

Position Non-resident researcher at Institute for Research in Fundamental Sciences (IPM).

Personal Data

Place of Birth: Tehran

Nationality: Iranian

Education

1997, Sep. 2003, July: BS Mathematics AmirKabir University(Polytechnic).

1998-2000: Philosophy.

2003, Sep. 2006, June: MS Mathematics Tabriz University.

2008, Oct. -2011, Nov.: PhD Mathematics MLU Halle-Wittenberg.

Adviser: Prof. Peter Schenzel

PhD Students

- 1: E. Banisaeed, Payam nour univ. Tehran-Shargh, (current), (Co-advisors: F. Rahmati and Kh. Ahmadi-Amoli).
- 2: B. Hazrati, Mohaghegh Ardebili univ. Ardebil. (current), (Co-advisors: A. Khojali and N. Zamani).

MSc Students

- 1: A. Akhavan, Payam nour univ. Tehran-Shargh, (current).
- 2: S. Torabi, Payam nour univ. Tehran-Shargh, (current).

Research Publications

1. M. Eghbali, On formal local cohomology, colocalization and endomorphism ring of top local cohomology modules. Phd. Dissertation, Martin-Luthar Universität Halle-Wittenberg (2011).
2. M. Eghbali, On Artinianness of formal local cohomology, colocalization and coassociated primes. *Math. Scand.* **113** (2013), 5-19.
3. M. Eghbali, On an endomorphism ring of local cohomology . *Comm. in Algebra*, **40**: 4295-4305, (2012).(with P. Schenzel)
4. M. Eghbali, On set theoretically and cohomologically complete intersection ideals., *Canad. Math. Bull.* **57**(3) (2014), 477-484.
5. M. Eghbali, On top local cohomology modules, Matlis duality and tensor products., submitted. (with Kh. Ahmadi-Amoli and M.Y. Sadeghi)
6. M. Eghbali, On cohomological invariants of local rings in positive characteristic., submitted.

7. M. Eghbali, Annihilators of local cohomology modules and simplicity of rings of differential operators.(with A. F. Boix)

Honors and Awards

- 1: [DAAD Research Scholarship] DAAD-Programm STIBET - Doktorandenförderung - Bewilling eines Reaserch - Assistantships für Internationale Doktorand/innen (Einsatzstipendium)
- 2: [Carl Friedrich von Siemens Foundation travel grant,] to participate in Oberwolfach Seminar: Representations of Finite Groups: Local Cohomology and Support, May 23-29, (2010).
- 3: [IPM Research grant,] as a non-resident researcher, (2012-2013).
- 4: [Universitat Politècnica de Catalunya,] financial support for scientific visit, September 4 - October 1, 2013.
- 5: [IPM Research grant,] as a non-resident researcher, (2014-2015).
- 6: [IPM Research grant,] as a non-resident researcher, (2015-2016).

Visits and conferences

Visits:

- Universitat Politècnica de Catalunya (Spain), September 4 - October 1, 2013. Invited by Josep Àlvarez Montaner.

Invited talks within conferences/seminars:

- On formal local cohomology and closedness of its cosupport, IPM, Jan (2011).
- On formal local cohomology, colocalization and endomorphism ring of top local cohomology modules, Univ. Leipzig, July 11, (2011).
- On a endomorphism ring of local cohomology modules, 8th seminar on Commutative Algebra and Related Topics. School of Mathematics, IPM. Nov. 30-Dec. 1, (2011).
- Artinian formal local cohomology and its coassociated primes, The 43rd Annual Iranian Mathematics Conference, Univ. of Tabriz 27-30 August (2012).
- Top local cohomology, Matlis duality and tensor products, 9th seminar on Commutative Algebra and Related Topics. School of Mathematics, IPM. Nov. 7-8, (2012).
- A view to cohomological dimension of an ideal, Seminari Geometria Algebraica, September 27, (2013), (UB-UPC), Barcelona.
- A view to cohomological dimension of an ideal, 10th seminar on Commutative Algebra and Related Topics. School of Mathematics, IPM. Dec. 18-19, (2013).
- Bernstein-Sato polynomials, Weekly Seminars on Commutative Algebra and related topics. School of Mathematics, IPM. Mar. 13, (2014).
- Frobenius depth and its applications, 11th seminar on Commutative Algebra and Related Topics. School of Mathematics, IPM. Nov. 10-11, (2014).

Employment History

- 2004-2005: Teaching Assistantships, IAU.
- 2005-2006: Teaching Assistantships, Qazvin Kar university.
- 2006-2008: Teaching Assistantships, Shabestar Payame nour university.

- 2011-2012: Teaching Assistantships, Sahand university of Technology.
- 2012-2013: Teaching Assistantships, Sh. Madani Univ.
- 2011-Present: Teaching Assistantships, IAU.
- 2013-Present: Teaching Assistantships, Payame nour Univ.

Teaching Experience

- Undergraduate calculus I and II, 2004-2005.
- Calculus I and II for Engineering , 2005-2006.
- Calculus I and II, Algebra I, Linear Algebra I, 2006-2007.
- Algebra I, Linear Algebra I, 2007-2008.
- Algebraic Topology (MSc.), 2011-2012.
- Advanced algebra (MSc.), Algebra I, Graph Theory, Calculus, Advanced Engineering Math., 2012-2013.
- Number Theory, Applied combinatorics, Calculus, 2013-2014.
- Ring and module theory (B. and MSc.), Undergraduate Algebraic Geometry, Algebraic Geometry (Msc.), 2014-2015.

Conferences

- 29th. Annual Mathematics Conference Amirkabir University(1998).
- Workshop on Commutative Algebra and Related Topics. School of Mathematics, IPM. Nov. 24-25, (2004), Tehran-Iran.
- Short colloquium. Leipzig University, spring (2009).
- Oberwolfach Seminar: Representations of Finite Groups: Local Cohomology and Support, May 23-29, (2010).
- 21st Algebra seminar of Iran, 10-11 November (2010).
- 7th seminar on Commutative Algebra and Related Topics. School of Mathematics, IPM. Dec. 1-2, (2010), Tehran-Iran.
- Ten Lectures on Algebraic Theory of D-Modules, IPM, by J. Alvarez Montaner, Universitat Politecnica de Catalunya, Spain, Dec. 4-8, (2010).
- Andre Memorial Conference, Centre Interfacultaire Bernoulli-EPFL-Lausanne-Switzerland, 11-13 May (2011).
- Workshop: Combinatorial Methods in Algebraic Geometry and Commutative Algebra, July 05-07, (2011), Max Planck Institute for Mathematics in the Sciences.
- A Short Course on Vector Bundles, Forcing Algebras, and Local Cohomology, IPM (Jan. 5-9, 2012), by Holger Brenner from University of Osnabruck (Germany).

Work as reviewer and referee

- (1) Reviewer for "Mathematical Reviews" (Since March 2014).
- (2) Referee for journal "Communications in Algebra".

Major areas of research interest

- (1) Primary: Commutative Algebra, Algebraic Geometry, Homological Algebra.
- (2) Secondary: Local Cohomology, Complete Intersection Curves, Linkage Theory, D-modules, Test Ideals and Singularities.

Language Skills

- (1) Persian (mother tongue)
- (2) English (advanced level)
- (3) German (intermediate level)

Hobbies

- (1) philosophy
- (2) poem and literature
- (3) Music especially Iranian classical music
- (4) Sociology
- (5) Travel