

# Александр Васильевич Кельманов



(25.04.1952 – 1.12.2019)

1 декабря 2019 года на 68 году жизни скончался доктор физико-математических наук, главный научный сотрудник лаборатории анализа данных Института математики им. С.Л. Соболева Сибирского отделения РАН (ИМ СО РАН) Александр Васильевич Кельманов.

А.В. Кельманов родился 25 апреля 1952 года. В 1969 году окончил Ижевский естественно-гуманитарный лицей «Школа № 30». В 1974 году с отличием окончил Ижевский механический институт (сейчас - Ижевский государственный технический университет), защитив дипломную работу «Многоканальный анализатор спектра сигналов». После окончания учебы Александр Васильевич приехал в Академгородок г. Новосибирск. Начал свою работу в Новосибирском государственном университете (НГУ), чуть позже там же поступил в аспирантуру. Долгое время работал в Научно-исследовательской части НГУ, по договорам вел совместные исследования с коллегами из лаборатории анализа данных, а с 1989 г. официально перешел в штат лаборатории анализа данных Института математики СО АН СССР (ИМ), продолжая работать в НГУ в качестве доцента на кафедре теоретической кибернетики механико-математического факультета НГУ.

А.В. Кельманов был специалистом в области прикладной математики, информатики и компьютерных технологий. Занимался проблемами дискретной оптимизации; экстремальными задачами анализа данных и распознавания образов, алгоритмами с

гарантированными (доказуемыми) оценками точности для труднорешаемых задач дискретной оптимизации, прикладной статистикой и аппроксимацией, геометрическими задачами на графах.

А.В. Кельманов многократно был автором результатов, признанных важнейшими научными достижениями ИМ. Ему принадлежат цикл работ по исследованию вычислительной сложности дискретных экстремальных задач, которые индуцируются актуальными проблемами анализа данных и распознавания образов; систематизация этих задач; полиномиальные алгоритмы с гарантированными оценками точности для решения NP-трудных задач анализа данных и распознавания образов; компьютерные технологии, реализующие эти алгоритмы (2005–2014 гг.); математические методы, эффективные алгоритмы с оценками точности и компьютерные технологии, ориентированные на решение проблем помехоустойчивого анализа и распознавания числовых и векторных последовательностей как дискретных структур, которые в отсутствие помехи включают повторяющиеся, чередующиеся и перемежающиеся информационно значимые элементы и их комбинации (1994–2014 гг.); математическая модель звукового строя русского языка, учитывающая триграммное взаимодействие фонем в слитной речи; алгоритмы макроволнового компьютерного синтеза устной русской речи по тексту, реализующие эту модель (1990–1993 гг.); математические методы, эффективные алгоритмы и компьютерные технологии для решения проблем (помехоустойчивого анализа и распознавания речевых сигналов), возникающих при голосовом управлении различными техническими объектами (компьютерными системами, летательными аппаратами, портативными средствами сбора и обработки данных и т.п.) (1974–1994 гг.).

А.В. Кельманов был одним из разработчиков системы [QPSLab \(QuasiPeriodic Sequences Laboratory\)](#) для решения задач компьютерного анализа и распознавания числовых последовательностей с квазипериодической структурой.

Под руководством А.В. Кельманова было выполнено 11 проектов, поддержанных РФФИ, защищены 5 кандидатских диссертаций, велась подготовка аспирантов ИМ СО РАН и НГУ, а также студентов кафедры Теоретической кибернетики НГУ. Он входил в состав редколлегии журналов: «Дискретный анализ и исследование операций» и «Проблемы информатики».



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