

# ANATOLI KOUROPATOV

SENIOR LECTURER

## Personal Details

Place of Birth: Moscow, USSR

Birth Year: 1965

Address: 15/5 Beilinson St., Netanya, 4244317

Home Tel: 09-8359364

Mobile: 054-2267893

Email: anatoliko@gmail.com

## Education

<i>Date</i>	<i>Degree</i>	<i>Department</i>	<i>Institution</i>
2006-2016	PhD	Mathematics Education	Tel Aviv University
2003-2006	MA with honors	Mathematics Education	Tel Aviv University
2003-2004	Teaching Certificate	Mathematics	Tel Aviv University
1995-1996	DBA	Business Management (Finance)	Kennedy Western University (Idaho, US) (not submitted for recognition by the Israeli Council for Higher Education)
1993-1995	MBA	Business Management (International Business)	Moscow Trade Institute (not submitted for recognition by the Israeli Council for Higher Education)
1982-1989	BA with honors (corresponds to a Master's degree in Israel)	Mathematics and Mathematics Education	Moscow State Pedagogical Institute

## Professional Academic Experience

2020-present	Senior Lecturer – Department of Mathematics, Levinsky College (Tel Aviv).
2014-present	Faculty member – Department of Mathematics, Levinsky College (Tel Aviv).
2017-2020	Consultant – Center for Promoting Teaching, Afeka College

2014-2015	Faculty member – Kibbutzim College and Levinsky College (Tel Aviv)
2012-2014	Faculty member – David Yellin College and Levinsky College (Tel Aviv)

### **Other Professional Experience**

2019-present	Principal investigator (with Prof. Tommy Dreyfus) – Tel Aviv University (ISF grant number 1743/19) Research topic: Meanings for Fundamental Calculus Concepts in High School
2017-present	Researcher – Lev Institute (ISF grant number 1815/16) Research topic: Students' Construction of Mathematical Knowledge by Means of Analogy
2015-2018	Faculty member, Mathematics – Center for Educational Technology (CET)
2014-2015	Content developer for virtual high school – CET
2010-2012	Research assistant – Tel Aviv University and the Lev Institute (ISF grant number 843/09) Research topic: Students' Construction of Mathematical Justifications as a Process of Abstraction in Context
2009-2012	Developer of mathematical content in the digital environment – Time To Know
2005-2009	Developer of textbooks and curricula – CET

### **Conferences Attended**

#### ***Overseas Professional Conferences***

Kouropatov, A., Hersu-Kluska, R., Klemer, A., Miedijensky, S., & Segal R. (2022). Digital tools before and since the outbreak of the COVID-19 pandemic: mathematics and science teachers' priorities. *CADGME 2022: Conference on Digit Tools in Mathematics Education*. Jerusalem, Israel.

Noah-Sella, L., Kouropatov, A., Dreyfus, T., & Elias, D. (2022). Knowledge compartmentalization in integral calculus: a case study. *Proceedings of the 45th annual conference of the International Group for the Psychology of Mathematics Education (PME45)*. Alicante, Spain.

Kouropatov, A., Hersu-Kluska, R., Klemer, A., Miedijensky, S., & Segal R. (2022). Mathematics and science teachers' attitudes toward using technology for learning before and during the pandemic. Online conference: *ICT in Education & Training in Times of*

*Pandemic*. Universidad de Granada, Spain: ATEE (Association for Teacher Education in Europe).

Ballin, C., Kouropatov, A., & Shafirovitz, O. (2021). Interactive digital environment for teaching and learning deductive geometry (FullProof): design principals, functionality, pedagogy and results of implementation. *The 15th International Conference on Technology in Mathematics Teaching (ICTMT 15)*. Copenhagen, Denmark: Aarhus University.

Noah-Sella, L., Kouropatov, A., Dreyfus, T., & Elias, D. (2021). Can knowledge in analysis be insufficient to tackle calculus problem? The case of Nathan. In *Proceedings of the 42nd Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Mazatlan, Mexico: PME-NA.

Kouropatov, A., & Kidron, I. (2020). Constructing knowledge by means of embodiment mediation: the case of lines and planes in geometrical space. *20th Conference for Research in Education*. Tel Aviv, Israel: Levinsky College of Education.

Kouropatov, A., & Kidron, I. (2019). Students construct and reconstruct geometrical knowledge using their body: Tal and Sean explore the mutual placement of straight lines and planes in geometrical space. In *Proceedings of Mathematical Ability Conference*. Utrecht, Netherlands: Utrecht University.

Kouropatov, A. (2019). Computer tools as tools of semiotic mediation in studying infinitesimal analysis: the didactical challenge. *The ACA 2019 Conference on Applications of Computer Algebra*. Montreal, Canada: ACA2019.

Kouropatov, A., & Kidron, I. (2019). Students construct and reconstruct geometrical knowledge using their body: Tal and Sean explore the mutual placement of straight lines and planes in geometrical space. *The Mathematical Ability Conference*. Utrecht, Netherlands: Utrecht University.

Kouropatov, A., Fraenkel, M., & Ovodenko, R. (2018). Didactic consideration with respect to applets for the teaching of mathematics. *The 7th CADGME Conference on Digital Tools in Mathematics Education*. Coimbra, Portugal: University of Coimbra.

### ***International Professional Conferences in Israel***

Hall, E., Zak, L., Gitelman, S., & Kouropatov, A. (2017). DUDAMATH – The digital environment for demonstrating mathematical ideas and problem solving. *The 23rd Conference on Applications of Computer Algebra*. Jerusalem, Israel: ACA2017.

Ovodenko, R., & Kouropatov, A. (2017). The use of digital tools to confront errors. *The 23rd Conference on Applications of Computer Algebra*. Jerusalem, Israel: ACA2017.

### ***Local Professional Conferences in Israel***

Kouropatov, A., Noah-Sella, L., Elias, D., & Dreyfus, T. (2023). *10th Jerusalem Conference for Research in Mathematical Education (JCRME11)*. Jerusalem, Israel.

Ballin, H., & Kouropatov, A. (2023). *10th Jerusalem Conference for Research in Mathematics Education (JCRME11)*. Jerusalem, Israel.

- Falah, J., & Kouropatov, A. (2023). *10th Jerusalem Conference for Research in Mathematics Education (JCRME11)*. Jerusalem, Israel.
- Abed, A., & Kouropatov, A. (2023). *10th Jerusalem Conference for Research in Mathematics Education (JCRME11)*. Jerusalem, Israel.
- Klemer, A., Segal, R., Kouropatov, A., Miedijensky, S., & Hersu-Kluska, R., (2023). *10th Jerusalem Conference for Research in Mathematics Education (JCRME11)*. Jerusalem, Israel.
- Klemer, A., Segal, R., Kouropatov, A., Miedijensky, S., & Hersu-Kluska, R. (2022). Attitudes of mathematics and science teachers toward their technological knowledge in teaching before and during the coronavirus pandemic. *The Annual National Conference for Teaching Mathematics in Secondary Education: "Mathematics – Looking Far, Aiming High."* Tel Aviv, Israel.
- Kouropatov, A., Noah-Sella, L., Elias, D., & Dreyfus, T. (2022). Can knowledge of analysis be insufficient to solve problems in infinitesimal calculus? Nathan's case. *10th Jerusalem Conference for Research in Mathematics Education (JCRME10)*. Jerusalem, Israel.
- Noah-Sella, L., Kouropatov, A., Elias, D., & Dreyfus, T. (2022). The relationship between an integral and the accumulation function in the eyes of a high school student. *10th Jerusalem Conference for Research in Mathematics Education (JCRME10)*. Jerusalem, Israel.
- Elias, D., Dreyfus, T., Kouropatov, A., & Noah-Sella, L. (2022). Objective and subjective aspects in mathematics – the case of rate of change. *10th Jerusalem Conference for Research in Mathematics Education (JCRME10)*. Jerusalem, Israel.
- Eisenströk, N., Bellin, H., Ovodenko, & R., Kouropatov, A. (2022). An online environment for learning and teaching deductive geometry - findings, challenges and dilemmas. *10th Jerusalem Conference for Research in Mathematics Education (JCRME10)*. Jerusalem, Israel.
- Ovadia, T., Kouropatov, A., Adler, A., Lehavi, Y., Nachshon, M., Lavia, E., Bassan, R., Segal, R., & Miedijensky, S. (2021). Designing tasks using technological tools in teaching mathematics, physics and biology and researching the knowledge and thinking processes of pre-service teachers and developer teachers. *Research, Teaching and Creation Conference*. Oranim College, Israel.
- Kouropatov, A., Elias, D., Dreyfus, T., & Nach-Sela, L. (2021). Development of meanings of rate of change. *9th Jerusalem Conference for Research in Mathematics Education (JCRME9)*. Jerusalem, Israel.
- Elias, D., & Kouropatov, A. (2021). How to use graphs to solve traffic problems: case analysis of using a graph as an upgraded diagram. *9th Jerusalem Conference for Research in Mathematics Education (JCRME9)*. Jerusalem, Israel.
- Copperman, K., Kidron, A., & Kouropatov, A. (2021). The contribution of the analogy between the algebraic representation and the graphic representation in solving a system of equations among 4th grade students. *9th Jerusalem Conference on Research in Mathematical Education (JCRME9)*. Jerusalem, Israel.

- Dreyfus, T., Elias, D., Nach-Sela, L., & Kouropatov, A. (2021). Mathematics as a tool for describing engagement in the “world”: the case of rate of change. *9th Jerusalem Conference for Research in Mathematics Education (JCRME9)*. Jerusalem, Israel.
- Yoffe T., & Kouropatov, A. (2020). Multi-age learning: group teaching and learning within high school mathematics studies. *Seminar for Math Centers and Leading Teachers*. Tel Aviv, Israel: Ort Network.
- Cohen D., & Kouropatov, A. (2020). The MOOC course as a means of self-learning - dilemmas and insights: experience from the field. *The Annual National Conference for Teaching Mathematics in Secondary Education: “Mathematics – Looking Far, Aiming High.”* Tel Aviv, Israel.
- Gabel, M., Jan, I., & Kouropatov, A. (2019). Establishing faculty learning communities as an engine for growth in academic teaching in engineering. *Leaders of Change in Academia Conference*. Braude College, Israel.
- Kidron, A., Kouropatov, A., & Copperman, K. (2018). Constructing students’ mathematical knowledge through analogy. *6th Jerusalem Conference on Research in Mathematical Education (JCRME6)*. Jerusalem, Israel.
- Ovodenko R., & Kouropatov, A. (2017). Using digital tools to cope with errors: the case of the inflection point. *Annual National Conference on Teaching Mathematics in Secondary Education: “Teaching Mathematics – Moving Forward.”* Ashkelon, Israel.
- Cohen, D., Ovodenko R., Kouropatov, A., Hoch, M., & Hershkovitz, S. (2017). Geometrical construction in a dynamic environment (GeoGebra): the case of mathematics teachers’ training. *Annual National Conference on Teaching Mathematics in Secondary Education: “Teaching Mathematics – Moving Forward.”* Ashkelon, Israel.
- Kouropatov, A. (2017). Abstraction-in-context and design of a teaching unit – case study. *5th Jerusalem Conference on Research in Mathematical Education (JCRME5)*. Jerusalem, Israel.
- Ovodenko, R., & Kouropatov, A. (2017). The process of building mathematical settings in a digital environment: the case of the kite. *5th Jerusalem Conference on Research in Mathematical Education (JCRME5)*. Jerusalem, Israel.
- Nahliali, T., Katz, Y., & Kouropatov, A. (2017). Mathematical thinking development: identifying the processes of mathematical thinking development for mathematics pre-service teachers. *5th Jerusalem Conference on Research in Mathematical Education (JCRME5)*. Jerusalem, Israel.
- Kouropatov, A., & Katz, J. (2016). Developing mathematical thinking by solving uncommon problems: from primary school students to pre-service teachers. *The Annual National Conference on Mathematics in Secondary Education: Discourse and Mathematical Literacy*. Tel Aviv, Israel.
- Kouropatov, A., & Ovodenko R. (2016). Geometric construction in a digital environment: a case study of pre-service teachers. *The Annual National Conference for Teaching Mathematics in Secondary Education: “Mathematics – Looking Far, Aiming High.”* Tel Aviv, Israel.

- Levinger A., & Kouropatov, A. (2016). The place of videos in math teaching and learning: can a snooker game help with geometry instruction? *The Annual National Conference for Teaching Mathematics in Secondary Education: "Mathematics – Looking Far, Aiming High."* Tel Aviv, Israel.
- Kouropatov, A. (2016). A dynamic digital learning system environment as a tool for creating new knowledge construction. *16th Conference on Research in Education*, Booklet of Abstracts, 12. Levinsky College. Tel Aviv, Israel: Levinsky College.
- Kouropatov, A. (2014). The construction of abstract knowledge (the case of learning the integral concept in high school). *Together for the Common Discussion of the Study of Mathematical-Science Education Conference*, Booklet of Abstracts, p. 20. Jerusalem, Israel: David Yellin College.
- Kouropatov, A., & Tirosh, D. (2009). What is the perception of the equal sign of teachers and student teachers. *National Conference of Mathematical Education in Elementary School*, Booklet of Abstracts, 36. Jerusalem, Israel.
- Kouropatov, A., & Tirosh, D. (2007). Do pre-schoolers understand what mathematical equality is? *The 14th National Conference of Mathematics Education in Elementary and Pre-school*, Booklet of Abstracts, 71. Tel Aviv, Israel.
- Kouropatov, A., & Zarya, Y. (2007). Probability in middle school – why and how? *Annual Conference of Teaching Research and Development in the Field of Mathematics for Elementary School in Israel*, Booklet of Abstracts, 76. Tel Aviv, Israel.
- Kouropatov, A., & Ovodenko, R. (2006). Does intuition help with learning classical probability: Impressions from an online course. *13th Annual Conference of the Society for the Advancement of Mathematics Education in Israel*, Booklet of Abstracts, 72. Tel Aviv, Israel.
- Ovodenko, R., & Kouropatov, A. (2006). The role of online tasks in defining the concepts of tangent and asymptote. *13th Annual Conference of the Society for the Advancement of Mathematics Education in Israel*, Booklet of Abstracts, 36. Tel Aviv, Israel.

## **Publications and Research**

### ***Journals***

- Klemer, A., Segal, R., Miedijensky, S., Herscu-Kluska, R., & Kouropatov, A. (2023). Changes in the attitudes of mathematics and science teachers toward the integration and use of computerized technological tools as a result of the COVID-19 pandemic. *Eurasia Journal of Mathematics, Science and Technology Education*, 19(7), em2295. <https://doi.org/10.29333/ejmste/13306>
- Bos, R., Kouropatov, A., & Swidan, O. (2022). Tools to support meaning-making in calculus and pre-calculus education: editorial. *Teaching Mathematics and its Applications: An International Journal of the Institute of Mathematics and its Applications (IMA)*, 41(2), 87-91. <https://doi.org/10.1093/teamat/hrac008>
- Kouropatov, A., & Ovodenko, R. (2022). The explorative digital tool as a pathway to meaning: the case of the inflection point. *Teaching Mathematics and Its*

*Applications: An International Journal of the Institute of Mathematics and its Applications (IMA)*, 41(2), 142-166. <https://doi.org/10.1093/teamat/hrac007>

- Dreyfus, T., Kouropatov, A. & Ron, G. (2021). Research as a resource in a high-school calculus curriculum. *ZDM Mathematics Education*, 53(3), 679-693. <https://doi.org/10.1007/s11858-021-01236-3>
- Ovodenko, R., & Kouropatov, A. (2019). The use of digital tools to confront errors during Advanced Calculus learning: The case of the inflection point. *Mathematics in Computer Science*, 13(1), 217-236. <https://doi.org/10.1007/s11786-018-0365-1>
- Yizhak, M., & Kouropatov, A. (2018). Palindrome: A challenge for fourth graders and for mathematics professors. *Mispar Hazak 2000*, 29, 48-54. Israel: Haifa University. (In Hebrew).
- Kouropatov, A., & Dreyfus, T. (2014). Learning the integral concept by constructing knowledge about accumulation. *ZDM – The International Journal of Mathematics Education*, 46(4), 533-548. <https://doi.org/10.1007/s11858-014-0571-5>
- Kouropatov, A., & Dreyfus, T. (2013). Constructing the integral concept on the basis of the idea of accumulation: suggestion for a high school curriculum. *International Journal of Mathematical Education in Science and Technology*, 44(5), 641-651. <https://doi.org/10.1080/0020739X.2013.798875>

### **Conference Proceedings**

- Dreyfus, T., Elias, D., Kouropatov, A., Noah-Sella, L., & Thompson, P. (2022). Personal meanings versus basic mental models for the integral. In M. Trigueros, B. Barquero, R. Hochmuth, & J. Peters (Eds.), *Proceedings of the Fourth Conference of the International Network for Didactic Research in University Mathematics (INDRUM 2022, 19-22 October 2022)* (pp. 144-153). Leibniz University, Hannover and INDRUM.
- Kouropatov, A., Noah-Sella, L., Dreyfus, T., & Elias, D. (2022). An epistemological gap between analysis and calculus: the case of Nathan. In M. Trigueros, B. Barquero, R. Hochmuth, & J. Peters (Eds.), *Proceedings of the Fourth Conference of the International Network for Didactic Research in University Mathematics (INDRUM 2022, 19-22 October 2022)* (pp. 174-182). Leibniz University, Hannover and INDRUM.
- Noah-Sella, L., Kouropatov, A., Dreyfus, T., & Elias, D. (2022). Manifestations of the collapse metaphor and their possible implications on personal meanings of integral and accumulation. In *Proceedings of the 12th Conference of European Research in Mathematics Education*. Bolzano, Italy: CERME.
- Elias, D., Dreyfus, T., Kouropatov, A., & Noah-Sella, L. (2022). Objective and subjective aspects of mathematics and context – the case of rate of change. In *Proceedings of the 12th Conference of European Research in Mathematics Education*. Bolzano, Italy: CERME.

- Elias, D., Kouropatov, A., Dreyfus, T. & Noah-Sella, L. (2021). Rate of change: meanings students have in accordance with context. In *Proceedings of the 14th International Congress on Mathematical Education*. Shanghai, China: ICME.
- Copperman, K., & Kouropatov, A. (2021). Constructing the link between graphical visualization and algebraic computation by mean of analogy: the case of system of equations. In *Proceedings of the 14th International Congress on Mathematical Education*. Shanghai, China: ICME.
- Ovodenko, R., & Kouropatov, A. (2021). Constructing knowledge using digital tools: the case of the inflection point. In *Proceedings of the 14th International Congress on Mathematical Education*. Shanghai, China: ICME.
- Kouropatov, A., Ovodenko, R., Fraenkel, M., & Hoch, M. (2021). Didactic considerations regarding iterative development design of dynamic digital tools. In *Proceedings of the 14th International Congress on Mathematical Education*. Shanghai, China: ICME.
- Kouropatov, A., & Ovodenko, R. (2019). Construction (and re-construction) and consolidation of knowledge about the inflection point: Students confront errors using digital tools. In J. Monaghan, E. Nardi, & T. Dreyfus (Eds.), *Calculus in Upper Secondary and Beginning University Mathematics – Conference Proceedings* (pp. 123-127). Kristiansand, Norway: MatRIC. Retrieved on 13.09.2019 from <https://matric-calculus.sciencesconf.org/>
- Kouropatov, A., & Ovodenko, R. (2018). Consolidation of abstract knowledge in the process of confronting errors using digital tools: the case of the inflection point. In F. Botana, F. Gago, F. & M. Ladra, (Eds.), *Proceedings of the 24th Conference on Applications of Computer Algebra* (pp. 86-89). Santiago de Compostela, Spain: Universidade de Santiago de Compostela.
- Kouropatov, A., & Dreyfus, T. (2017). Combining two theories in the design for learning about integrals. In T. Dooley, & G. Gueudet (Eds.), *Proceedings of the 10th Conference of European Research in Mathematics Education* (pp. 2746-2753). Dublin, Ireland: CERME.
- Cohen, D., Kouropatov, A., Ovodenko, R., Hoch, M., & Hershkovitz, S. (2017). Geometric constructions in a dynamic environment: the case of in-service teachers. In T. Dooley, & G. Gueudet (Eds.), *Proceedings of the 10th Conference of European Research in Mathematics Education* (pp. 580-587). Dublin, Ireland: CERME.
- Kouropatov, A., & Dreyfus, T. (2016). Integrals: Non-routine questions. In C. Csíkos, A. Rausch, & J. Sztányi (Eds.), *Proceedings of the 40th Conference of the International Group for the Psychology of Mathematics Education* (Vol. 1) (pp. 308-309). Szeged, Hungary: PME.
- Kouropatov, A., & Dreyfus, T. (2013). Constructing the fundamental theorem of calculus. In A. Heinze, & A. Lindmeier (Eds.), *Proceedings of the 37th Conference of the International Group for the Psychology of Mathematics Education* (Vol. 3) (pp. 201-209). Kiel, Germany: PME.

- Kouropatov, A., & Dreyfus, T. (2012). Constructing the accumulation function concept. In T. Y. Tso (Ed.), *Proceedings of the 36th Conference of the International Group for the Psychology of Mathematics Education* (Vol. 3) (pp. 11-19). Taipei, Taiwan: PME.
- Kouropatov, A., & Dreyfus, T. (2012). The idea of accumulation as a core concept for an integral calculus curriculum for high school. In S. J. Cho (Ed.), *Proceedings of the 12th International Congress on Mathematical Education* (CD) (pp. 2740-2749). Seoul, South Korea: ICME.
- Kouropatov, A., & Dreyfus, T. (2011). Constructing the concept of approximation. In B. Ubuz (Ed.), *Proceedings of the 35th Conference of the International Group for the Psychology of Mathematics Education* (Vol. 3) (pp. 97-105). Ankara, Turkey: PME.
- Kouropatov, A., & Tirosh, D. (2011). Preschool children's understanding of equality: opting for a narrow or a broad interpretation? In M. Pytlak, T. Rowland, & E. Swoboda (Eds.), *Proceedings of the Seventh Congress of the European Society for Research in Mathematics Education* (pp. 316-326). Rzeszow, Poland: CERME.
- Kouropatov, A. (2010). RBC micro-level analysis of knowledge constructing in case of the concept of approximation. *Papers for the Fifth YERME Summer School (YESS-5)*. Palermo, Italy.
- Kouropatov, A., & Dreyfus, T. (2009). Integral as accumulation: a didactical perspective for school mathematics. In M. Tzekaki, M. Kaldrimidou, & H. Sakonidis, (Eds.), *Proceedings of the 33rd Conference of the International Group for the Psychology of Mathematics Education* (Vol. 3) (pp. 417-424). Thessaloniki, Greece: PME.
- Kouropatov, A., & Zarya, Y. (2008). Non-standard problems for gifted mathematics students: spontaneous or heuristic. In R. Leikin (Ed.), *Proceedings of the 5th International Conference: Creativity in Mathematics and the Education of Gifted Students* (pp. 339-343). Haifa, Israel: CET Publishing.
- Kouropatov, A. (2008). Approaches to the integral concept: the case of high school calculus. *Papers for the Fourth YERME Summer School (YESS-4)*. Trabzon, Turkey.

## Research

<b>Date</b>	<b>Role</b>	<b>Research Topic</b>
2021-present	Researcher in an intercollegiate research group (led by the research authority of Oranim College)	Mathematics and science teachers' attitudes toward using technology for learning before and during the pandemic
2019-present	Principal investigator (in collaboration with Prof. Tommy Dreyfus) – Tel Aviv University (ISF-grant number 1743/19)	Meanings for fundamental calculus concepts in high school
2017-2020	Operational researcher at the Lev Institute, Jerusalem	Students' construction of mathematical knowledge by means of analogy

2010-2012	(ISF-grant number 1815/16). Research assistant at Tel Aviv University and the Lev Institute (ISF-grant number 843/09).	Students' construction of mathematical justifications as a process of abstraction in context
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### Invited Lectures

- Kouropatov, A. (2022, July). *"Cognizing" mutual relations among straight lines and planes in geometrical space using embodiment mediation*. Batsheva de Rothschild Workshop on Embodied Cognition and Learning in STEAM. Weizmann Institute, Israel.
- Kouropatov, A. (2022, May, online). *International practices: mathematical education in Israel*. Moscow City Pedagogical University, Moscow, Russia.
- Kouropatov, A. (2021, October, online). *Research as a resource in a high-school calculus curriculum*. Seoul National University, Seoul, South Korea. (The prepared lecture was canceled due to technical circumstances).

### Graduate Dissertation Supervision

2022-present	Irena Lax, Tel Aviv University, MA thesis (joint supervision with Prof. Tommy Dreyfus)
2022-present	Amira Abed, University of Haifa, PhD (joint supervision with Dr. Michal Ayalon)
2021-present	Gilat Falah, Tel Aviv University, MA thesis (joint supervision with Prof. Tommy Dreyfus)
2020-present	Dafna Elias, Tel Aviv University, PhD (joint supervision with Prof. Tommy Dreyfus). See appendix on the last page
2020-present	Lia Noah-Sella, Tel Aviv University, PhD (joint supervision with Prof. Tommy Dreyfus). See appendix on the last page
2019-2020	Tomer Yaffe, Levinsky College of Education, MED degree final project (subject: Multi-age teaching – 11th graders teach 10th graders five study units in mathematics)

### Books/Book Chapters

- Kouropatov, A., Komemi O., & Shahar, N. (2022). *The geometry of the plane for teaching purposes – a basic course*. The Levinsky-Wingate Academic College (under reviewing).

Kouropatov, A. (2014). *Learning and teaching analytics: A mathematical-didactic book for the teacher*. Technion, Ministry of Education (Participated in writing selected chapters).

Kouropatov, A. (2013). *Practice for summer matriculation*. Tel Aviv: Rehes.

*Mathematics for the sixth grade*. (2012). Tel Aviv: Time To Know (Development team member)

*Mathematics for the fifth grade*. (2012). Tel Aviv: Time To Know (Development team member)

*Mathematics for the ninth grade: Shvilim*. (2009). Tel Aviv: CET (Development team member)

*Mathematics for the eighth grade: Shvilim*. (2009). Tel Aviv: CET (Development team member)

*Mathematics for the seventh grade: Shvilim*. (2009). Tel Aviv: CET (Development team member)

*Mathematics for the sixth grade: Shvilim*. (2009). Tel Aviv: CET (Development team member)

*Mathematics for the fifth grade: Shvilim*. (2007). Tel Aviv: CET (Development team member)

*Mathematics for the fourth grade: Shvilim*. (2006). Tel Aviv: CET (Development team member)

*Geometry for the sixth grade: Shvilim*. (2007). Tel Aviv: CET (Development team member)

*Geometry for the fifth grade: Shvilim*. (2007). Tel Aviv: CET (Development team member)

*Geometry for the fourth grade: Shvilim*. (2007). Tel Aviv: CET (Development team member)

*Geometry for the third grade: Shvilim*. (2007). Tel Aviv: CET (Development team member)

*Mathematics for the sixth grade: Ve od ahad hadasha*. (2005). Tel Aviv: CET (Development team member)

*Mathematics for the fifth grade: Ve od ahad hadasha*. (2005). Tel Aviv: CET (Development team member)

### **Scholarships and Awards**

2015-2016, 2016-2017, 2017-2018, 2018-2019	Tel Aviv University, Outstanding Lecturer
2003-2005	Tel Aviv University, Excellence Scholarship for Learning in the Education School

### **Employment Experience (Outside of Academia)**

2012-2009	Content developer in the field of mathematics in a digital environment – Time To Know
2005-2006	Middle school mathematics teacher at the School of Environment and Society in Tel Aviv
2004-2005	Mathematics teacher at the Parkauf School, Or Yehuda, at the 4th and 5th grade levels, as part of the Kedem Atidim program for cultivating excellent students on behalf of the Branco Weiss Institute

1986-1997 Mathematics teacher in public and private schools in Moscow

### Other Professional Experience (Public Positions)

2017-present Steering committee member, Center for Optimal Teaching, Levinsky College of Education

2016-present Member of the committee for optimal teaching, Levinsky College of Education

2016-present Member of the disciplinary committee, Levinsky College of Education

2022 Organizer of the education session of the *Israel Mathematics Union Conference* (Israel)

2020-2022 Guest editor at the *International Journal of the Institute of Mathematics and its Applications – Teaching Mathematics and its Applications (TeaMat, IMA, Oxford University)*. Special Issue: *Tools to Support Meaning-Making in Calculus and Pre-Calculus Education*

2020 Member of the organizing committee of the international worksheet “Middle school mathematics in Israel – looking ahead” (Israel)

2019-2020 Deputy Head of the Department of Mathematics, Levinsky College of Education

2019 Member of the program committee at the *XIII International Conference on Mathematics, Science and Technology Education (ICon-MaSTEd)* (Ukraine, Kryvyi Rih)

2019 Member of the organizing committee of the session “Computer algebra in education” at the *ACA 2019 Conference on Applications of Computer Algebra* (Canada, Montreal)

2018 Organizer of the Working Group “Didactic considerations with respect to digital tools for the teaching of mathematics” at the *7th CADGME Conference* (Coimbra, Portugal)

2018 Member of the organizing committee of the session “Computer algebra in education” at the *24th Conference on Applications of Computer Algebra*. (Santiago de Compostela, Spain)

2017

2017	Member of the organizing committee of the session “Computer algebra in education” at the <i>23rd Conference on Applications of Computer Algebra</i> (Jerusalem, Israel)
2017	Editor of the symposium: “Abstraction in context” at the <i>5th Jerusalem Conference for Research in Mathematics Education (JCRME5)</i>
2007-2015	Member of the Program Committee of the <i>5th Jerusalem Conference for Research in Mathematics Education (JCRME5)</i>
	Experience in teaching courses in the didactics of differential and integral calculus in high school for a teaching certificate, Weizmann Institute

**Reviewer for international and local journals and conferences:**

- ESM
- JMB
- ZDM
- JRME
- International Journal of Research in Undergraduate Mathematics Education
- International Journal of Science and Mathematics Education
- PME
- CERME
- JCRME
- Practice and Research in mathematical education (in Hebrew)

**Membership in Professional Associations**

2020-present	Bureau of Information Technologies in Israel
2019-present	Eastern Eurasian Association for Educational Assessment (EAOKO)
2017-present	Association for Teacher Education in Europe (ATEE)
2009-present	International Group for the Psychology of Mathematics Education (IGPME)
2007-present	European Research in Mathematics Education (ERME)

**Languages**

Russian, Hebrew, English.

Appendix



19/10/21

To Whom It May Concern

Concerns: Dr. Anatoli Kouropatov

Dr. Anatoli Kouropatov and I are jointly principal investigators of a research project on "Meanings for fundamental calculus concepts in high school," a project funded by the Israel Science Foundation.

As part of the project, we jointly supervise two research students (PhD students) registered at Tel Aviv University who conduct their research on topics related to the project. The students are Dafna Elias and Lia Noah-Sella.

Sincerely,

Tommy Dreyfus  
Professor Emeritus  
School of Education  
Tel Aviv University