

**Hussain A. Ibdah** Department of Mathematics  
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**Appointments:**

Aug. 2021-Current **University of Maryland, College Park**  
Sergei Novikov Postdoctoral Fellow  
Mentor: Eitan Tadmor

**Education:**

Aug. 2015-Aug. 2021 **Texas A&M University, College Station**  
Ph.D. in Mathematics.  
Advisor: Edriss S. Titi  
Thesis Title: *On Preservation of Moduli of Continuity by Parabolic Evolution*

Aug. 2010-Jan. 2015 **American University of Sharjah, Sharjah**  
B.Sc. in Mechanical Engineering with a Second Major  
in Mathematics, *Magna Cum Laude*.

**Research Interests:**

Nonlinear, Nonlocal Partial Differential Equations, Fluid Mechanics.

**Publications****Published/Accepted Work**

1. H. Ibdah. *Lipschitz continuity of solutions to drift-diffusion equations in the presence of nonlocal terms*, J. Math. Fluid Mech, 24(01):Paper No. 19, 35, 2022.
2. H. Ibdah. *Strong solutions to a modified Michelson-Sivashinsky equation*. Commun. Math. Sci., 19(4):1071–1100, 2021.
3. H. A. Ibdah, C. F. Mondaini, and E. S. Titi. *Fully discrete numerical schemes of a data assimilation algorithm: uniform-in-time error estimates*. IMA J. Numer. Anal., 11 2019. drz043. doi: <https://doi.org/10.1093/imanum/drz043>

**Preprints/In preparation**

1. H. Ibdah. *Bypassing Hölder super-criticality barriers in drift-diffusion system and viscous incompressible fluids*, in preparation (working title)

**Undergrad Publications**

1. H. Ibdah, S. A. Khuri, and A. Sayfy. *A spline collocation approach for a business cycle model with small gestation period in production*. Int. J. Dyn. Syst. Differ. Equ., 6(2):101–116, 2016.
2. H. Ibdah, S. A. Khuri, and A. Sayfy. *Two-point boundary-value problems over a semi-infinite domain: a coupled ABC and spline collocation approach*. Int. J. Comput. Methods Eng. Sci. Mech., 15(5):448–456, 2014.

**Invited Talks**

April 20, 2022	PDE Seminar, Penn State University, State College, PA.
January 31, 2022	Analysis Seminar (online), Texas Tech University, Texas.
September 9, 2021	PDE-Applied Math Seminar, University of Maryland, College Park, Maryland.
April 2, 2020	Analysis of Fluids and Related Topics Seminar (online), Princeton, New Jersey
September 8, 2020	Nonlinear PDE Seminar (online), Texas A&M, College Station
September 25, 2020	Applied Math Colloquium talk (online), UMBC, Maryland
October 16, 2020	SIAM TX-LA Sectional Meeting, Texas A&M, College Station
January 7, 2021	JMM (invited special session talk), Washington, DC

**Activities and Service**

July 17-July 21, 2023	Co-organizer of summer school in fluid mechanics, Brin Mathematics Research Center, University of Maryland, College Park, Maryland
August 2021-May 2022	Co-organizer of PDE-Applied Math seminar, University of Maryland, College Park, Maryland
April 2022	Co-organizer of AMS special session on fluid mechanics, JMM
Referee Work	Journal of Mathematical Analysis, Nonlinearity, Fluid Dynamics research.

**Workshops Attended**

1. Criticality and stochasticity in quasilinear fluid systems, American Institute for Mathematics, San Jose, California, May 2-May 6, 2022.
2. Mathematical Aspects of Hydrodynamics, Mathematisches Forschungsinstitut Oberwolfach, Oberwolfach, Germany, August 18-August 24, 2019.
3. Intensive Program on Fluids and Waves, GSSI, L'Aquila, Italy, May 27-June 16, 2018.

**Short term visits**

- Duke University, Durham, North Carolina, May 29-June 1, 2022.
- Freie Univerität Berlin, Germany, May 17-June 17, 2019.

**Achievements and Awards:**

- August 2019  
May 2018-June 2018
- Texas A&M**
- US Junior Oberwolfach Fellow Travel Grant.
  - GSSI Young Researcher Grant.
- Aug. 2010-Jan. 2015
- American University of Sharjah**
- *Professional Development Grant* (conference travel funds).
  - *Chancellor's List* for four consecutive years.
  - *Dean's List Scholarship* for eight consecutive semesters.
  - Awarded *Merit Scholarship* upon joining institute.

**Teaching Experience:**

- Aug. 2021-Current
- University of Maryland, Department of Mathematics**
- Honors Calculus II (MATH 141H), Fall 2021, Fall 2022.
  - Calculus for Life Sciences (MATH 136), Spring 2022.
- Aug. 2015-August 2021
- Texas A&M University, Department of Mathematics**
- Instructor of Record: MATH 142, Fall 2019, Fall 2020
  - Instructor of Record: MATH 131, Fall 2018, Spring 2019
  - Held Ph.D. qualifying exam preparation sessions in Applied Analysis, Summer 2017 and Summer 2020.
  - Methods of Applied Math and Applied Analysis TA (graduate courses).
  - MATH 152 (calculus) recitations and Matlab sessions (undergraduate course).
- Feb. 2011-Jan. 2015
- American University of Sharjah, Dept. of Mathematics**
- Help sessions and grading various undergrad math courses.
  - Prepared lecture notes, Maple codes and assisted in conducting Numerical Analysis recitations.