Computing Educators Oral History Project
An Interview with *Judith Gal-Ezer*
Conducted Friday, March 9, 2007
In Covington, Kentucky, USA
Interview conducted by Barbara Boucher Owens

1   [0:00]
2   **Barbara Owens: This is an interview with Judith Gal-Ezer of the Open University of**
3   **Israel on the 9th of March, [2007] at Covington, Kentucky. It is part of the Computing**
4   **Educators Oral History Project. It's being conducted Barbara Boucher Owens.**
5
6   **Did I say your name right, Judith? Would you say it for us so it gets in here correctly,**
7   **both in English and Hebrew if you like?**
8
9   Judith Gal-Ezer: All right. In Hebrew it is [says name in Hebrew]. And in English it is Judith
10   Gal-Ezer.
11
12   **B: Thank you very much. And it's a pleasure to have you with us this afternoon and to**
13   **talk to us a little bit about — thinking way, way, way back — let's talk about your**
14   **parents' education. Did your parents have college degrees?**
15
16   J: No, unfortunately my parents did not have any college degrees. They were born, both of
17   them, in Berlin and they had to flee from Germany in 1939. Actually, my father left in 1938
18   and my mother a year later. They weren't my parents, then, of course. They were teenagers.
19   And they came to Israel. Their parents and siblings and other members of the family were

20   taken to the concentration camps and they never came back.
21
22   And they had to struggle to lead a decent life in Israel. My father was a carpenter and right
23   from the beginning he had to work for his living. My mother was younger — my father was
24   about 19 years old and my mother was about 14 years old. And she went to a secretaries'
25   school and meant to become a secretary. But then, after years, when they dated first and then
26   got married, my father thought, "It's good for a woman to be at home and not to work at all."
27   So she became a housewife. And he went on with his carpenter work. And so they didn't
28   have any college, any formal education.
29
30   **B: So neither of your parents were in computers or science or anything like that?**
31
32   J: No. No. Not at all.
33
34   **B: Were you a good student when you were in school?**
35
36   J: A very, very good student, I must say!
37
38   **B: You should see her eyes light up!**
39
40   J: Yes. I loved to learn, just from the beginning. I really loved it. I loved doing my homework.
41   Unbelievable, I mean, my children can't believe it, but I really loved it. And I was a very
42   good student.
43
44   I met my elementary school teacher, my seventh and eighth elementary grades, a few weeks
45   ago, by accident, and she even told me — I don't think I ever knew it — that I was the first in
46   Israel in the exam that we had to take when graduating elementary school. I don't think I ever
47   knew that; I don't think she ever told us.
48
49   **B: You were a good student! Did you take courses in mathematics and science that**
50   **prepared you for college studies? I think you told us that.**
51
52   J: Yes, in high school, I elected the class that put emphasis on mathematics and physics and
53   chemistry, but more physics than chemistry. We had five classes: two humanities, one was
54   biology, one was more social studies oriented, and one was the math and physics class. We
55   were twenty boys and four girls there. This was my choice. I loved mathematics from the
56   beginning. I think I was pretty good in mathematics, and physics too, but more mathematics
57   than physics.
58
59   **B: Could you explain just a little bit about the high school curriculum. You didn't take any**
60   **humanities? You chose to only take math and physics. Is that how it worked?**
61
62   J: No, we had humanities and some social sciences as well. And the Bible and Hebrew studies
63   and English studies, of course. But the emphasis was on mathematics and physics.
64
65   **B: OK, I understand. Did you have any brothers or sisters who went on to college or**

66 **professions?**
67
68 J: Yes, I have one brother who is an engineer, aeronautics engineer (I forgot the word).
69 [5:05]
70 **B: And that's it, just one brother?**
71
72 J: Just one brother.
73
74 **B: Were you given the same educational opportunities that your brother had?**
75
76 J: Maybe, the same opportunities — no, not even the same opportunities. There was not the
77   same support. When I graduated elementary school my father thought that I should go
78   working, go learn something like being a secretary or whatever. Why should I go to high
79   school, I'm going to be a housewife anyway? So this was his attitude. He never believed it. I
80   told him after years that this is what he said, but he never believed that he said it. [both
81   laugh] I have to confess, that one reason, I must say, was also that we weren't very well —
82   my parents didn't have the money to send me to high school — it was pretty expensive. So
83   this is one of the reasons, I must say. But there was also this philosophy that I'm a girl and I
84   should stay at home. So I asked one of my elementary school teachers, my music teacher, to
85   come home and convince my father that I should go to high school, because I was a very
86   good student. So I finally joined high school.
87
88   For my brother it was obvious that he would go to high school and that he would go to the
89   Technion, the Technical Institution of Israel. And it wasn't at all obvious that I would go on
90   and continue at the university.
91
92 **B: Were there teachers that, particularly in your early life, inspired you to pursue this**
93   **mathematics, physics career path?**
94
95 J: Yes, I believe there were especially two teachers. One was the teacher of my seventh and
96   eighth grade in elementary school. She was a wonderful teacher. And she taught us
97   mathematics, literature, and physics (all the physics we studied then). I loved the way she
98   taught us mathematics. We were two groups in mathematics. There was the intensive group,
99   so to speak, and I participated in the intensive group and she was really very good. I knew
100   that this is what I want to do, this is what I'm going to do, to do mathematics.
101
102   And then there was the teacher in high school, in the 10th, 11th, and 12th grades of high
103   school. He was also very, very good. He taught us much more than he had to teach, to learn,
104   for the end exams [the matriculation exams]. I was sure that I am going to pursue math
105   studies at the university.
106
107 **B: How did you choose? When you decided you were going to university, you were**
108   **supposed to go to secretarial school. How did it happen that you went to college and**
109   **how did you choose the undergraduate institution that you went to?**
110
111 J: I was very determined to pursue higher education, so I made it. Actually, I wanted to join the

112   Weizmann Institute — I can't say I'm sorry, but this was my dream. I read — now, I
113   remember, while in high school, being a teenager — I read the book of Madame Curie. This
114   inspired me a lot. (Oh, I should have mentioned that yesterday [during my keynote talk]!) I
115   dreamt of being Madame Curie. So I thought I would join Weizmann Institute, but then they
116   didn't have undergraduate studies, they had only graduate studies. So I chose the Tel Aviv
117   University. I lived in Tel Aviv, and this was the most convenient. They had applied
118   mathematics there, so I chose applied mathematics.
119
120 **B: Was the university education free in Israel?**
121
122 J: No, not at all. We had to pay. I also learned the accordion. Do you know what the accordion?
123   I was pretty good in this, too. I loved this, too. But I had to choose. I mean, when I got 18, I
124   had to choose: Am I going to become a musician or a mathematician? So I chose
125   mathematics. But, I taught accordion, and so I earned the money I paid for my studies in
126   university.
127 [10:15]
128 **B: How interesting, how interesting. Well, you've said that you came to school knowing**
129   **what you wanted to major in. Then why did you or how did you decide to go on? Did**
130   **you do that right away? Or after you … well, you might tell me a little but about your**
131   **undergraduate experience before you tell me more.**
132
133 J: Well it was very difficult. It was very difficult. It was very different from high school.
134   Despite the fact I was a very good student in high school, I found it very difficult in
135   university. I can't say that I was the best in university, not at all. The first year was difficult.
136   Calculus — no, calculus was OK — but the linear algebra course I remember to be most
137   difficult. The logic course was quite difficult. But then this was the first year. The second and
138   third were much better. We in Israel have to join the army. Well, I went on the academic
139   reserve, so that I could study first the undergraduate program and join the army later. And I
140   joined the army right after graduating and I went to a computer unit. There started my love
141   for computers.
142
143   When I graduated, the same time — oh, let me turn to some personal details. I knew my
144   husband ever since elementary school. We were not in the same class, but we were in parallel
145   classes, but there was no connection between us. But we were in the same class in high
146   school. And then he also went to the academic reserve and he chose to study physics at Tel
147   Aviv University as well. And so in applied mathematics we had many physics courses as
148   well, so we had many courses together. And then our friendship started.
149
150   And when we graduated and — as I said, he was also in the academic reserve, he also joined
151   the army — no, actually he took the Master's program and he joined the army one year later.
152   But then we already decided to get married. And so I again had to earn some money for our
153   living, because he was still a student of the Master's program and I was in the army. And we
154   cannot work, we don't have any salary while we are in the army. So I asked — I mentioned
155   my colleague, Gideon Zwas, who was also my teacher and a very good friend. And I asked
156   him if I could be a TA or something while I am in the army so that I can earn some money.
157   And he said, "You can do that and I can see to it, but you have to enroll to a Master's

158   program." So I enrolled in a mathematics program while being in the army. I don't know if
159   it's allowed! But anyway, I've done it. [laughter]
160
161 **B: You don't think anybody listening to this will come after you, do you?**
162
163 J: That was years ago! So I actually continued with my Master's program and then my
164   instructor of the Master's thesis told me, "I understand that you're going on to the doctorate."
165   And so I said, "Yes of course!" And this is how I went on to the doctorate program in
166   seismology. And it was still not anything to do with computers. I worked in programming in
167   the army. COBOL. Yes. And while doing the doctorate — it was in seismology — and I
168   wrote these huge programs in FORTRAN on these … (how were they called? [makes a
169   rectangle with her hands])
170
171 **B: Punch cards?**
172
173 J: Punch cards, yes! And I think for most of the time of my doctorate I went down to the
174   computer laboratory and put these punch cards on the machine and waited the night to get the
175   output and so on. But this was kind of a beginning and I …
176 [14:52]
177 **B: Let's go back and reflect a little bit on this. When you were in high school it was your**
178   **story you tell about there being twenty boys and four girls. You haven't said anything**
179   **about the ratio in your classes when you were studying applied mathematics at Tel**
180   **Aviv. Do you remember?**
181
182 J: Yeah, it wasn't so … the ratio wasn't so bad, but the girls were a minority, I would say. It's
183   hard to remember now.
184
185 **B: So it wasn't important, you mean.**
186
187 J: Maybe something 30% of … something like 30%. Sometimes we were mixed classes with
188   those who study statistics. The girls were more than in physics and math, of course.
189
190 **B: So you went on to the doctorate. You were out of the army?**
191
192 J: I was out of the army. By then I had two girls already.
193
194 **B: Oh!**
195
196 J: [laughs]
197
198 **B: Working on a Master's, in the army, and having two babies!**
199
200 J: Yes, that's true. Yep!
201
202 **B: Busy lady.**
203

204   J: I always was, yeah! And then when I finished my doctorate, I gave birth to my son.
205

206   **B: And so you're saying that on your doctorate you studied something … that seismology**
207   **wasn't what you did on your Master's**
208

209   J: It was close; it was nearby. It was wave propagation in my Master's program.
210

211   **B: Did you enjoy the research that you did for your doctorate?**
212

213   J: I enjoyed the research. My instructor was a very tough and very tense man. And it was not so
214   easy to work with him. I learned from him a lot, but my days were pretty tough and not
215   always very pleasant. This is the truth. So I don't see this period as very enjoyable.
216

217   **B: Something you had to do?**
218

219   J: I wanted to do it. I wanted to make the progress; I wanted to get the Ph.D. But it was less
220   enjoyable than the year before and the year later. The years have gone, though.
221

222   **B: How many years was it that you felt like you were working on this dissertation?**
223

224   J: It was all in all about five years that I began and until I got the Ph.D.
225

226   **B: And then how did your life go after you got your Ph.D.?**
227

228   J: Well, it was something like the third or fourth year of the Ph.D. — Professor Bruckheimer,
229   who was one of the founders of the Open University in Great Britain, gave a colloquium
230   lecture at the Tel Aviv University. And then I came home and I told my husband that if there
231   would be such an institution in Israel, there is where I want to be. And something like one or
232   two years later, the Open University [in Israel] was established. And some of my colleagues
233   from Tel Aviv University, two physicists, and one colleague, who studied mathematics with
234   me, joined the Open University as TAs, they were not faculty yet, and they told me to come
235   and join them. And I said, "Well, I can't do everything. I have to finish my doctorate first."
236   And then I join the Open University. And this is how it was. I graduated my doctorate
237   program and then joined the Open University and there I am ever since. And I really love this
238   place.
239

240   **B: She is smiling very broadly. She loves this place. And what about the idea of the Open**
241   **University appealed to you so that you came home after that talk and said, "That's**
242   **what I want to do!"?**
243   [19:22]
244   J: While being at Tel Aviv University I was also teaching. I taught various classes, but I very
245   much liked the engineering classes. I taught math, numerical analysis and differential
246   equations, and complex function and — that's it, I think. I loved it; I really loved it. I felt that
247   I really taught mathematics to the engineers, who weren't interested at all. I mean, they
248   wanted the questions, the solutions, which should be a number, and that's it. Or a recipe or
249   something like this. And I didn't like it. I didn't want it to be this way. So I tried to do my

250 best to teach them the beauty of mathematics. Besides, it was applied mathematics, it's not
251 pure mathematics. But still I thought there is a beauty and to really made them love it. And I
252 think I succeeded. And so I thought teaching … I went back actually to what I wanted to do
253 when I was in high school or elementary school, to be a teacher. And I felt that this is what I
254 should do. And the Open University puts emphasis on teaching, great emphasis on teaching.
255 It is a distance education institution. And the faculty at the Open University — well, it's not
256 face-to-face teaching, but we have to prepare the material, the textbooks. And I felt that I
257 could do something to contribute and this is what I want to do. Shall I go on?

259 **B: If you want to. But was there somebody who was a mentor who supported this move**
260 **into education?**

262 J: There was my teacher and then colleague, Gideon Zwas, who was a great teacher.

264 **B: Can you spell that name again?**

266 J: Gideon Zwas. It's Zed-w-a-s.

268 **B: Thank you.**

270 J: He was a great teacher. And we were also friends. And we … after years we make research
271 together. And he really inspired me. He taught me how to prepare a lesson. How to motivate
272 the students. How to devote — actually, he devoted his life to teaching and to his students
273 and how important it is. So he supported my desire to become a teacher.

275 **B: Your career has moved from — certainly, no seismology anymore.**

277 J: No, no.

279 **B: And the mathematics has been paired with computer science.**

281 J: Yeah. Well …

283 **B: Can you talk about how that path developed?**

285 J: Yes. I can. When I started work at the Open University — and what I really was doing then
286 was preparing textbooks — I felt that I needed something more, some additional thing to do
287 or to research. So what I felt I wanted to do was to take advantage of the computer's potential
288 and to integrate it into the teaching of mathematics and to see how mathematics can be taught
289 better, with more insight, with the help of the computer. So I joined Gideon Zwas who was
290 doing similar work in the past. There was another colleague, Shlomo Breuer, they wrote a
291 book, *The Mathematical Laboratory*[1] or something like this. And so I asked him if he was

---

[1] full title: *Numerical Mathematics: A Laboratory Approach*, by Shlomo Breuer & Gideon Zwas, Cambrldge University Press, 1993. ISBN 0-521-44040-8.

292 willing to work with me together on such issues and he agreed. So we worked from … I
293 think it was in 1987 to 2000, thirteen years together or so. We met once a week — I was very
294 busy at the Open University; he was very busy at the university, at Tel Aviv University — so
295 we met once a week and we made this research on integrating the computer into mathematics
296 teaching. We provided ways to teach mathematics without the prerequisites usually needed.
297 Yep.
298
299 And then I felt that I … something was missing with my computer education, computer
300 science education. That I know how to use a computer, but I don't know this science is really
301 … what are the foundations of the science. So I decided to take courses in computer science.
302 And I took about ten courses, which are the core of computer science. And at the same time,
303 at the Open University, the president of the Open University decided to develop the computer
304 science undergraduate program. And so I went into it. Well, then I started to develop
305 computer science courses — not by myself, there were my colleagues, but we were the ones
306 who founded computer science department at the Open University.
307 [25:14]
308 **B: If you have a teaching philosophy … you said you want to convey this love of learning**
309 **mathematics, or I assume now computer science, to your students. But what drives you?**
310 **What's your overall philosophy about doing this? Do you have one?**
311
312 J: I never thought of it as a philosophy. I think rigor is one of the things I would center on. Not
313 give up. Going into details. Understanding, really understanding, what you are doing … what
314 you are teaching and what you are learning. Hmm …
315
316 **B: Has that changed, your teaching style, your style of writing, in preparing these**
317 **materials over the years?**
318
319 J: I am not sure it has changed anything. I can't point at change or at this stage something is
320 changed. I think this is what my philosophy was since.
321
322 **B: What's the most favorite course you've developed of all the courses that you've taught?**
323
324 J: I think that automata and formal languages. And maybe numerical analysis was also one of
325 them. Mmm … yep.
326
327 **B: Can you think of a particular student … you must explain a little bit to me and for the**
328 **other listeners, about the way it works in the Open University, but do you have contact**
329 **with the individual students?**
330
331 J: Yes, I have contacts. But first, the Open University, as I said, is a distance education
332 institution. The main element of the study method is written textbooks. We used to develop
333 textbooks in Hebrew, but the procedure for developing a textbook is very intensive, very
334 long. It takes, like, 4, 5, or 6 years to develop a textbook. It starts with a proposal, which is
335 sent to two or three referees outside the university. And then every unit that is written is sent
336 again to referees and going back to the proposal writer. And then the publishing house comes
337 into it. And the editors. It takes a long time. In computer science, we couldn't afford

338 ourselves to have this long time of development, because after five years, of course, the
339 material is obsolete. So we base our courses on English textbooks, oexisting English
340 textbooks. Some of them we translated, but it also took some time, because you have to be
341 very pedantic in translating. So the more advanced courses we don't translate anymore. But
342 we write study guides, which are in Hebrew. Well, it is easier for us in Hebrew than in
343 English, and for the students, of course.
344
345 And we have … students get home these course materials. They get assignments that they
346 have to submit during the semester, prescheduled assignments. And we have tutorials. They
347 can take it … they are not mandatory. They can take it in two modes: either a regular mode,
348 which is once in two or three weeks, or intensive mode, which is once a week. And we force
349 them … the only time we force the students to come to a place is at the end of the semester,
350 they have to take the exam. We have about 50 centers all over the country. The tutorials are
351 being conducted in the centers and so are the exams. And …
352
353 What is it you asked specifically?
354
355 **B: I was asking if you had contact with the individual students that were studying the**
356 **materials that you developed.**
357
358 J: We consult the students, even before they are students, when they are potential students. This
359 is one way of contact with the student. The faculty, I mean the faculty. I know we have
360 course coordinators and tutors. The tutors are those that meet the students on a regular basis.
361 The course coordinators meet them from time to time; also to some extent on a regular base
362 when they visit the study centers. The faculty is more … actually in the head department of
363 the university, and only once in a semester, or maybe twice in a semester, visit the study
364 centers. That means we consult students. Now we have also a graduate program in computer
365 science at the university and we instruct them in their thesis or final report projects they have
366 to submit.
367 [30:27]
368 **B: Do you have a particular story, a teaching story, that would — about any of the classes**
369 **or the development — that you'd like to share?**
370
371 J: The only thing that pops into my mind is that I keep meeting students, former students, either
372 from the Open University or the Tel Aviv University, and they remember me. And I am so
373 happy! And they … they are grateful, so that is something I like.
374
375 **B: There's a radical change in what you've been doing. I've noticed recently you've moved**
376 **into intensive work with the high schools.**
377
378 J: Right.
379
380 **B: Would you like to talk a little about that? Because your first move was into the**
381 **graduate program after undergraduate. And now the other way, the reaching down.**
382
383 J: Actually, it is not recently. It is now about 20 years, I think. Yeah! About 20 – almost, maybe

384   19 or 18 years.

385

386   Well, way ago, in — it was 1988, 1987 or 1988, I can't really remember, I was … Ah! there
387   was there then in Israel a committee, a professional committee of computer science. They
388   were … they should design a computer science program for high school. There was a
389   computer science for high school then implemented in Israel, but there was no material
390   written and then the teachers — there were not real computer science teachers. And they
391   were doing, you know, what they liked in the school. It wasn't very well established. Another
392   committee was nominated (I was not a member of it then). I was asked by one of the
393   members of the committee if I was ready to prepare the first unit of the first two units of such
394   a program, which was meant to be the foundations of computer science. Why he approachd
395   me — he worked in an institution adjacent to the Open University; he knew me; he knew that
396   I was involved in designing the syllabus of courses at the Open University. So I believe that
397   is why he chose me. I had no idea of high school curriculum, not at all.

398

399   By that time, David Harel, another colleague of mine, had a small book, *the Foundation of*
400   *Computer Science*. Actually it was a radio program that he gave once a week or so, and this
401   came out in a little book. This was the foundation of computer science. And it was after or
402   while I was taking the courses in computer science at Tel Aviv University. But actually this
403   book gave me the real notion of what computer science is. And I thought that I can use this
404   book to design these two units of the high school curriculum. I then called David Harel. I
405   never met him — oh, maybe I had met him once before — and I asked him if it was all right
406   if I used his book (well, not to copy the book, but as the foundation of this program). And he
407   was very … he agreed of course. He was very satisfied with it. And I prepared this program
408   and then somehow he also got involved in this. We submitted it together to this committee
409   and it was approved.

410

411   A year or two later, and I really don't know why, the Minister of Education nominated a new
412   committee, a quite new committee, which I became a member of. This new committee —
413   Amiram Yehudai was chair, David Harel was a member, and I was a member, and another
414   member from the Hebrew University, Catriel Beeri, and three members of the Ministry of
415   Education, and two computer science teachers — and we designed this, what we call new
416   curriculum of computer science, which is implemented until today. This paved the way to
417   research in computer science. And there is where I got into research in computer science —
418   it's computer science education.
419   [35:05]
420   **B: This is having knowledge of the talk that you gave yesterday when you won the**
421   **Outstanding Computing Educator Award. You spoke about how you had mentored,**
422   **essentially, into computer science education, two of the outstanding researchers in**
423   **Israel. Would you like to talk about that? Because I think that's a nice story.**

424

425   J: Yes. It is Moti Ben-Ari and David Ginat. The first one was David Ginat. They both … well, I
426   don't think it is a secret, they both applied to the Open University. And we didn't recruit any
427   faculty at the time. But we were working … in all the institutions in Israel, in most of the
428   institutions, there were teams working on the high school curriculum program, they were
429   actually writing the materials. And there were not enough computer science educators at the

430   time. Actually, there was no one. There was one mathematician, one theoretical
431   mathematician in the Technion, who was involved somehow in preparing some of the
432   material in LOGO then. But actually there were no computer science educators at all. So
433   when David Ginat came to the Open University, I suggested that he join the science teaching
434   department at the Weizmann Institute, and that he starts … that he establishes the team that
435   can take part in preparing the material for the high school curriculum. After a while — a
436   while, meaning 2, 3, or 4 years, I really don't remember — he left for the Tel Aviv
437   University. And I was on sabbatical at the Weizmann Institute for that year, right when he
438   left or the last year he was there. And then they asked me for the recommendation if I know
439   of anyone who would come to the Weizmann Institute and chair the group of the computer
440   science research, computer science education research there. And at that time Moti Ari came
441   to the Open University, Moti Ben-Ari. And so I convinced him to go to the Weizmann
442   Institute. And now he chairs the group there. I think they are both happy with this and they
443   really like their work. David Ginat really went into it. And what I like is that both had formal
444   good education in computer science; they both had Ph.D.s in computer science. And this was
445   very, very important.

446

447 **B: This is sort of stepping back. Could you talk about a typical day in your professional**
448   **life?**

449

450 J: Hmmm.

451

452 **B: Because it sounds like it wouldn't be typical in America, because you have a different —**
453   **working at the Open University, slightly different, but it would be interesting, I think,**
454   **for our listeners what a typical working day is like for you.**

455

456 J: I try to. I try to. I … shall I start when I get up? I get up at 6 o'clock in the morning. Or its
457   5:45? I start very early at the university, 7:00, 7:15, 7:30. Well, I start by reading mail, but
458   then I will go through material. I will talk with students. I will talk with my colleagues. I
459   have lots of meetings. I'm involved in many things at the Open University, not necessarily to
460   do with computer science. The reason is that it's been now two years since I served in the
461   Office of Vice-president for Academic Affairs for 6 years. Wow! And so I'm involved in
462   zillions of committees at the Open University. And so they … you know, meeting after
463   meeting. And talking with my colleagues. Doing … trying to do research with my
464   colleagues, some of them working at the Open University. Ela Zur, {unclear}. And Michael
465   Armoni, who used to be at the Open University, is on sabbatical … mm, post-doctorate at the
466   Weizmann Institute. We try to find time during the week to work together. From time to time
467   I have the meeting of the professional committee of computer science, Ministry of Education
468   committee.
469   [40:02]
470   I can hardly find time during the day to read materials, to read the articles, that I would be
471   doing later at home. I leave the university about 5:00, 6:00, sometimes 7:00 in the evening.
472   You said professional life. But then I usually try to help my daughters with their children.
473   And finally 10:00-11:00, I fall in bed! [both laugh]

474

475 **B: Thank you. What kind of professional organizations do you belong to and how has that**

476   **affected your career?**

478   J: I'm sorry?

480   **B: Professional organizations, like ACM or … ?**

482   J: ACM. SIGCSE. I used to be IEEE. [long pause] No professional organizations in Israel, I
483   used to be … no, there is hardly one. So no. Yep!

485   And the CSTA now. CSTA!!!

487   **B: Well yeah! Can you tell us a little bit about the CSTA? Tell us what that is and how you**
488   **got involved.**

490   J: Mmm hmm. Well, the CSTA is the Computer Science Teachers Association. I've heard
491   about it ever since it was established. But Chris Stephenson [the executive director of CSTA]
492   invited me to be the international board member on the board of directors, international
493   director — this is the right — board of directors, a year or year and a half ago. I agreed. It is
494   very challenging. I don't think that I have done enough to recruit members from … really
495   international members. I have contacts with international colleagues. I tried to organize an
496   international panel for the next ITiCSE, but it was very difficult. And one of the difficulties
497   was with the European colleagues: to the travel —travel expenses, and this is for the ITiCSE
498   [the European conference]. To get to the SIGCSE [in the United States] was the visa
499   problems, which I wasn't aware until today, but they were aware of. And so it didn't work
500   out.

502   We have board meetings twice a year, very well organized. I attend them. I think they are
503   doing great work. They are trying to, well, to put together the curriculum, to conduct the
504   many workshops for teachers, computer science teachers, to collect data that seems to be
505   unavailable. In what states there are requirements for computer science teachers? In what
506   states there are universities that offer computer science education certificate programs?
507   Would it be in an education school or in the computer science school? So we have only eight
508   universities in Israel, much more colleges, but it is all very clear. And it seems to be much
509   more complicated in the US. Even collecting this data seems to be complicated for me as an
510   outsider. So I think the CSTA is doing great work by collecting … trying to collect this data.
511   By serving computer science teachers and trying to find out what they need, what they lack,
512   what they teach actually, because there is no general program that they have to teach except
513   the AP [Advanced Placement], as I understand. So it is very interesting, very demanding. I
514   think that I should do much more for them.

516   **B: Thank you. Another area that I am always interested in is mentoring. And I think that**
517   **in one way you've answered the question, that you acted as a mentor to David Ginat**
518   **and to Moti Ben-Ari. But can you think of other instances where you have been a role**
519   **model / mentor for others?**

521   J: Oh! You make me blushing. Yes, I have done it all my life, I think. I've been mentoring in

522 the Open University. Actually everyone who joined the computer science education
523 department, in whatever they were doing, until, well, until I became vice president for
524 academic affairs, then for six years I left the department. I used to be head of the department,
525 so this is why I was mentoring them. And I am still doing it. Well, it's mentoring in how to
526 write the courses, how to teach, how to talk to the students, how to consult the students. I'm
527 doing it today with three people, I would say, at the Open University, three members of the
528 computer science department. Basically on how to write the study guides for courses.
529 [45:35]
530 **B: One of the things that has not come up: I have heard some men's names, but is there a**
531 **balance between men and women in the field in Israel? Your colleagues, do you have**
532 **women colleagues?**
533
534 J: I have women colleagues, but there is no balance. Well, in the community of faculty at the
535 universities there is a balance, now that I think of it. We have Moti Ben- Ari now in the
536 Weizmann Institute as a computer science educator and researcher. We have David Ginat at
537 the Tel Aviv University. We have Orit Hazzan at the Technion. And myself at the Open
538 University, this I think …
539
540 **B: You do?!**
541
542 J: … now coming to think of it. [both laugh] The departments of computer science, no, I don't
543 think there is any balance in the computer science departments.
544
545 At the Open University we are a very small faculty. The Open University has only 60 faculty
546 in all areas. It was something like a motto of the Open University to be a very small kernel
547 and to rely also on faculty of other universities. So at the computer science department we
548 are seven faculty now — we are recruiting two more, but we are seven. And from seven, we
549 are three female and 4 males.
550
551 **B: Very nice! Have there been any particular challenges that you have faced, challenges**
552 **juggling your commitments? You said you had three children, your commitments at**
553 **home, your having to travel to various … the centers. Any particular challenge you**
554 **want to talk about?**
555
556 J: There was always a challenge to find the time to do everything. But my biggest, greatest
557 challenge is … was and still is to convince that computer science is a science. To convince
558 the Ministry of Education, to convince … hmm mm mm, what is the word? [long pause] I
559 don't have the word; I'll come back to it later. To convince that computer science is a science
560 like chemistry, physics, or biology. And it should be taught on the same par with them. That
561 computer science teachers should have a formal education, same as physics teacher or, for
562 that matter, history teachers. This has been my — policymakers! this is the word that I
563 looked for! — this is still a challenge. This is still a challenge. Always was and still is.
564
565 **B: Thank you. Do you have any outside interests that would help us understand you**
566 **better? You used to play the accordion.**
567

568 J: Yeah, I don't play anymore. My grandchildren ask me to play and I promise them and I don't
569   do it. I love to read. I love music. I have only a little time for this. When I am traveling I do
570   some reading.
571
572 **B: It looked like one of the outside interests was certainly your grandchildren, because we**
573   **saw pictures of them in your talk.**
574
575 J: Yes, I try to devote time to them. Compensating of the time I didn't devote to my children,
576   maybe didn't devote enough time. So I try very hard.
577
578 **B: I bet. Are there any of those interests that shaped your career? Like partly the**
579   **accordion made possible your career.**
580
581 J: Right! Did it shape my career? I'm not sure. No, I see myself, you know, always running
582   ahead and trying to do as much as I can. Not so much for myself —of course, my career is
583   me — but to do for students, to do good for Israel, for the society. I think this is it.
584 [49:58]
585 **B: Thank you. Thank you! We're getting down to the wrap-up of this interview. And if**
586   **you had advice for a young woman just starting out in computer science, and especially**
587   **computer science education, what would that advice be?**
588
589 J: Keep running. Keep doing. Be determined. You will succeed. Once you make it — what was
590   the sentence I said? — once she makes it, she is there! Once you make it, you will be there.
591
592 **B: If you could change one decision you made along the way, along your career path, what**
593   **might that be?**
594
595 J: Hmm. [long pause] Terrible! I don't think there is anything I want to change.
596
597 **B: That's wonderful, that doesn't sound terrible! Well, how about this one: if there were**
598   **one story you could tell that you want to remembered by, you want everyone to**
599   **remember this one story, what would that one story be?**
600
601 J: Story? Or something I've done?
602
603 **B: Well, it could be something you did, some occurrence that happened, and everybody**
604   **would say, "Oh, that is Judith!"**
605
606 J: I think it is the high school curriculum in computer science. I think this is maybe the most
607   important thing — except my children and family, of course — I've done.
608
609 **B: Well, thank you! We're very glad that you spent with us this afternoon. We really**
610   **thank you for all you are doing for computer science.**
611
612 J: Thank you.
613 [51:40]