Sean Andrew Chen

PERSONAL DETAILS

Mobile	(732) 595-8743
Email	sean@seanandrewchen.com
Website	www.seanandrewchen.com

ACADEMIC EXPERIENCE

RUTGERS UNIVERSITY   2021 - 2025
Bloustein School of Planning & Policy
    Ph.D. in Planning & Policy
    Research areas include Urban Informatics, Urban Modeling, & Urban Climate Resilience

NEW YORK UNIVERSITY   2017 - 2021
Center for Urban Science & Progress (Tandon School of Engineering)
    M.S. in Applied Urban Science & Informatics
    Coursework in Data Science, Spatial Analytics, Operations Research, Urban Policy & Planning

PRINCETON UNIVERSITY   2014 - 2018
School of Public & International Affairs
    Masters in Public Affairs
    Scholars in the Nation's Service Initiative (SINSI) Fellowship
    Concentration in Developmental Economics & Economic Policy
    Certificate in Urban Planning & Policy

PRINCETON UNIVERSITY   2009 - 2014
School of Public & International Affairs
    A.B. in Public & International Affairs
    Certificates in Urban & Environmental Studies

UNIVERSITY COLLEGE LONDON   2011 - 2012
The Bartlett School of Planning
    Gap Year Study
    Coursework in City Planning, Transport Planning, & Urban Economics

THE JUILLIARD SCHOOL   2005 - 2009
Pre-College Division
    Certificate of Study in Violoncello Performance & Musical Composition
    Coursework in Theory, Ear Training, Counterpoint, Chamber & Orchestral Performance

PROFESSIONAL EXPERIENCE

MARRON INSTITUTE OF URBAN MANAGEMENT   September 2020 - July 2021
Civic Analytics Fellow

- Competitive and paid fellowship for only two graduate students to perform research within the Marron Institute of Urban Management, an independent research institute of New York University dedicated to studying the urban and built environment.
- Performed research on urban mobility, land use, and 311 calls to understand the spread of COVID-19.
- Gained experience with handling sensitive and private data through secure infrastructure.
- Work included the use of Big Data management, advanced geospatial analysis, and advanced machine learning techniques.

DATA SCIENCE FOR SOCIAL GOOD   Summer 2018
Research Fellow

- Competitive and paid fellowship at the University of Washington's eScience Institute, a data science research center partnered with the Information School.
- Participated in a research project as a lab member to use computer vision to automatically detect and tag areas of damage from post disaster remote sensing imagery.
- Final products include a public dataset and potential academic publication.
- Gained in depth knowledge and experience with cloud and cluster computing.
- Employed computer vision techniques using libraries such as TensorFlow.
- Engineered scripts and database systems for handling, analyzing, and processing extremely large geospatial datasets.

US ARMY CORPS OF ENGINEERS   June 2015 - August 2017
Scholars in the Nation's Service Initiative Fellow (SINSI)

Institute for Water Resources *(Washington, DC)*
June - August 2015 & March - August 2017

- The Institute for Water Resources (IWR) is the internal think tank of the Corps of Engineers, tasked with producing innovations in hydrology, engineering, planning and economics.
- Evaluated new technologies such as UAVs and the Internet of Things for their utility to the Corps.
- IWR provided details to various districts across the country and an international development project in Thailand.

Omaha District *(Omaha, NE; Denver, CO; Tribal Lands)*
September 2015 - March 2016

- Gained proficiency with Corps' economic analysis procedure for flood risk management including the computer models HEC-FDA and HEC-FIA by attending course at the Hydrological Engineering Center in Davis, CA.
- Expertise includes real estate inventory appraisal and damages estimation.
- Economist on flood risk management and ecosystem restoration project on the Lower Platte River and local gulches in Denver, CO.
- Developed Social Vulnerability Index on neighborhoods within project areas.
- Facilitated public meetings in Denver and meetings with partner agencies - EPA, FWS, Colorado DNR, City and County of Denver.
- Tribal work included representing the Corps at the Missouri River Restoration Implementation Committee November 2015 meeting in Rapid City, SD and consultation of the Standing Rock Sioux Reservation, and compilation of a Socioeconomic and Cultural Resources Report on Tribes within the Missouri River Basin.
- Represented the Corps at the annual HAZUS conference at CDC in Atlanta with UNO professor as part of research on creating more accurate flood damages estimation models.

Bangkok & Udon Thani, Thailand
March 2016 - October 2017

- Work in Thailand was sponsored by an IWR scientist working on climate change and urbanization in Southeast Asia partnering with USAID and the ADB.
- Project focused on the Isaan city of Udon Thani, requiring living in Udon Thani for several months and Bangkok for over six months.
- Project culminated in two different workshops dedicated to supporting a public participatory method of decision making for the metropolitan region of Udon Thani for adapting to urbanization, climate change, and water resource issues such as flooding and drought.

- To ensure workshop participation, developed an interactive and graphically interfaced hydrological, land use and economic model for a serious gaming session.
- Working directly with the city and province as well as a Bangkok based landscape architecture firm, created a site suitability analysis for the implementation of green infrastructure through remote sensing land classification, land cover change detection, and land use modeling.

Jacksonville District (*Jacksonville, FL; San Juan, PR; Mobile, AL*)
November 2016 - March 2017

- Formulated plan for improvements to the San Juan Harbor in Puerto Rico.
- Gained proficiency in Corps' navigation project procedures at the Deep Draft Center of Expertise in the Mobile District.

WHITE HOUSE SC2 INITIATIVE   Summer 2013
Policy Analyst

- The White House Strong Cities, Strong Communities Initiative was an executive council housed at the US Department of Housing and Urban Development but collaborating across multiple domestic agencies and departments.
- Drafted daily memo for White House, Treasury and HUD staff on urban issues, particularly on the unfolding Detroit municipal bankruptcy.
- Researched and compiled best practices for urban economic revitalization programs to disseminate amongst participating cities in program.
- Analyzed municipal bond ratings of candidate cities for new program creating recommendations on which cities were most distressed in terms of credit worthiness and debt.
- Reviewed candidate city applications for new program.
- Participated in meetings regarding efficacy of programs and policies of council held at the White House Executive Office Building as well as at HHS, EPA, and HUD.
- Organized site visit to participating city of Chester, PA, meeting with local stakeholders and officials, evaluating and assessing their needs.
- Facilitated UPenn PennPraxis program with the city of Chester, PA so that PennPraxis would conduct pro bono urban planning for the city.

NEXT CITY   Summer 2012
Reporter & Multimedia Production

- Wrote comprehensive articles on urban issues in the United States and abroad, including stories on affordable housing in the Philadelphia metro area and urban pension reform around the country for leading national urban affairs magazine.

THE STREET PLANS COLLABORATIVE   Summer 2012
Research Associate & Graphic Designer

- Developed report on "Tactical Urbanism" strategies, including visual instructions for planning practitioners.
- Researched the economic benefits of street food vending, the legal challenges to such economic activities, and policy solutions to these legal, social and cultural barriers.

ACADEMIC AWARDS, FELLOWSHIPS, & OTHER HONORS

SCHOLARS IN THE NATION'S SERVICE INITIATIVE
Princeton University School of Public & International Affairs

- Competitive fellowship and scholarship program awarded to five students per year which provides admission into the Princeton University School of Public and International Affair's MPA program, a paid summer internship within the federal government, a summer of intensive language training, and a placement into a two year federal position.

CUSP ACADEMIC SCHOLARSHIP
NYU Center for Urban Science & Progress

- Awarded merit scholarship to pursue the M.S. in Applied Urban Science & Informatics at the New York University Center for Urban Science & Progress.

PACIFIC STANDARD 2017 "TOP 30 THINKERS UNDER 30"
Pacific Standard Magazine

- Honored by Pacific Standard magazine as one of their 2017 "Top 30 Thinkers Under 30" and profiled for magazine story focusing on career and achievements.

DEANS FELLOWSHIP & RUTGERS EXCELLENCE FELLOWSHIP
Rutgers University

- Full funding including tuition remission and stipend for four years to pursue a PhD at the Bloustein School of Planning and Policy.

ACADEMIC & OTHER PUBLICATIONS

- Chen, Sean Andrew. "Questioning the Cult of the Creative Class." Next City, June 26, 2012.

- Chen, Sean Andrew. "Power to the Cities." The Chronicle of Higher Education, July 30, 2017.

- Chen, Sean Andrew, Andrew Escay, Christopher Haberland, Tessa Schneider, Valentina Staneva, and Youngjun Choe. "Benchmark dataset for automatic damaged building detection from post-hurricane remotely sensed imagery." arXiv preprint arXiv:1812.05581 (2018).

ACADEMIC PRESENTATIONS

Urbanization in China: Past, Present, Future Conference   July 2014
Shanghai Study Centre of Hong Kong University Faculty of Architecture
Shanghai, PRC

- Presented original research on IT infrastructure investment's impact on urban economic development and an investigation into the failures of "Smart City" technologies.

Cascadia Innovation Corridor Conference   September 2018
University of British Columbia
Vancouver, BC Canada

- Poster presentation on using neural networks to automatically identify damaged buildings in post-hurricane remotely sensed data.

KDD Conference   August 2020
Association for Computing Machinery (ACM)
Special Interest Group on Knowledge Discovery and Data Mining (SIGKDD)

- Social Impact panel session on the use of data science for social good.

3D GeoInfo 16th Conference   September 2021
International Society for Photogrammetry and Remote Sensing (ISPRS)

- Poster presentation on analyzing machine and deep learning methods for urban object classification using LiDAR Data.

Disaster Resilience Research Symposium   August 2023
NIST-NSF

- Symposium presentation on NSF research project on impact on intergovernmental fiscal flows from coastal hazards.

ACSP Annual Conference   October 2023
Association of Collegiate Schools of Planning
Chicago, IL

- Presentation on the use of agent based models to understand the fiscal federalism game of intergovernmental flows in the context of managed retreat due to coastal hazards.

SKILLS

Language	Mandarin (Conversational)
	Japanese (Conversational)
Programming	Python, R, JavaScript
	Bash Shell Scripting
	LaTeX
	SQL & PostGIS
GIS	ESRI ArcGIS, QGIS, GeoDa
	OGR/GDAL, GeoPandas, PySAL
Multimedia	Adobe Creative Suite (Photoshop, InDesign, Illustrator)

SELECTED COURSEWORK IN URBAN PLANNING & POLICY

Princeton University
Planning Theory & Process
Planning Methods
Urban Economic Development
Urban Economics
Smart Cities Policy Workshop
GIS for Public Policy
Resuscitating Inner City Neighborhoods
Theories of Housing & Urbanism

University College London
Transport Policy & Planning
Development Project: Regeneration Plan Making
Urban Form & Formation
Economics of Cities & Regions
Planning for a Changing Countryside
Urban & Environmental Politics

Rutgers University
Planning, Public Policy, & Social Theory
Environmental Planning & Management
Resilient Buildings & Infrastructure

Coastal Climate Risk & Resilience
Command Line GIS

SELECTED COURSEWORK IN ECONOMICS & PUBLIC POLICY

Princeton University
The Politics of Policy
Psychology for Policy Analysis & Implementation
Microeconomic Analysis (Advanced)
Macroeconomic Analysis
Economic Analysis of Development (Advanced)
Information Technology & Public Policy

SELECTED COURSEWORK IN QUANTITATIVE METHODS

New York University
Principles of Urban Informatics
Monitoring Cities
Applied Data Science
Urban Decision Models
Advanced Urban Spatial Analytics
Machine Learning for Cities

Princeton University
Machine Learning for Policy Analysis
Econometrics & Public Policy (Advanced)
Quantitative Methods for Public Policy (Advanced)

Rutgers University
Discrete Choice Methods
Applied Multivariate Methods
Machine Learning for Public Informatics