

# Junqing(Jenn) Qian | CV

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## Position

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Visiting Assistant Professor of Pure Mathematics

2020 -

*Department of Mathematics and Statistics  
University of New Mexico, Albuquerque, NM, U.S.*

## Education

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Ph.D. in Mathematics

2014 - 2020

*Advisor: Damin Wu*

*Department of Mathematics  
University of Connecticut, Storrs, CT, U.S.*

B.S. in Mathematics

2010 - 2014

*School of Gifted Young  
University of Science and Technology of China, Hefei, Anhui, China*

## Research Interests

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Differential geometry, analytic functions, automorphic functions, complex manifolds, invariant metrics, Riemann surfaces, arithmetic differential geometry, and number theory.

## Publications

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2. The Kobayashi-Royden metric on punctured spheres (*with G. Cho*). arXiv:1907.07295  
Volume 32, Issue 4, Pages 911–918. *Forum Mathematicum.*
1. Hyperbolic metric, punctured Riemann sphere and modular functions. arXiv:1901.06761  
DOI: <https://doi.org/10.1090/tran/8175> *Trans. Amer. Math. Soc.*

## Awards and Fellowships

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DeLuca Graduate Teaching Award

*University of Connecticut, Department of Mathematics*

*spr. '20*

Doctoral Dissertation Fellowship

*University of Connecticut*

*spr. '20*

Doctoral Travel Fellowship

*University of Connecticut*

*fall '19*

Commendation Letter of Excellence in Teaching

*Office of the Provost, University of Connecticut*

*each semester, '16 - '19*

William H. Ezell Scholarship

*University of Connecticut*

*sum. '18*

Graduate Summer Fellowship

*University of Connecticut*

*sum. '15*

Scholarship for Freshman

*University of Science and Technology of China*

*fall '10*

## Conferences and Talks

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- *Algebra & Geometry Seminar* Sep. '20  
talk title: From the hypergeometric differential equation to conformal maps of curvilinear polygons  
University of New Mexico
- *Colloquium* Sep. '20  
talk title: Modular functions and Asymptotic geometry on Punctured Riemann Sphere  
University of New Mexico
- *Current Developments in Mathematics 2019* Nov. '19  
Harvard University *attended with financial support*
- *Conference on Differential Geometry* Nov. '19  
a conference in celebration of the 40 years JDG Editorship and the 70th Birthday of S. T. Yau  
Lehigh University *attended*
- *S.I.G.M.A seminar (expository)* Oct. '19  
talk title: conformal mapping, Schwarzian derivative and accessory parameters  
University of Connecticut
- *PDE and Differential Geometry Seminar* Oct. '19  
talk title: hyperbolic metric on punctured Riemann surfaces  
University of Connecticut
- *Northeast Analysis Meeting* Oct. '19  
contributed talk: hyperbolic metric, punctured sphere and modular functions  
Syracuse University
- *Northeast Analysis Network* *attended, Sep. '19*  
University of Connecticut
- *Current Developments in Mathematics 2018* Nov. '18  
Harvard University *attended with financial support*
- *Summer School in Minimal Surfaces, Flows, and Relativity* July '18  
University of Connecticut *attended*
- *S.I.G.M.A seminar (expository)* spr. '18  
talk title: poincaré hyperbolic models, punctured Riemann sphere and modular functions  
University of Connecticut

## Teaching Experience

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<b>Current:</b>	<i>albuquerque, NM</i>
MATH 1512: Calculus I	<i>fall '20</i>
MATH 327: Discrete Structures	<i>fall '20</i>
<b>Past:</b>	<i>storrs/waterbury, CT</i>
Elementary Differential Equations (PI)	<i>2 sections, supervised 4 honor students, fall '19</i>
Elementary Differential Equations (PI)	<i>2 sections, spr. '19</i>
Multi-Variable Calculus (PI)	<i>summer '17</i>
Calculus II (online TA)	<i>spr. '20</i>
Multi-Variable Calculus (TA)	<i>3 sections, spr./fall '17, spr./fall '18</i>
Multi-Variable Calculus (TA)	<i>online, summer '18</i>
Calculus II (TA)	<i>3 sections, fall '16</i>
Calculus I (TA)	<i>3 sections, fall '15, spr. '16</i>

## In Class Presentations and Seminar Attended

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- Class presentation: "A sketch of symmetric spaces" *spr. '19*  
course title: fourier analysis on groups
- Seminar: "Trace Formula and Weyl's Law" *learning seminar, fall '18*
- Multiple presentations *working seminar, uconn, spr. '18/fall. '17*  
topic: hyperbolic metric on  $n$ th punctured Riemann sphere ( $n = 3, 4, 6$ )
- Doctoral oral exam: "Modular Function and Gauss Curvature" *fall '16*
- " $\Gamma(2)$  and Modular Function" *geometry reading section, spr. '15*
- Class presentation: "An introduction to Zariski Topology" *spr. '15*  
course title: intro. to geometry and topology 2
- Class presentation: "Primary Decomposition in Noetherian Ring" *fall '14*  
course title: commutative algebra

## Computer Skills

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SageMath, C, MATLAB, LaTeX, Blackboard, Piazza, WebAssign, WolframAlpha, GeoGebra.

## References

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- Alexandru Buium *University of New Mexico*  
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- Hongnian Huang *University of New Mexico*  
Email: hnhuang@unm.edu
- Damin Wu *University of Connecticut*  
Email: damin.wu@uconn.edu