi, M., Simon, M.,

Yan, C., Almeida, J., Trostl, J., Nieminen, T., Ortega, I. K., Wagner, R., Adamov, A., Amorim, A., Bernhammer, A. K., Bianchi, F., Breitenlechner, M., Brilke, S., Chen, X. M., Craven, J., Dias, A., Ehrhart, S., Flagan, R. C., **Franchin, A.**, Fuchs, C., Guida, R., Hakala, J., Hoyle, C. R., Jokinen, T., Junninen, H., Kangasluoma, J., Kim, J., Krapf, M., Kurten, A., Laaksonen, A., Lehtipalo, K., Makhmutov, V., Mathot, S., Molteni, U., Onnela, A., Perakyla, O., Piel, F., Petaja, T., Praplan, A. P., Pringle, K., Rap, A., Richards, N. A. D., Riipinen, I., Rissanen, M. P., Rondo, L., Sarnela, N., Schobesberger, S., Scott, C. E., Seinfeld, J. H., Sipila, M., Steiner, G., Stozhkov, Y., Stratmann, F., Tome, A., Virtanen, A., Vogel, A. L., Wagner, A. C., Wagner, P. E., Weingartner, E., Wimmer, D., Winkler, P. M., Ye, P. L., Zhang, X., Hansel, A., Dommen, J., Donahue, N. M., Worsnop, D. R., Baltensperger, U., Kulmala, M., Carslaw, K. S., and Curtius, J.: Ion-induced nucleation of pure biogenic particles, *Nature*, 533, 521+, 10.1038/nature17953, 2016.

***Franchin, A.**, Ehrhart, S., Leppa, J., Nieminen, T., Gagne, S., Schobesberger, S., Wimmer, D., Duplissy, J., Riccobono, F., Dunne, E. M., Rondo, L., Downard, A., Bianchi, F., Kupc, A., Tsagkogeorgas, G., Lehtipalo, K., Manninen, H. E., Almeida, J., Amorim, A., Wagner, P. E., Hansel, A., Kirkby, J., Kurten, A., Donahue, N. M., Makhmutov, V., Mathot, S., Metzger, A., Petaja, T., Schnitzhofer, R., Sipila, M., Stozhkov, Y., Tome, A., Kerminen, V. M., Carslaw, K., Curtius, J., Baltensperger, U., and Kulmala, M.: Experimental investigation of ion-ion recombination under atmospheric conditions, *Atmos Chem Phys*, 15, 7203-7216, 10.5194/acp-15-7203-2015, 2015.

***Franchin, A.**, Downard, A., Kangasluoma, J., Nieminen, T., Lehtipalo, K., Steiner, G., Manninen, H. E., Petaja, T., Flagan, R. C., and Kulmala, M.: A new high-transmission inlet for the Caltech nano-RDMA for size distribution measurements of sub-3 nm ions at ambient concentrations, *Atmos Meas Tech*, 9, 2709-2720, 10.5194/amt-9-2709-2016, 2016.

Kangasluoma, J., **Franchin, A.**, Duplissy, J., Ahonen, L., Korhonen, F., Attoui, M., Mikkila, J., Lehtipalo, K., Vanhanen, J., Kulmala, M., and Petaja, T.: Operation of the Airmodus A11 nano Condensation Nucleus Counter at various inlet pressures and various operation temperatures, and design of a new inlet system, *Atmos Meas Tech*, 9, 2977-2988, 10.5194/amt-9-2977-2016, 2016.

Schobesberger, S., **Franchin, A.**, Bianchi, F., Rondo, L., Duplissy, J., Kurten, A., Ortega, I. K., Metzger, A., Schnitzhofer, R., Almeida, J., Amorim, A., Dommen, J., Dunne, E. M., Ehn, M., Gagne, S., Ickes, L., Junninen, H., Hansel, A., Kerminen, V. M., Kirkby, J., Kupc, A., Laaksonen, A., Lehtipalo, K., Mathot, S., Onnela, A., Petaja, T., Riccobono, F., Santos, F. D., Sipila, M., Tome, A., Tsagkogeorgas, G., Viisanen, Y., Wagner, P. E., Wimmer, D., Curtius, J., Donahue, N. M., Baltensperger, U., Kulmala, M., and Worsnop, D. R.: On the composition of ammonia-sulfuric-acid ion clusters during aerosol particle formation, *Atmos Chem Phys*, 15, 55-78, 10.5194/acp-15-55-2015, 2015.

Schobesberger, S., Junninen, H., Bianchi, F., Lonn, G., Ehn, M., Lehtipalo, K., Dommen, J., Ehrhart, S., Ortega, I. K., **Franchin, A.**, Nieminen, T., Riccobono, F., Hutterli, M., Duplissy, J., Almeida, J., Amorim, A., Breitenlechner, M., Downard, A. J., Dunne, E. M., Flagan, R. C., Kajos, M., Keskinen, H., Kirkby, J., Kupc, A., Kurten, A., Kurten, T., Laaksonen, A., Mathot, S., Onnela, A., Praplan, A. P., Rondo, L., Santos, F. D., Schallhart, S., Schnitzhofer, R., Sipila, M., Tome, A., Tsagkogeorgas, G., Vehkamäki, H., Wimmer, D., Baltensperger, U., Carslaw, K. S., Curtius, J., Hansel, A., Petaja, T., Kulmala, M., Donahue, N. M., and Worsnop, D. R.: Molecular understanding of atmospheric particle formation from sulfuric acid and large oxidized organic molecules, *Proceedings of the National Academy of Sciences of the United States of America*, 110, 17223-17228, 10.1073/pnas.1306973110, 2013.

Riccobono, F., Schobesberger, S., Scott, C. E., Dommen, J., Ortega, I. K., Rondo, L., Almeida, J.,

Amorim, A., Bianchi, F., Breitenlechner, M., David, A., Downard, A., Dunne, E. M., Duplissy, J., Ehrhart, S., Flagan, R. C., **Franchin, A.**, Hansel, A., Junninen, H., Kajos, M., Keskinen, H., Kupc, A., Kurten, A., Kvashin, A. N., Laaksonen, A., Lehtipalo, K., Makhmutov, V., Mathot, S., Nieminen, T., Onnela, A., Petaja, T., Praplan, A. P., Santos, F. D., Schallhart, S., Seinfeld, J. H., Sipila, M., Spracklen, D. V., Stozhkov, Y., Stratmann, F., Tome, A., Tsagkogeorgas, G., Vaattovaara, P., Viisanen, Y., Vrtala, A., Wagner, P. E., Weingartner, E., Wex, H., Wimmer, D., Carslaw, K. S., Curtius, J., Donahue, N. M., Kirkby, J., Kulmala, M., Worsnop, D. R., and Baltensperger, U.: Oxidation Products of Biogenic Emissions Contribute to Nucleation of Atmospheric Particles, *Science*, 344, 717-721, 10.1126/science.1243527, 2014.

Manninen, H. E., **Franchin, A.**, Schobesberger, S., Hirsikko, A., Hakala, J., Skromulis, A., Kangasluoma, J., Ehn, M., Junninen, H., Mirme, A., Mirme, S., Sipila, M., Petaja, T., Worsnop, D. R., and Kulmala, M.: Characterisation of corona-generated ions used in a Neutral cluster and Air Ion Spectrometer (NAIS), *Atmos Meas Tech*, 4, 2767-2776, 10.5194/amt-4-2767-2011, 2011.

Wimmer, D., Lehtipalo, K., **Franchin, A.**, Kangasluoma, J., Kreissl, F., Kurten, A., Kupc, A., Metzger, A., Mikkila, J., Petaja, T., Riccobono, F., Vanhanen, J., Kulmala, M., and Curtius, J.: Performance of diethylene glycol-based particle counters in the sub-3 nm size range, *Atmos Meas Tech*, 6, 1793-1804, 10.5194/amt-6-1793-2013, 2013.

Kulmala, M., Kontkanen, J., Junninen, H., Lehtipalo, K., Manninen, H. E., Nieminen, T., Petaja, T., Sipila, M., Schobesberger, S., Rantala, P., **Franchin, A.**, Jokinen, T., Jarvinen, E., Aijala, M., Kangasluoma, J., Hakala, J., Aalto, P. P., Paasonen, P., Mikkila, J., Vanhanen, J., Aalto, J., Hakola, H., Makkonen, U., Ruuskanen, T., Mauldin, R. L., Duplissy, J., Vehkamaki, H., Back, J., Kortelainen, A., Riipinen, I., Kurten, T., Johnston, M. V., Smith, J. N., Ehn, M., Mentel, T. F., Lehtinen, K. E. J., Laaksonen, A., Kerminen, V. M., and Worsnop, D. R.: Direct Observations of Atmospheric Aerosol Nucleation, *Science*, 339, 943-946, 10.1126/science.1227385, 2013.

Kirkby, J., Curtius, J., Almeida, J., Dunne, E., Duplissy, J., Ehrhart, S., **Franchin, A.**, Gagne, S., Ickes, L., Kurten, A., Kupc, A., Metzger, A., Riccobono, F., Rondo, L., Schobesberger, S., Tsagkogeorgas, G., Wimmer, D., Amorim, A., Bianchi, F., Breitenlechner, M., David, A., Dommen, J., Downard, A., Ehn, M., Flagan, R. C., Haider, S., Hansel, A., Hauser, D., Jud, W., Junninen, H., Kreissl, F., Kvashin, A., Laaksonen, A., Lehtipalo, K., Lima, J., Lovejoy, E. R., Makhmutov, V., Mathot, S., Mikkila, J., Minginette, P., Mogo, S., Nieminen, T., Onnela, A., Pereira, P., Petaja, T., Schnitzhofer, R., Seinfeld, J. H., Sipila, M., Stozhkov, Y., Stratmann, F., Tome, A., Vanhanen, J., Viisanen, Y., Vrtala, A., Wagner, P. E., Walther, H., Weingartner, E., Wex, H., Winkler, P. M., Carslaw, K. S., Worsnop, D. R., Baltensperger, U., and Kulmala, M.: Role of sulphuric acid, ammonia and galactic cosmic rays in atmospheric aerosol nucleation, *Nature*, 476, 429-U477, 10.1038/nature10343, 2011.

Selected Presentations

Franchin A., et al., *Chemical Characterization of Biomass Burning aerosols*
Can we reduce the complexity of primary aerosol emissions? **International Aerosol Conference 2018**, Saint Louis, USA. **Oral presentation.**

Franchin A., et al., *High pollution events in the Great Salt Lake Basin and its adjacent valleys.*
Insights on mechanisms and spatial distribution of the formation of secondary aerosol. **AGU Fall Meeting 2017**, New Orleans, USA. **Oral presentation.**

Franchin A., et al., *GANS: measuring sub-3 nm neutral cluster distributions using a DMA technique.* **European Aerosol Conference 2015**, Milan, Italy. **Oral presentation.**

Franchin A., et al., The box that increases the sampling efficiency of sub-3 nm particles measurements. **Aerosol Technology 2015**, Tampere, Finland. **Oral presentation.**

Franchin A., et al., Il contributo della ionizzazione dell'atmosfera nella formazione di nuove particelle: le misure nella stazione remota SMEAR II (Hyytiälä, Finlandia) SESTO CONVEGNO NAZIONALE SUL PARTICOLATO ATMOSFERICO PM 2014 **Invited oral presentation.**

Franchin A., et al., Developing a Gas-Aerosol Nucleation Spectrometer (GANS) for ambient measurements, **International Aerosol Conference 2014**, Busan, South Korea. **Oral presentation.**

Franchin A., et al., Size dependence of Growth rates. Results of experiments in the CLOUD chamber. **European Aerosol Conference 2012**, Granada, Spain. **Oral presentation.**

Franchin, A., et al., Physical characterization of ions in the CLOUD chamber. **European Aerosol Conference 2011**, Manchester, UK. **Oral presentation.**

Poster presentations supplied upon request

Franchin A., et al., Understanding high pollution events in the Great Salt Lake Basin and its adjacent valleys. **Gordon Research Conference on Atmospheric Chemistry**, Newry, ME, USA

Teaching Experience

Teaching Assistant, University of Milan, Intermediate Physics Laboratory of Physics

Teaching Assistant, University of Helsinki, Feedbacks and Biosphere-Atmosphere Interactions

Teaching Assistant, University of Helsinki, Aerosol Measurement Techniques" field course

Teaching Assistant, University of Helsinki, Biosphere-Atmosphere Interactions

Teaching Assistant, University of Helsinki, Aerosol Measurement Techniques

Teaching Assistant, University of Helsinki, Laboratory of Atmospheric Physics

Guest Lecturer, University of Colorado Boulder, Atmospheric Chemistry. "Nucleation and growth of atmospheric aerosols"

Other professional activities

Peer reviewer (proposals): NASA Atmospheric Composition Modeling and Analysis Program 2018, Swiss National Science Foundation Project funding for Mathematics, Natural Sciences and Engineering

Peer reviewer (journals): Atmospheric Chemistry and Physics, Atmospheric Environment, Aerosol Science and Technology, Journal of Geophysical Research-Atmospheres

Workshops:

Engaged Scientist Workshop on Outreach Communications Tools, November 20, 2019

Sharpening your Leadership Skills, November 20, 2019

CIRES Workplace Culture Survey Committee, Feb, 2018

Engaged Scientist Series: Science is Culture: Understanding Power & Privilege in Community-based Research, April 6, 2017

Languages

English, Italian

Citizenship

American, Italian